



Enterprise Innovation Partnership

Paramedic Evidence Based Education Project (PEEP)

End of Study Report



August 2013



Maximising paramedics' contribution to the delivery of high quality and cost effective patient care.

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1.0 Executive Summary

The increase in attention that the education and training of paramedics has received in recent years led the National Allied Health Professional Advisory Board, England, to commission this study. Our aim has been to develop an evidence based business case, for the College of Paramedics, to progress the strategic direction of the standardisation of education and training for this key workforce.

As a consequence of local influence and local funding decisions between education commissioners, education providers and their partner ambulance services, there are various education and funding models in place across the United Kingdom (UK). This situation is considered to be a critical risk for the profession, especially when combined with the concerns about financial sustainability and a potential for continued inconsistencies, particularly in England. This Paramedic Evidence-Based Education Project (PEEP) has attempted to address these issues.

This report presents the findings of this study and chronicles the existing evidence to support the future direction of paramedic education and training.

Samples of representatives of stakeholder organisations from each of the four nations of the UK were invited to take part in this study. We spoke to representatives of patients who receive care from paramedics; senior managers with responsibility for developing the paramedic workforce; managers who develop and guide clinical policy; education and training providers to the paramedic workforce; paramedics and students. In addition, a one day summit was held by the Department of Health in England for a UK wide invited group of participants. This provided considerable insight into the whole systems approach that needs to be taken to progress the standardisation of the education and training of the paramedic workforce.

The potential contribution that a well-educated and highly trained paramedic workforce can make to healthcare, through its unique field of practice that intersects healthcare, public health, social care and public safety, has yet to be fully appreciated and understood. Paramedics are very well regarded by the general population. A closer engagement of this workforce with pre-hospital urgent care and prevention of hospital admission, should be of benefit to the wider community.

The emerging consensus is that paramedics are autonomous professionals at the point of registration and well placed to effectively deliver a patient led, out of hospital urgent care service. To enable this situation to be realised, a more robust education and training system needs to be in place. The current education and training model, in England, is very locally determined, resulting in very different student experiences and different levels of learning outcomes achieved at the point of registration.

While this is not a definitive study, it highlights the need for the standardisation of approach to education and training and to developing a clear framework that will enable this to happen. This study highlights a number of areas in the education and training of paramedics that could be developed and also proposes a model that leads to an all graduate paramedic profession by 2019. The proposed model attempts to address the key stages required to ensure all key stakeholders are empowered to engage and inform the development of a unified approach. The result should be an education and development framework for paramedics that is sustainable. It is recognised that many may contend

that this timeframe is far too long. However, a carefully staged approach is strongly recommended and it is proposed that the College of Paramedics establishes a UK wide stakeholder steering group, to take the development systematically through the identified stages.

One key deliverable is to raise the minimum threshold entry onto the Paramedic Register, of the Health Care Professions Council, so that all student paramedics enrol on programmes leading to a minimum award of a diploma in higher education (DipHE), by September 2015. This requires the education sector to reflect on the appropriateness of the use of a foundation degree, or an apprenticeship model, for developing the paramedic workforce, as currently these two models of education and training are also used to develop the healthcare support workforce. Post-registration and continuing professional and personal development (CPPD) opportunities should be readily available to all paramedics, who wish to achieve the new minimum threshold, or prepare themselves for an all graduate profession.

The current funding model to support the students is very varied and favours those who can financially support themselves through their training. While this might be financially advantageous to the service it does not promote fair or widened access to the profession. The findings of this study indicate that the most appropriate funding model for England is the Higher Education England (HEE) /Local Education and Training Board (LETB) commissioned model with access to bursary support in line with other NHS non-medical trainees. This would provide security of supply to the service and the higher education (HE) sector; a national overview of numbers in training; and enable prospective students from diverse backgrounds to apply to train as paramedics. It would also further the discussion about bursary support and a clinical tariff for training the students. The governance of this funding model also quality assures the clinical learning environment which is fundamental to a standardised approach to developing the paramedic workforce.

During the study we have found some excellent examples of true partnership working for the benefit of the paramedic student. For example, the Scottish model of the Ambulance Service sponsoring an Academy linked to Glasgow Caledonian University. Another example of how the ambulance service, the commissioners and the education providers work well together is Health Education North West (HENW). Effective partnership working is essential. Arrangements need to be in place to enable the student and the qualified paramedic to receive timely feedback on their clinical decisions to enable them to further develop their knowledge and skills.

In relation to the curriculum review, some of the interviewees reported that the curriculum should include more leadership skills development and improved learning outcomes about dementia and mental health challenges. A matter of concern for the education sector and the profession is how to enhance the multi-professional learning opportunities for the students. All participants in the study recognised the importance of time spent in the clinical learning environment and many of them questioned whether two academic years was sufficient to gain the clinical experience required.

The myriad and complexity of the paramedic education and training models in England will continue until there is an agreed consensus, which requires investment of time and resources. One approach to resolving this situation is to appoint, to a full time role, somebody who would work in partnership with Health Education England and the Local Education and Training Boards; the Ambulance Services in England; the Northern Ireland Ambulance Service; the Scottish Ambulance Service and the Welsh Ambulance Service.

2.0 Summary of Recommendations

2.1 Standardised approach to education and training

There should be a standardised approach to all aspects of education and training for paramedics.

2.1.1 Nationally agreed approach to commissioning and funding

- a) There should be a nationally agreed commissioning and funding model for pre-registration paramedic education based on core principles:
 - Equivalent opportunities to access education and training as compared to other non-medical healthcare professionals.
 - Equity of access to funding.
 - Transparent, affordable and sustainable.
- b) There should be a standardised approach to paramedic education funding in England based on Multi-professional Education and Training (MPET) including the clinical education tariff.
- c) Ambulance services, education commissioners and education providers should agree a regional tri-partite approach to apply a nationally agreed funding model.
- d) Commissioners of pre-registration education and training programmes should add paramedic pre-registration programmes to existing National Standard Contracts between commissioners and the education providers.
- e) The emergency driving requirement should be the responsibility of the ambulance services not individual students.

2.1.2 Access to bursary funding

Paramedic students should have access to student bursaries in line with students of other non-medical professions.

2.1.3 Models of pre-registration education and training

The education providers should review the academic awards offered to paramedic students and bring them in line with the other non-medical professions, particularly Allied Health Professionals (AHPs). The use of the foundation degree as the main award leading to qualification as a paramedic should be discontinued.

2.2 Pre-registration education development model leading to an all graduate profession

The College of Paramedics in partnership with National Education Lead Bodies should agree an achievable pre-registration development model. The model should take the paramedic profession to an all graduate status by 2019.

The stages of development should include, in addition to recommendation 2.1.2 and 2.1.3 above, the following steps:

- Review of agreed scope of practice.
- Review of Standards of Proficiency.
- Evaluate education and development opportunities for the existing workforce.
- Embed a whole systems approach to enhance the learning environment for the student paramedic.

2.3 Knowledge and skills enhancement

There are a number of areas in the curricular where the education sector and service sectors working in partnership should enhance the curricular and the effectiveness of the learning environment.

2.3.1 Content

Suggested additions to the pre-registration and where appropriate post-registration curricular include:

- Dementia and mental health awareness;
- Clinical leadership skills;
- Multi-professional learning opportunities;
- Integrated Care;
- End of Life Care; and
- Inclusion Health

2.3.2 Clinical Decision Making

The ambulance trusts should review how they support pre-registration paramedics to obtain the appropriate level of clinical decision making skills. The process by which students and qualified paramedics receive timely feedback for clinical decisions should be improved.

2.4 Partnership model

A UK wide approach should be taken to developing a clear strategy for an all systems partnership model to support the future development of the paramedic workforce.

2.5 Paramedic leadership for England

Health Education England in partnership with NHS England and the College of Paramedics should appoint a national lead for education and training of paramedics. This national lead would have the responsibility for standardising the education and training of paramedics in England. They would also work with their counterparts in Northern Ireland, Scotland and Wales to share best practice in paramedic education and training across the UK.

2.6 Standardised approach to identification

To help the patient, service users and the general public, the ambulance services in partnership with the College of Paramedics, should take a standardised approach to the identity of the paramedic profession, including who wears the 'green uniform' and what titles the specialist and advanced paramedic practitioner are given.

3.0 Introduction

3.1 Background to the study

The models of education and training for the paramedic workforce vary extensively across the UK, with each home nation taking a different approach to developing their workforce. This is further complicated by the fact that in England the approach taken varies by ambulance trust. There has been no research to date concerning the most appropriate way of educating and training the UK paramedic workforce.

3.2 Study aim

The aim of the study was to develop an evidence based business case for the College of Paramedics (CoP) to progress the strategic direction for the standardisation of education and training, including fair access to funding support and enhancing the threshold of entry to the profession.

3.3 Study focus

The study focussed primarily on the pre-registration education and training of the paramedic workforce and the changing healthcare context in which this takes place.



4.0 Context and Drivers for Change

4.1 Introduction and policy context

The urgent and emergency care system in the UK is under pressure and the ability to meet targets for accident and emergency waits and ambulance waits was challenged during the recent winter¹. In January 2013, NHS England announced that a review of urgent and emergency services would be undertaken to identify the best model of organising this aspect of care². The report³, published in June 2013, has only one reference to paramedics which is made in the context of the type of response to a call. It highlights that there is evidence to support that incidents occur when a technician crew, rather than the ambulance crew that was requested, is sent to transfer a very sick patient from one hospital to another. It re-states the important message that patients consistently report ‘positive experiences of ambulance services’ but also acknowledges the fact that there is still considerable confusion surrounding other areas of non-urgent healthcare leading to a possible increase in the use of the ambulance service.

In May 2013, The King’s Fund recommended to the Clinical Commissioning Groups in England that one of their priorities should be to manage urgent and emergency activity through an integrated approach, particularly for emergency medical admissions to hospital. The report highlighted the importance of a whole systems approach, ‘involving hospitals and community, primary and ambulance services through joint service planning and sharing of clinical information across different agencies’⁴.

Similarly in Wales, the Welsh Ambulance Trust (WAST) has announced its intention to reduce the number of unnecessary ‘999 journeys’ to Acute Hospital Services⁵. This initiative includes developing a clinical model that both supports non-conveyance and also ensures that patients who do go to emergency departments are handed over very promptly by the ambulance crew.

In Northern Ireland⁶ there have been challenges facing the Emergency Departments. Consequently, the Northern Ireland Ambulance Service is reviewing its model of delivery to support the Department of Health, Social Services and Public Safety’s approach to transforming care⁷.

The distinctive geography of Scotland demands a different approach to that taken in the rest of the UK. There has been a partnership approach with NHS Highland⁸ for paramedics to deliver health checks as part of the wider anticipatory care programme. This innovative service improvement helps maintain a paramedic’s skill level in remote areas, as well as increasing Primary Care capacity. The

¹ <http://www.kingsfund.org.uk/projects/urgent-emergency-care>

² <http://www.england.nhs.uk/2013/01/18/>

³ NHS England (2013) High quality care for all, now and for future generations: Transforming urgent and emergency care services in England

⁴ King’s Fund (2013) Health Select Committee Inquiry. Emergency Services and Emergency Care

⁵ NHS Wales (2011) Ten High Impact Steps to Transform Unscheduled Care. Unscheduled Care Board Wales

⁶ Department of Health, Social Services and Public Safety (2013) Oral Statement by Health Minister-Update Transforming Your Care

⁷ Department of Health, Social Services and Public Safety (2011) Transforming Your Care, Review of Health and Social Care in Northern Ireland.

⁸ Scottish Ambulance Service (2012) Annual Review 2011/12

patient's feedback is very positive and the Scottish Ambulance Service is exploring ways of working closely with NHS Boards in Scotland and the Primary Care Service.

The role of paramedics has become increasingly important over recent years, with growing expectation for ambulance services to deliver the right care in the right place first time⁹. As early as 2005¹⁰, it was recognised that investing in the clinical development of the frontline ambulance staff would yield significant benefits for patient outcomes and to the health economy. In *Taking Healthcare to the Patient: Transforming NHS Ambulance Services*¹⁰ it was reported that community paramedics were 'treating patients at home; helping to provide primary care out of hour's services; helping to respond more efficiently and effectively to non-urgent 999 calls; and there was further scope to improve education and training of ambulance staff to create a workforce that could provide a greater range of mobile urgent care'. It was further suggested that education and training should focus on clinical



decision making. Development of this workforce required a clear funding framework that would give paramedics the same opportunities to access education and training and funding support, that is available in other healthcare professions. In 2008, the Department of Health published guidance on funding for the Strategic Health Authorities, Primary Care Trusts and Ambulance Services¹¹. One of the key principles of this guidance was that education and training of paramedics should be developed in partnership with the ambulance service. In 2011, the six years on review undertaken by the Association of Ambulance Chief Executives¹² reported that advances in clinical care had been made through improved education and training developed through the partnerships between the ambulance service and the higher education sector. However, there was no reference to a funding framework to support the education and training of the paramedics.

In 2012, the Centre for Workforce Intelligence published a report about the paramedic workforce¹³. This report concluded that current policy initiatives will raise the required level of educational training for paramedics, with greater emphasis on higher education qualifications, but it pointed out the potential risks associated with increasing the cost of training and a potential reduction of applicants to pre-registration courses as the level of entry is increased.

⁹ College of Paramedics(2012) Curriculum Guidance third edition.

¹⁰ DH (2005) *Taking Healthcare to the Patient, Transforming NHS Ambulance Services*.

¹¹ DH (2008) *Pre Registration Education and Funding for Paramedics, Guidance for SHAs, PCTs and Ambulance Trusts*

¹² Association of Ambulance Chief Executives (2011) *Taking Healthcare to the Patient 2 A review of 6 years' progress and recommendations for the future*.

¹³ Centre for Workforce Intelligence (2012) *Workforce Risks and Opportunities Paramedics*

5.0 Approach to the Study

Initially the scope of the study was focussed on England with the other three nations being represented by a Scottish case study. Part-way through the study it was agreed that the scope would be extended to include all four nations. As a result the following sites were visited:

- England:
 - North West Ambulance Service (NWAS)
 - West Midlands Ambulance Service
 - East Midlands Ambulance Trust
 - South East Coast Ambulance Trust.
- Northern Ireland Ambulance Service (NIAS).
- Scottish Ambulance Service (SAS), North East Division.
- Welsh Ambulance Services NHS Trust (WAST).

Interviews were also held with staff from South West Ambulance Trust, London Ambulance Trust and representatives from key stakeholder organisations. A total of 68 interviews were conducted as shown in table 1.

Role in relation to paramedic service	Number
Workforce/Management	7
Human Resources	6
National AHP strategy and regulation	4
Paramedic Educators/Education Leads/Practice Educators	20
Paramedics (including students)	26
Significant others	6
Total	68

Table 1 Range of interviews including focus groups

Meetings were held with the Human Resources (HR) Directors of ambulance services in the UK HR Directors and a group of union leaders from Unison, Unite and GMB.

The approach to gathering data varied according to location, staff available and the number of staff present at the meeting. Some of the interviews were structured and held over the phone, others were semi-structured one to one interviews while the remainder were thematic interviews held with focus groups. Interview schedules and discussion topics can be found in Appendix 1. The topics included the following themes:

- Scope of practice of the paramedic.
- Education and training for the paramedic workforce.
- Funding for the training of paramedics.
- Future trends for the paramedic workforce.

Towards the end of the study a Department of Health sponsored one-day summit was held for invited key stakeholders. This summit provided a rich source of ideas and suggestions for next steps. The detailed topics covered during the summit and participants' comments can be found in the Annex to this report.

6.0 Paramedic Education

This section outlines the current situation concerning education for the paramedic workforce. As one respondent pointed out ‘*Education is new to the ambulance service*’ (Practice Liaison Clinical Facilitator).

Historically, paramedics were trained through an in-service training route, the Institute of Health and Care Development paramedic programme known as the IHCD¹⁴. The education and training route through the higher education (HE) sector was first introduced by the University of Hertfordshire in 1991. The degree level qualification is a more recent development.

6.1 Four nations approach to paramedic education

The approach to educating and training the paramedic workforce varies by nation and within England by ambulance trust. The education and training of paramedics is affiliated to the emergency care services in the UK which is predominantly provided by four publicly funded healthcare systems: NHS England; Department of Health, Social Services and Public Safety (DHSSPS) in Northern Ireland; NHS Scotland and NHS Wales. These health care systems include pre-hospital care and transport delivered by ten regional ambulance services in England and national ambulance services in Northern Ireland, Scotland and Wales.¹⁵

There are currently 50 Health and Care Professions Council (HCPC) approved programmes (table 2 and Appendix 2) leading to eligibility to register as a paramedic. These programmes are delivered by 32 different education providers.

Award title	Number
Foundation Degree	20
Diploma of Higher Education	11
BSc(Hons)	8
Institute of Health and Care Development (IHCD)	6
Graduate Diploma	2
No formal award	3

Table 2 Range of HCPC approved awards leading to eligibility to work as a paramedic

The majority of the pre-registration programmes are delivered through a formal partnership between an ambulance trust and a university. However some of the ambulance trusts train the paramedics in their organisation through an IHCD programme, for example the Northern Ireland Ambulance Service (NIAS). An overview of the diversity of models across the UK is set out in table 3. A detailed list of all the HCPC approved programmes can be found in Appendix 2.

As shown in table 3, different parts of the UK employ different training routes. ‘Some are all HE, although with a range of diplomas, foundation degrees and honours degrees, while others use short,

¹⁴ HCPC (2011) Professionalism in Healthcare research report.

¹⁵ Gowan, P., Gray, D. (2011) Paramedic training programmes and scope of practice: A UK perspective *Emergencias*; 23: 486-489

in-service training courses. Often the foundation degree or honours degree function as conversion courses for non-regulated technician staff¹⁶.

Ambulance Trust	Model of Education and Training for paramedics	Academic Partner
ENGLAND		
East Midlands Ambulance Service NHS Trust	IHCD	Employed in Trust
	DipHE Paramedic Practice	Sheffield Hallam University
	FdSc Paramedic Science	University of Northampton
London Ambulance Service NHS Trust	IHCD	Employed in Trust
	FdSc in Paramedic Science	St George's University of London
	BSc (Hons) Paramedic Science (London)	University of Greenwich
	BSc (Hons) Paramedic Science	University of Hertfordshire
North East Ambulance Service NHS Foundation Trust	FdSc Paramedic Science	University of Teesside
North West Ambulance Service NHS Trust	DipHE Paramedic Practice	Edge Hill University
	DipHE Paramedic Practice	Liverpool John Moores University
	DipHE Paramedic Practice	University of Central Lancashire
South Central Ambulance Service NHS Foundation Trust	BSc(Hons) Paramedic Emergency Care	Oxford Brookes University
	FdSc Paramedic Emergency Care	
	FdSc Paramedic Emergency Care	Portsmouth University
South East Coast Ambulance Service NHS Foundation Trust	BSc (Hons) Paramedic Science	Canterbury Christ Church University
	FdSc Paramedic Science	St George's University of London
	BSc (Hons) Paramedic Practice	University of Brighton
	BSc (Hons) Paramedic Practice	University of Greenwich
	BSc (Hons) Paramedic Practice	University of Surrey.
South Western Ambulance Service NHS Foundation Trust	DipHE Paramedic Sciences	Open University
	BSc (Hons) Paramedic Practitioner	Plymouth University
	FdSc Paramedic Science	University of the West of England
	FdSc Paramedic Science	Bournemouth University

¹⁶ Health Professions Council (2011) Professionalism in Healthcare Professions.

Ambulance Trust	Model of Education and Training for paramedics	Academic Partner
West Midlands Ambulance Service NHS Foundation Trust	Apprenticeship model	Coventry University
	FdSc Paramedic Science	
	Apprenticeship model	Staffordshire University
	FdSc Pre-Hospital Unscheduled and Emergency Care	
	FdSc Paramedic Science	
	Apprenticeship model	University of Worcester
FdSc Paramedic Science		
Yorkshire Ambulance Service NHS Trust	FdSc Paramedic Science	University of Teesside
NORTHERN IRELAND		
Northern Ireland Ambulance Service Health and Social Care Trust (NIAS)	Paramedic in-training	None
SCOTLAND		
Scottish Ambulance Service (SAS)	Student employed by SAS for one year to achieve Cert HE in Paramedic Practice (technician). Progress to year two to achieve a DipHE Paramedic Practice (paramedic).	Scottish Ambulance Academy and Glasgow Caledonian University
WALES		
Welsh Ambulance Service NHS Trust	DipHE Paramedic Science	Swansea University

Table 3 Overview of the Ambulance Trusts' pre-qualifying education and training models and academic partners. Code- IHCD (Institute of Health and Care Development); FdSc (Foundation Degree); DipHE (Diploma in Higher Education); BSc(Hons) (Bachelor degree with honours)

An example of an in-service model is where an NHS ambulance trust delivers a two year foundation degree entirely in-service. The degree is awarded by a local university, but most classroom teaching takes place in the trust's education centre. All trainees must be employed by the trust before admission to the foundation degree programme and many are existing staff – technicians, emergency care support workers (ECSWs) or control staff when they apply for admission to the course¹⁷.

In England the education and training options to becoming a paramedic are extremely diverse and vary by ambulance trust (table 3). Seven out of the ten trusts have more than one programme of study leading to qualification as a paramedic.

There are two education and training routes into the paramedic profession in Wales that are supported by the Welsh Ambulance Service Trust (WAST):

- HE programme delivered by Swansea University.
- IHCD programme delivered by the Welsh Ambulance Service NHS Trust National Training College.

¹⁷ Northern Ireland Ambulance Service (2008) paramedic-in-training programme

Scotland and Northern Ireland run very different models of pre-registration and training to England and Wales. The model in Scotland with an ambulance academy is well understood across the country and currently supports the service well.

‘The Scottish Ambulance Academy, based within the School of Health at Glasgow Caledonian University was opened in 2011. The Academy offers a modern learning environment where students will have the opportunities to train alongside police and fire service colleagues for example, in simulated road traffic collisions, as well as clinical simulation areas. Staff who deliver the programme work for the Scottish Ambulance Service. The advantage of this approach is that the service has a little more control over the programme and the staff delivering the programme are all working as clinicians.’ (Paramedic Educator)

Box 1 The Scottish Ambulance Academy¹⁸

The programme run in Northern Ireland is the sole responsibility of the Northern Ireland Ambulance Services (NIAS). NIAS runs a Paramedic-in-Training Programme which is essentially an in-service training model. Before applying to train as a paramedic in Northern Ireland, the applicant needs to have two year’s work experience as an Emergency Medical Technician (EMT)¹⁷.

There are two entry criteria options to be eligible to train as an EMT. Option one is five GCSEs at grade C or higher. Option two is three GCSEs plus an Ambulance Care award and the IHCD/EMT pre-test. In addition, EMT applicants are required to obtain a full driving licence that includes category C1 (medium-sized vehicles) and D1 (large vehicles).

Once the applicant has been accepted by NIAS for an EMT post they must successfully complete 11 weeks training, two weeks of which are dedicated to developing advanced driving skills. During the next year the EMT trainee will be assessed on a quarterly basis.

Once the EMT has the required work experience they are eligible to apply for the Paramedic-in-Training Programme which is based on the IHCD programme which comprises a 12 weeks training and four weeks working in a hospital.

6.2 Commissioning trends 2008/09 - 2012/13

Data has been collected from the university sector which shows that at a national level, there was an increase in paramedic commissions from 698 in 2008/09 to 1,195 in 2011/12, with a total of 4,580 over that period. This trend started to reverse in 2012/13 when the total numbers fell to 921 as shown in table 4. The detail can be seen in Appendix 3. During that period the North East Coast placed the highest number of commissions at 1,775 and South West Ambulance Service the lowest at 34.

¹⁸ <http://www.scottishambulance.co.uk/WorkingForUs/academy.aspx>

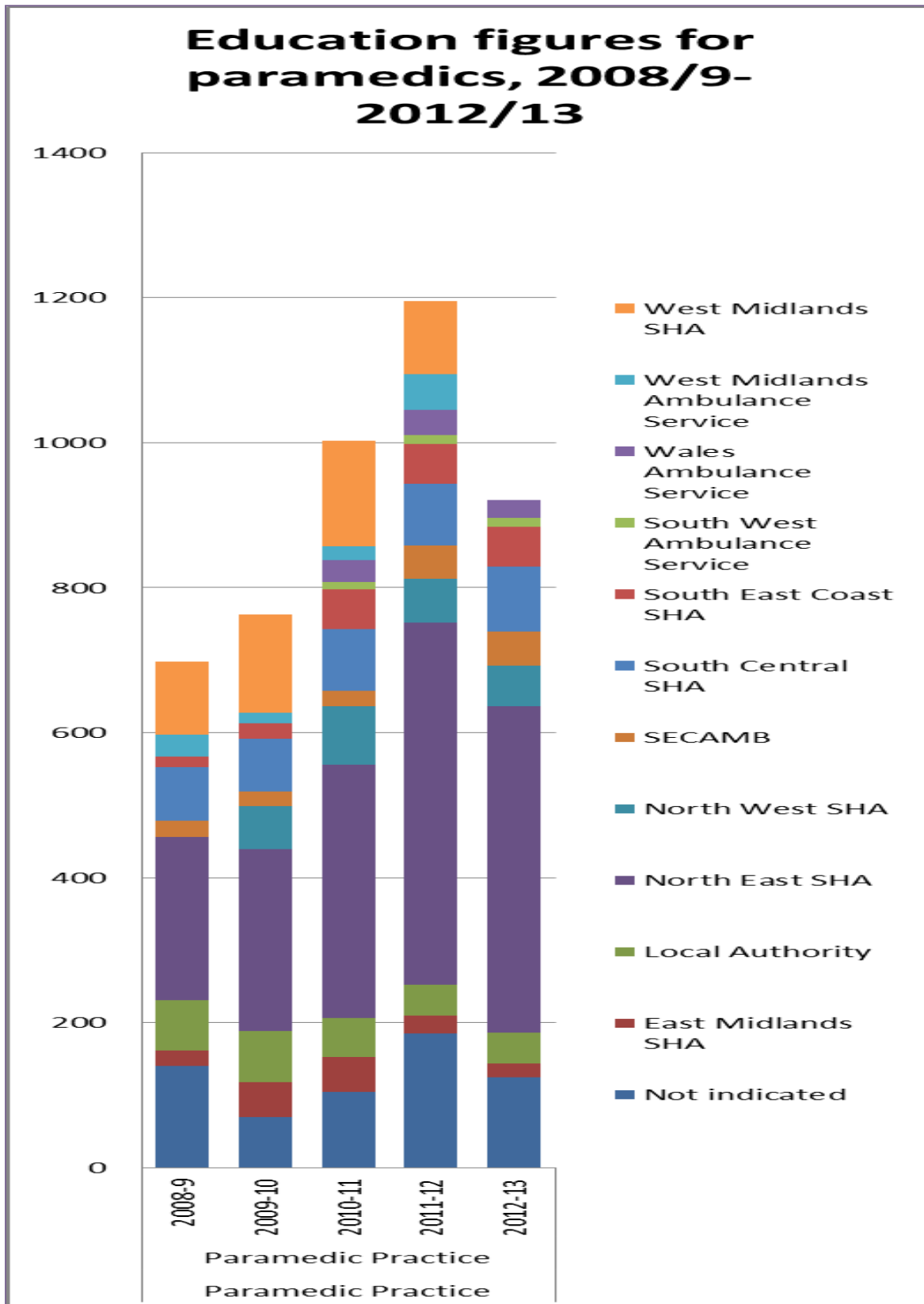


Table 4 University pre-registration paramedic university commissions during the period 2008/09 - 2012/13

6.3 Funding for pre-registration paramedic education.

Access to financial support differs across the four nations and in England by ambulance trust. Fair access to financial support is very important in addressing widening participation¹⁹ and providing equal opportunities to train as a paramedic.

6.3.1 Funding support in Scotland

The Scottish Ambulance Service (SAS) funds the training of paramedics. Ambulance technicians employed by the SAS with at least one year's experience are eligible to apply for a funded place on the Glasgow Caledonian University (GCU) course.

“Implicit in that is we recruit them into the service to send them off to GCU after a year and a permanent contract of employment with the Scottish Ambulance Service going forward is subject to successful completion of the course. We financially support them to do this course.

This is a more flexible model than in England as we will take as many students as required for the service as long as we can do so safely in the programme. So for example last year our cohort was small whereas this year we need extra staffing. By the end of this year (2012/13) we will run three cohorts and put nearly 180 students through the system.” (Paramedic educator)

6.3.2 Funding support in Northern Ireland

To train to become a paramedic in Northern Ireland the prospective student is required to apply to NIAS for a training post. During the period of training the trainee paramedic is employed by NIAS for two years. During the first year they are employed on a pre-registration year one salary. On successful completion of this year's study, the salary is uplifted to a pre-registration year two salary. Throughout the training period the trainee is required to work in unsocial hours and financial compensation is paid for this work.

The funding for the training fees for the trainee paramedic is provided by the DHSSPS. Currently the DHSSPS does not have a dedicated budget for paramedics as they are not aligned to Allied Health Professions.

“If the paramedics are aligned with Allied Health Professions then we have a budget for Allied Health Professions which covers our 6 AHPs. A very small amount of that goes to post-registration. If the paramedics are aligned with AHPs there is a direct line there for funding”. (Human Resources representative, DHSSPS)

The DHSSPS allocates the funding to NIAS as a training budget. 30% of that budget is ring-fenced for the classroom component of the Paramedic-in-Training programme.

¹⁹ DH (2013) The Education Outcomes Framework

6.3.3 Funding support in Wales

The government funding for paramedic education and training in Wales, until recently, was provided directly from the National Leadership and Innovation Agency for Healthcare (NLIAH). The functions of NLIAH changed on March 31st 2013 and its functions have been relocated to NHS Wales. NHS Wales funds the full cost of the tuition fees. Students are eligible to apply for a non-means tested grant.

6.3.4 Funding support in England

There is currently a myriad of different funding models which are locally determined by the ten Ambulance Service NHS Trusts in England as shown in table 5. Funding support can also vary within ambulance trust by course. Where the programmes are not commissioned, the students are required to pay their own fees. Some of the ambulance trusts work closely in partnership with the local education commissioning board or authority to secure funding support for these programmes.

Table 5 illustrates the fact that a large proportion of the paramedic courses in England are not commissioned or funded by the education commissioning authorities. HE South West previously known as NHS South West; HE North East, previously known as NHS North East; HE East of England previously known as NHS East of England; and HE North West London/HE North Central and East London/HE South London, previously collectively known as NHS London, do not directly commission or fund paramedic courses.

Ambulance Trust	Commissioner SHA (until March 31st 2013) HEE (from April 1st 2013)	Programme	Tuition fee per student 2012/13 (funded by student either directly or via student loan from Student Finance in England)	Salary per trainee	Benchmark price (BMP)or tuition fee (funded through Multi-professional education and training (MPET))
East Midlands Ambulance Service NHS Trust	East Midlands SHA/HE East Midlands	2 year diploma			£8,152/year
		2 year foundation degree			£8,152/year
East of England Ambulance Service NHS Trust	Not commissioned		£9,000/year		

Ambulance Trust	Commissioner	Programme	Tuition fee	Salary per student	BMP or tuition fee
London Ambulance Service NHS Trust	Not commissioned	2 year foundation degree	£8,000/year £6,000/year		
		3 year BSc (Hons)	£8,000/year £9,000/year		
North East Ambulance Service NHS Trust	Not commissioned	2 year foundation degree	£9,000/year	£19,337 year 1 £20,715 year 2	
North West Ambulance Service NHS Trust	North West SHA/ HE North West	1 year diploma (conversion)		£3,744	£8,152/year
		2 year diploma			£8,152/year
South Central Ambulance Service NHS Trust	South Central SHA/ HE Thames Valley; HE Wessex	1 year diploma		£18,771	£4,219/year
		2/3 year diploma		£11,732	£9,000/year £8,500/year £1,833/year
South East Ambulance Service NHS Trust	South East Coast SHA/ HE Kent, Surrey and Sussex	1 year diploma		£3,360	£1,645/year
		2/3 year diploma		£3,360	£2,152/year
		3 year BSc (Hons)			
South Western Ambulance Service NHS Trust	Not commissioned	2 year foundation degree	£9,000/year		
		3 year BSc (Hons)	£9,000/year		
West Midlands Ambulance Service NHS Trust	West Midlands SHA/ HE West Midlands	1 year diploma		£5,822	£2,850/year
Yorkshire Ambulance Service NHS Trust	Yorkshire and Humber SHA/ HE Yorkshire and Humber	1 year diploma		£12,020	£7,140/year
		2 year diploma			£7,140/year

Table 5 Different funding models to train as a paramedic in England

The ambulance trusts in these areas advise their partner academic institutions how many paramedics they anticipate they will need in the service to assist with future workforce planning. The extent to which ambulance trusts provide funding to support the courses varies.

In England, similar non-medical pre-registration programmes such as operating department practice, radiography and physiotherapy are currently governed by the National Standard Contract²⁰ and commissioned and funded according to the 'Benchmark Price (BMP)' which is the price allocated for the services provided under the contract. The BMP is determined by Health Education England and applies to programmes listed within the contract. The BMP has five bands which reflect the cost to the education provider, for example operating department practice courses are priced at band A; physiotherapy at band B; dietetics at band D and radiography at band E. Band E is the highest rate and addresses the cost of the clinical skills equipment. Similarly in the other three nations there is a nationally agreed price based on the concept of the BMP. This approach to funding ensures a secure business model to enable the education providers to plan the education delivery.

Currently pre-registration paramedic programmes do not benefit from inclusion in the BMP or the National Standard Contract. Where the programmes are commissioned by Health Education England, Local Education and Training Boards (formerly Strategic Health Authorities), the programmes may have been included in locally negotiated contracts.

When compared to the police force and the fire service the apprenticeship model of training offered by some ambulance services in England is very similar, in that the students are employed as trainees on a trainee salary during the period of the training.

As a consequence of local influence and local funding decisions between education commissioners, education providers and their partner ambulance services, there are various education and funding models in place across England. This is considered to be a critical risk for the profession combined with concerns regarding sustainability, potential continued inconsistencies, lack of transparency and a general lack of understanding across students, higher education providers and ambulance services. The Paramedic Evidence-Based Education Project (PEEP) has been commissioned to address this issue and a revised commissioning framework is essential to support the study outcomes and the curriculum guidance.

6.3.5 Funding models in England

One of the key principles of the Department of Health's guidance¹¹ on pre-registration education and funding for paramedics trained in England, is that any decisions on funding should be congruent with the multi-professional education and training funding (MPET) review.

At the time of the publication of the guidance it was announced that associated costs for the paramedic higher education activity should be included in strategic health authorities (SHA) MPET funding allocations from 2008/09. This funding was identified within MPET as pump priming to facilitate the move to HE. After the initial three years, funding would be part of the usual MPET allocations. It was recommended that MPET funds include the:

- Cost of Disclosure and Barring (formerly CRB-Criminal Records Bureau) checks.
- Cost of occupational health checks.
- Uniform costs.
- Tuition/top-up fees.
- Salary contribution for existing NHS staff at 50% of mid-point Agenda for Change Band 4.

²⁰ DH (2012) National Standard Contract Framework (under review)

It went on to recommend that the ambulance services should fund the balance of salary payments for existing staff who are enabled to study to become a paramedic and also the trust infrastructure costs, such as clinical educators and driving instruction, but this does not happen uniformly.

It should be noted that the 2008 guidance was written at a time when the mainstream higher education funding system was based on a different funding model to that in place as from academic year 2012/13. Of particular note is that the current Department of Business, Innovation and Skills (BIS) funding policy is no longer based on top-up fees. The current funding regime²¹ is based on students funding full tuition costs either directly or through student loans. Therefore this element of the 2008 guidance is no longer valid and education commissioners and ambulance services do not have the facility to fund top-up fees.

The existing situation of extensive variation and complexity of funding models culminating in a total lack of standardisation of funding for pre-registration paramedic education and training is not sustainable. One of the key recommendations from this study is that there should be a nationally agreed commissioning model for pre-registration paramedic education based on the following core principles:

- **Paramedics should have the same opportunities to access education and training as other non-medical healthcare professionals.**
- **In view of the alignment to the Allied Health Professions (AHPs) in England and Wales, paramedics should have equity of access to funding as the other AHP groups.**
- **The commissioning and funding model must be transparent, affordable and sustainable into the future.**
- **The commissioning and funding model must be applied consistently across England to ensure that there is equal access to all paramedic programmes.**
- **A harmonised approach to funding of education and training of paramedics to underpin consistency of clinical care/service delivery.**
- **The model should reflect workforce demand regionally and nationally.**

In order to understand how the principles identified above can be met a comparison of the risks and opportunities afforded by the different funding models was undertaken, Appendix 4 (higher education funding model) and table 5 (comparison of funding packages). The two models considered are the higher education funding model and the MPET funding model. Central to either model is practice placements. There must be rigorous and effective engagement and planning between the partners to ensure that sufficient high quality clinical learning practice placements are available to safeguard safety of supervision (see Education Outcomes Framework (EOF) Appendix 5 and section 9.2). The review of the tariffs for non-medical education and training to cover clinical placements did not include paramedics. Although it could be argued that in the current funding model for emergency services the element to cover education and training could include this tariff²².

²¹ <https://www.gov.uk/student-finance/overview>

²² DH (2012) Guidance to support strategic health authorities and shadow local education and training boards to plan transition to the education and training tariffs.

In conclusion, the following improvements need to be made to facilitate the standardisation of approach to paramedic education funding in England:

1. **Introduce a nationally agreed funding model based on MPET.**
2. **Ambulance services, education commissioners and education providers should agree a regional tri-partite approach to apply the nationally agreed funding model.**
3. **Commissioning of pre-registration paramedic programmes should be added to existing pre-registration non-medical education and training contracts between education commissioners and education providers.**

6.3.6 Standardised approach to bursaries

Another area where paramedic students are disadvantaged is the lack of a standardised approach to access to NHS student bursaries in England. This is partly because there is no standardised approach to commissioning or funding. Currently the following groups of students are eligible for student bursaries²³:

Chiropractic/Podiatry	Nursing	Orthoptics
Dental Hygiene/Dental Therapy	Midwifery	Physiotherapy
Dentistry	Occupational Therapy	Radiography
Dietetics/Nutrition	Operating Department Practice	Radiotherapy
Medical	Orthotics/Prosthetics	Speech and Language Therapy

In 2012, the National Education Commissioners considered which professions were eligible for student bursaries (Appendix 6). Subsequently, the Department of Health and Health Education England have implemented an annual process to consider new professions' eligibility for accessing the NHS Bursary Scheme. Paramedic practice is one of the professions being considered through this process. Health Education England wish to consider the findings of the PEEP report and any implications for funding before progressing this work further.

6.3.7 NHS Bursary Scheme rules for eligible non-medical courses

To be an eligible non-medical course for NHS Bursary funding a non-medical course must satisfy all of the following conditions (Appendix 6). These are that:

- a. It is provided by a recognised institution of higher education in England.
- b. It leads to a professional registration in one of the eligible healthcare professions.
- c. It is provided under a contract with an NHS organisation.
- d. The minimum level of qualification required for a course to be eligible is the diploma of higher education.

6.3.8 Pre-registration education and training for paramedics: Conclusions

All the evidence collected as part of this study substantiates the anecdotal view that there is no standardised approach to all aspects of education and training for paramedics and that this problem should be addressed as a matter of urgency.

²³ NHS (2013) Your Guide to NHS Student Bursaries

The areas for priority consideration are:

- a. Models of pre-registration education and training.
- b. Commissioning model.
- c. Clinical education tariff.
- d. Bursary support.

In order to resolve some of these system anomalies, the following approaches could be taken:

- a. All programmes should be commissioned on the MPET funding model as the benefits of this model in comparison to the higher education funding model are considerable and it would enable paramedic students to be eligible for a student bursary.
- b. All the ambulance services should work closely with their Local Education and Training Board (England) or national Commissioning Board to plan the workforce requirements and provide the required level of placement support for students.
- c. The commissioning of education for paramedics should be integrated into the existing National Standard Contract between the commissioners and the education providers.
- d. The emergency driving licence requirement should be the responsibility of the ambulance services.

This situation across the UK is further complicated by the fact that each of the devolved nations has a very different approach to pre-registration education and training of paramedics. The approaches taken in England and Wales are the most closely aligned of the four nations. The College of Paramedics could bring together and promote the models of best practice that exist across the UK.



7.0 The Paramedic Profession

There are currently 19,489 paramedics registered with the HCPC. According to the regulatory body ‘paramedics provide specialist care and treatment to patients who are either acutely ill or injured. They can administer a range of drugs and carry out certain surgical techniques’. Over two thirds of this workforce is employed in the NHS ambulance services. The services of paramedic staff are increasingly in demand resulting in paramedics being actively recruited into clinical advisor roles in the new NHS111. Many paramedics work in the private sector. They may work for private ambulance companies or as independent practitioners at national commercial events. They are sometimes contracted to work for the NHS at very busy times, during adverse weather conditions or events that attract large crowds.

In a recent article²⁴ to the paramedic profession, Professor Andy Newton wrote that what is needed for the modern ambulance service is a *‘new guiding principle based on a more clinical decision focussed approach’*. This approach would require a truly professionalised paramedic workforce with enhanced clinical capabilities and clinical decision making skills to work autonomously with the support and recognition of other professional colleagues in service. Professor Newton went on to report that it *‘is recognised that education of this workforce is essential for lasting change and is the core enabler for changing clinical behaviour’*. To achieve this paradigm shift, will take longer than many in the service may want or even appreciate. However there is considerable evidence that the role of the paramedic is changing quite significantly and there is potential for further change to enable an enhanced clinical service for the benefit of patients and their families.

Many authors have written about the altered role of the paramedic from the historical focus on first aid and transportation, to a greater emphasis on decision-making, treatment and where appropriate, referral^{8,25,26}. This increase in clinical capability has led to the realisation that paramedics can make a fundamental contribution to unscheduled and urgent care.

‘Many paramedics have undertaken additional training and moved into specialist practitioner roles, combining extended nursing and paramedic skills and supporting the first contact needs of patients in unscheduled care. Specialist practitioners are primarily employed by ambulance service trusts and undertake a range of activities, including carrying out and interpreting diagnostic tests, undertaking basic procedures and assessments of patients with long-term conditions in their homes and prescribing a wider range of medications²⁷.’ (AHP Quality Innovation Productivity and Prevention) (QIPP) tools - Stroke).

There is research evidence to indicate that specialist practitioners have a positive impact on the workloads of the emergency services which leads to fewer referrals to other healthcare professions

²⁴ Newton, A. (2012) The ambulance service: the past, present and future (part 1). Journal of Paramedic Practice Vol 4 No 5

²⁵ <http://www.improvement.nhs.uk/qipp>

²⁶ Mason, S., O’Keeffe, C., Coleman, P., Edlin, R., Nicholl, J., (2007) Effectiveness of emergency care practitioners working within existing emergency service models of care. Journal of Emergency Medicine

²⁷ <http://www.networks.nhs.uk/nhs-networks/ahp-networks/ahp-qipp-toolkits/stroke>

and a reduction in the use of the emergency transport²⁴. The same study reported that *‘patients were satisfied with the care received from specialist practitioners’*.

The College of Paramedics⁹ champions the fact that *‘paramedics are first contact practitioners’*, which requires them to have the appropriate underpinning knowledge, competencies and clinical practice experience to provide appropriate assessments, treatment and to implement appropriate management plans for their patients.

This is evidenced by a new innovative model of service called STARRS (Short-Term Assessment, Rehabilitation and Reablement Service). This is a rapid response service managed by The North West London Hospitals NHS Trust. This service brings together the expertise of London Ambulance Service paramedics with those of physiotherapists and occupational therapists employed by NHS Brent and NHS Harrow. The aim of this new service is to reduce hospital admissions by providing some clinical care at home (Appendix 7). This is an important initiative for the developing paramedic service as *“most patients do not fit into the urgent category”* (Professor of Clinical Practice) and fully utilises all their skills as *“they are trained in all aspects of pre-hospital emergency care ranging from acute problems such as cardiac arrest to urgent problems such as minor illness and injury”*²⁸ (Appendix 8). This approach also enables the paramedics to make a significant contribution to public health and the prevention element of the QIPP agenda²⁵.

7.1 Paramedics’ contribution to Quality Innovation Productivity and Prevention

The QIPP programme is a national Department of Health²⁵ (Appendix 9) strategy which aims to improve the quality and the cost effectiveness of the delivery of NHS care. In 2012, the Strategic Health Authority Allied Health Professions Leads published five toolkits setting out clinical pathways where AHPs make a significant difference in the clinical outcomes for a group of vulnerable patients. Paramedics make a major contribution to three out of these five presenting conditions: stroke, musculoskeletal and diabetes. These toolkits have been endorsed by the College of Paramedics (CoP). Two of these toolkits refer to the problem of falls, particularly in the elderly population. Many of the calls to ambulance services are falls-related. Paramedics and ambulance services operate falls prevention programmes, which refer patients directly to multi-disciplinary teams incorporating AHPs and advanced/ specialist paramedics.

Paramedics are trained in all aspects of pre-hospital emergency care ranging from acute problems such as cardiac arrest to urgent problems such as minor illness and injury. On arrival at an accident, they assess the patient’s condition, start any necessary treatment and refer as appropriate. They assess diabetes patients and can highlight frequent problems via a range of pathways²⁸.

Paramedics are able to autonomously undertake a full clinical examination of patients²⁹. Paramedics and senior/ specialist paramedics can perform more detailed patient assessments, including neuromuscular, motor and sensory examinations. Senior/specialist paramedics can differentiate the patient’s condition, which facilitates many patients being managed in the community as part of a wider Primary Care team.

²⁸ <http://www.networks.nhs.uk/nhs-networks/ahp-networks/ahp-qipp-toolkits/diabetes>

²⁹ <http://www.networks.nhs.uk/nhs-networks/ahp-networks/ahp-qipp-toolkits/msk>

Paramedics can in many cases make autonomous treatment and management decisions for patients with musculoskeletal presentations. Paramedics have a wide range of therapeutic options within their scope of practice, which expands further for senior/ specialist paramedics. Oral and parenteral medicines are available to paramedics, along with non-pharmacological interventions, such as positioning and splintage. Pharmacological methods authorised for paramedics are:

- Inhalational analgesia such as Entonox.
- Oral analgesia such as Paracetamol and Ibuprofen.
- Parenteral.
- Enteral analgesia – Codeine, NSAIDs, Morphine Sulphate IV and Morphine Sulphate Oral Solution.

To aid paramedics with nausea or emesis caused by musculoskeletal (MSK) injuries and pain relief, antiemetic drugs can be administered. Splintage can be provided by paramedics in many ways. These can include rigid splints, sling and support bandages, pneumatic splints, vacuum splints, pillow and blanket splints, traction splints and buddy splinting. Paramedics can also immobilise the whole patient using orthopaedic stretchers, vacuum mattresses and rigid collars with head support. By providing a detailed assessment and diagnosis, paramedics and senior/specialist paramedics can access specialist referral pathways.

7.1.1 Stroke pathway

A patient presenting with conditions such as hypertension, deep vein thrombosis or obesity are at risk of a transient ischaemic attack or a stroke. Paramedics as first contact practitioners are often in a clinical situation where they can observe and recognise motor function, cognitive and behavioural changes which could signal a stroke risk. The Stroke Association estimates that over 150,000 people have a stroke or mini stroke in the UK every year³⁰. That is one stroke every five minutes. It is estimated that 20,000 strokes a year could be avoided through preventative work and that prompt response to assess symptoms and facilitate urgent transfer to a Hyper Acute Stroke Unit (HASU) will mitigate against a long term adverse outcome as a fast response to stroke reduces the risk of death and disability. Paramedics can contribute to patient care at the prevention stage, the assessment or diagnosis stage and to the stroke pathway prevention³¹.

7.1.2 Diabetes pathway

There is evidence to indicate that elderly people with diabetes mellitus are at a greater risk of having a fall.³² There are an estimated 233,000 fractures each year in the UK primarily due to osteoporosis combined with a fall (fragility fracture)³³. The NHS London Allied Health Professions Diabetes Toolkit highlights the fact that paramedics work closely with occupational therapists, physiotherapists, podiatrists and orthoptists to provide a coordinated falls prevention service.

³⁰ The Stroke Association (2010) The Stroke Association Manifesto 2010-2015.

³¹ NHS London (2012) Allied Health Professions Stroke Toolkit

³² Maurer, M.S., Burcham, J., Cheng, J. (2005) Diabetes Mellitus Is Associated With an Increased Risk of Falls in Elderly Residents of a Long-Term Care Facility. The Journal of Gerontology: Series A Vol 60 (9)

³³ NHS London (2012) Allied Health Professions Diabetes Toolkit.

7.1.3 Musculoskeletal (MSK) pathway

Patients presenting with MSK conditions account for a high proportion of 999 calls. Some of these conditions can be very traumatic for the patient. A paramedic will assess and treat a patient and refer onwards if required³⁴. This includes patients with joint /back pain and mobility. A specialist paramedic (see section 10.3) at the scene is able to administer Diazepam to help prevent spasm in lower back pain and Codydramol to help with pain management at the scene. Paramedics are able to undertake a full clinical examination of patients and determine, with history, the possible MSK injuries present that may not be obvious. A specialist paramedic can also undertake a comprehensive health history to assess the link between the MSK co-morbidity situations to an acute presentation. MSK referrals are often linked to recurrent falls and the patient should be referred for a multidisciplinary assessment.

7.1.4 Paramedics' contribution to critical care

The contribution that paramedics already make to critical care and the potential for a greater contribution is well documented. Some patients are so severely ill or injured that they require advanced life support care beyond that of the scope of a paramedic. In some parts of the UK paramedics have been developed to take on the role of the Critical Care Paramedic (CCP). Similar developments have taken place in other countries such as Australia, Canada, New Zealand, South Africa and United States. The development of CCPs has been modelled closely on the highly successful mobile intensive care ambulance (MICA) paramedic in the State of Victoria in Australia. This approach was trialled as early as 1971 to reduce avoidable deaths from road traffic accidents and heart attacks. These advanced paramedics have a higher clinical skills set and can perform advanced clinical procedures³⁵ (Appendix 10). In 1992, the King's Fund published a research report³⁶ in which it was predicted that paramedics would be developed to this advanced level and that in so doing there would be 'a reduced need for direct medical involvement in pre-hospital care, which would have major economic benefits'. An Office of the Strategic Health Authorities international comparative review of emergency services³⁷ identified two main systems of pre-hospital care:

'During 2012 further evidence of the benefit from CCP level care has emerged from the conflict in Afghanistan, demonstrating a significant survival benefit from CCP level care in seriously injured patients' (Consultant Paramedic)

- 'Paramedic led (with medical governance):
 - Highly efficient, using advanced technologies.
 - Rapidly improving patient care pathways.
 - Introduction of clinical performance indicators.

³⁴ NHS London (2012) Allied Health Professions MSK Toolkit.

³⁵ Jashapar A. (2011) Clinical Innovation in pre-hospital care: An introduction to Critical Care Paramedics in the United Kingdom. ISBN: 978-1-905846-54-2

³⁶ King's Fund (1992) Too Many Cooks. The Response of the Health-Related Services to Major Incidents in London. Research Report no 15.

³⁷ Office of the Strategic Health Authorities (2009) Emergency Services Review A comparative review of international Ambulance Service best practice

- Physician led:
 - Complex systems of triage.
 - Delivering care direct to the patient.
 - Fewer, more appropriate ambulance transports to hospital services’.

They reported that ‘neither the paramedic led service nor the physician led service outperformed the other mostly due to years of system optimisation. It was also reported that elements of each are being considered to adapt the others system to accommodate changing priorities and needs’. This review reported that the total costs for paramedic based Emergency Medical Service (EMS) services in the West Midlands Ambulance Service when compared to a medic led German model, were 42%’.

Dr Jashapar³⁵ undertook a cost benefit analysis of the CCP role. He considered the five optional models of service delivery shown in table 6. He demonstrated that using CCP teams without additional support is a cost effective approach to the service

Option	Model	Cost/value of life saved
1	Current CCP model with CCP team in 4 PCTs – level of service is at an interim (developing) operating capability	£45,412
2	Developing CCP model – CCP teams in all 8 PCTs	£34,059
3	Fully developed CCP model with additional clinical support – CCP teams in all eight PCTs with medical supervision and support from 2 FTE Consultants	£47,170
4	One Doctor Team 24/7 in each Strategic Health Authority (two teams in total in SEC region) with medical supervision and support from 1 FTE Consultant	£302,341
5	One Doctor Team 24/7 in each PCT (eight teams in total in SEC region) with medical supervision and 24/7 cover from 2 FTE Consultant	£252,543

Table 6 Comparative cost benefit of employing Critical Care Paramedic teams³³

During the period April 2004 to January 2008, 1,045 patients in Australia with suspected severe traumatic brain injury (TBI) were evaluated by paramedics as eligible for inclusion in a randomized controlled trial³⁸. A total of 328 were randomly allocated to either paramedic pre-hospital intubation (160 patients) or hospital intubation (152 patients). The conclusion of this study was that for adults with severe TBI, pre-hospital rapid sequence intubation increases the rate of favourable neurological outcome at 6 months. While it is recognised that endotracheal intubation has a number of potential advantages for the patient, this clinical intervention requires the paramedic to have considerable advanced clinical skills such as those developed by the critical care paramedic and a clinical governance model that minimises risk to the patient.

³⁸ Bernard, B.A., Nguyen, V., Cameron, P., Masci, K., Fitzgerald, M., Cooper, D.J., Walker, T., Myles, P., Murray, L., Taylor, D., Smith, K., Patrick, I., Edington, J., Bacon, A., Rosenfeld, J.V., Judson, R.(2010) Prehospital rapid sequence intubation improves functional outcome for patients with severe traumatic brain injury: a randomized controlled trial. *Annals of Surgery* Vol 252 No 6 (page 959-965).

When a response to a 999 call requests a paramedic, because the patient is deemed critical, then it is inappropriate to send technicians. There is evidence³⁹ that adverse outcomes occur if the wrong type of crew is sent to a patient needing critical care (see section 4.1).

7.2 Patient's expectations

In 2005, Bradley¹⁰ stated that 'education, learning and development for all staff must be a priority to ensure that they have the appropriate skills, behaviours and knowledge to meet the professional standards expected of them'. The PEEP study has captured some examples of a patient's expectations. The examples shown below demonstrate the diversity of clinical skills required of this workforce. For more detail see Appendix 11.

Examples of patient's expectations

Patient one

'One Sunday in May 2011, I suffered a heart attack. My neighbour dialled 999 and a single paramedic arrived, in no time at all, to look at me and get me ready to be taken away in an ambulance. It arrived very quickly and two more paramedics put me in the ambulance and started work on me. Within no time at all they told me I was having a heart attack and told me they were taking me to hospital from my home. I thought it was quite a distance but we were there in no time at all. From leaving home I was treated with the utmost care and compassion, the paramedics were all fantastic taking care to inform me of exactly what they were doing and why. They delivered me into the care of the staff at the hospital and wished me good luck before they left. Getting me to hospital so quickly decreased the amount of damage that occurred to my heart, which helps with my recovery. I did not get a chance to thank the paramedics for what they did for me giving me a second chance at life. They all deserve a medal for what they do; it could not have been done any better I wish I knew their names so I could thank them in person.'

Patient two

'I've developed "late asthma" at 61. I've been admitted by emergency ambulance 5 times since May 2012. Each time near fatal. First aid from paramedics was critical for me. Their dedication & expertise probably saved me.'

Patient three

'I went round to check on my elderly mother recently and found her lying on the floor of her sitting room. It turned out later that she'd broken her hip. The ambulance was there in minutes and the drivers/paramedics, who turned out to be brothers, were absolutely superb. Not only were they hugely efficient but they treated my mother with great respect and kindness.'

³⁹ NHS England (2013) Urgent and Emergency Care Review - Evidence Base Engagement

7.2.1 End of Life Care

As part of the evidence of what a patient's expectations are of paramedics, a paper was prepared by the Research and Policy Officer at the charity Compassion in Dying, a copy of which can be found in Appendix 12. The issues raised in this paper highlighted the need for 'planned care' for those in receipt of palliative/end-of-life care, alongside chronically ill and frail older adults, rather than for ambulances delivering care for a 'well' population. The author went on to comment that 'paramedics have a crucial role in identifying and assessing these people. With an increasingly elderly population paramedics will encounter this situation more frequently and they should all be aware of the local systems for recording patients in the end-of-life stage'.

'Good end-of-life education and on-going training is essential so that paramedics feel competent in end-of-life care'. (Compassion in Dying)

7.3 Regulation of paramedics and standardisation of roles: the international position

7.3.1 Australia

The Australian Health Minister's Advisory Council is consulting on the options for national regulation for paramedics⁴⁰ as the personnel who provide pre-hospital emergency care. 'The current situation is that the role and scope of paramedics in Australia is determined by employers.' In response to this consultation the Australian College of Emergency Medicine (ACEM) welcomed the review⁴¹ and supports the 'principle of national registration of paramedics'. As part of this review of regulation of the paramedic workforce in Australia the ACEM calls for:

- Nationally consistent definition of a 'paramedic'.
- Uniform definition of the scope of practice for paramedics.
- Appropriate clinical governance model.
- National consistency in education and training for paramedics.

These priorities for the ACEM resonate with the findings of this PEEP study.

7.3.2 Canada and the United States

Paramedics in Canada are currently regulated under the Ambulance Act and Regulation⁴². It has been acknowledged that this is inadequate as it only covers those working for the ambulance services. Of the nine provinces, six are regulated either directly or indirectly by an Act, or in the case of Newfoundland and Labrador through the Regional Health Authorities Regulations. Out of the three provinces that are self-regulated, two are self-regulated through the Paramedics Act and Alberta has stayed with the Alberta College of Paramedics 'until the Health Professions Act is proclaimed in

⁴⁰ Australian Health Ministers' Advisory Council (2012) Consultation paper Options for regulation of paramedics.

⁴¹ Australian College of Emergency Medicine (2012) Consultation paper-Options for regulation of paramedics.

⁴² Health Professions Regulatory Advisory Council (2012) Regulation of Paramedics and Emergency Medical Attendants: A Jurisdictional Review.

force'. It is because of the lack of standardisation of regulation of the Canadian paramedic workforce that the jurisdictional review has been commissioned. The review also considers the situation in the United States and reports that 'each State has the authority to regulate local Emergency Medical Services (EMS) personnel and determine the scope of practice limits'. It notes that the 'lack of consistency in the workforce and the variability in standards and statutory obligations across States, contributes to a limited understanding of the size and function of the EMS workforce'.

7.3.3 New Zealand

There is no national regulatory framework for paramedics in New Zealand. However, there is currently a review of the Health Practitioners Competence Assurance Act 2003⁴³. Paramedics in New Zealand 'make clinical decisions on behalf of around 1,000 patients daily, yet remain unregulated. This presents a barrier to integration with primary care services'. The inclusion of 'paramedics under the Health Practitioners Competence Assurance Act should bring a highly skilled and adaptable workforce into the health professional arena, offering significant opportunities for flexible working'. There is a major gap in the current legislation. Paramedics engage daily in high stakes and largely autonomous clinical decisions but this situation is not truly reflected in law.

7.3.4 South Africa

Similar to the UK system, all emergency medical services personnel in South Africa are required to meet the standards of the governing body, the Health Professions Council South Africa (HPCSA). The following professions are registered under the auspices of the Professional Board for Emergency Care⁴⁴:

- Emergency Care Practitioners.
- Paramedics.
- Emergency Care Technicians.
- Basic Ambulance Assistants.
- Operational Emergency Care Orderlies.

7.3.5 United Kingdom

From the international evidence, it is very clear that the UK's robust regulation of paramedics is a strength for the profession. It provides a platform for further development of this workforce in a way that ensures safe outcomes for those that use their service. A particular challenge that the UK has is the naming of different employment grades of the qualified paramedic. This varies across the UK and between the services. Particular problems are the regular use of titles, in particular Paramedic Practitioner, Critical Care Practitioner and Emergency Care Practitioner.

The current career framework for the paramedic workforce sets out very clearly the recommended titles against the Agenda for Change pay scales and the minimum educational requirement (Appendix 13, Appendix 14). However, the information gathered so far suggests that this framework is not used consistently and that local interpretation is not well understood within and outwith the profession. The

⁴³ Paramedics Australasia (2012) Review of the Health Practitioners Competence Assurance Act 2003

⁴⁴ http://www.hpcsa.co.za/board_emergency.php/

College of Paramedics is urged to progress the standardisation of the naming of the roles and to keep the term ‘practitioner’ to refer to those in a Band 5 commensurate with other non-medical professions; specialist paramedic, for those who have developed additional knowledge and skills following further study. In line with other non-medical health professionals specialist paramedics would be employed at Band 6. Of particular concern is the interchangeable use of the titles; Advanced Paramedic, Critical Care Paramedic and Emergency Care Practitioners (ECP). ECP is a title also used by other professionals working in emergency care. The terms used should be standardised, profession specific and devoid of misunderstanding and misinterpretation.

7.4 Professional accountability for paramedics

In 2011, the then Health Professions Council (HPC) published a research report about professionalism¹⁴. The researchers studied the concept of professionalism within three of the professions regulated by the HPC, including paramedics. They concluded that the participants to their study interpreted professionalism as encompassing many aspects of ‘behaviour, communication and appearance (including but not limited to, uniform)’. They proposed that professionalism could be seen as a ‘meta-skill’ and that the true skills of professionalism are more about knowing when to do it rather than knowing what to do. With reference to a profession that is ‘newly professionalised’, which could be inferred as paramedics, the researchers suggested that the professionals may find it harder to gain the management support necessary to ensure they feel valued. When considering a lack of professionalism it is important to identify when behaviour is appropriate rather than as an absolute behaviour.



A proposed framework for professional accountability for paramedics is set out in figure 1. This framework is based on a Framework of Professional Accountability for Allied Health Professionals⁴⁵ which has been endorsed by the National AHP Professional Advisory Board (AHP PAB). It is set in the wider context of personal accountability, leadership, corporate governance and regulation (Appendix 15).

⁴⁵ Tanner, K (2013) Professional Accountability-Whose role is it anyway? Are the current mechanisms to ensure professional accountability for Allied Health professionals understood and applied? MSc Dissertation, University of West of England.

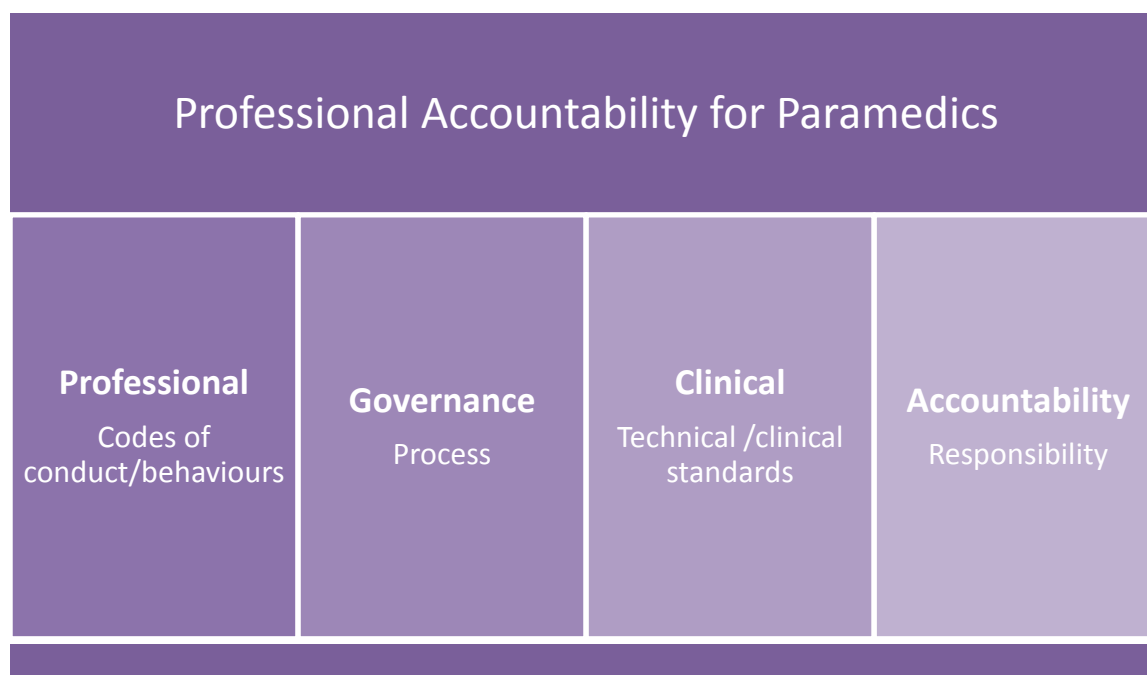


Figure 1 Proposed framework for professional accountability for paramedics

It has been proposed that where accountability arrangements are unclear or assumptions are made without agreement, there is a higher risk of failure and the weak accountability arrangements may only become apparent following an adverse event⁴⁶. This high level of clinical skill and decision making requires a high level of professional accountability. One respondent reported that *'professionalism for the paramedic workforce is work in progress'* and *'hospital clinicians have polarised views about paramedics'* (Professor of Clinical Practice). The main criticism is that *'paramedics do not follow up on the patients they take to hospital, so essentially they are ambulance drivers'*. One of the most important parts of the development and professionalisation of the paramedic workforce is the impression that others have of their capabilities.

During the period 02/02/12 - 10/01/13, 48 HCPC registrants were either struck off or suspended for 12 months (Appendix 16b). Of this 48, 25 were struck off the professional register and 23 were suspended for 12 months. Out of the 25 that were struck off 10 were paramedics which were 40% of those who were struck off the register. Furthermore, out of the 23 that were suspended 12 were paramedics or 52.2% of those that were suspended during that period. Table 7 sets out the reason that the paramedics were referred to the HCPC Fitness to Practise (FtP) Panel during this period and the decision taken by the panel.

Data from the 12 month period 06/01/2011 - 20/12/2011 (Appendix 16c) showed that of the 165 professionals reported to the HCPC 30 of these were paramedics, which is equivalent to 0.15 % of the paramedic registrants.

⁴⁶ McSherry, R; Pearce, P. (2007) *Clinical Governance: A Guide to Implementation for Healthcare Professionals*. (2nd Edition). Blackwell Publishing, Oxford.

Reason for referral to HCPC Fitness to Practise panel	Decision
Lack of competence	Suspended
Misconduct	Struck off
Misconduct	Struck off
Misconduct	Struck off
Conviction	Struck off
Inappropriate behaviour towards a student	Suspended
Practising with a lapsed registration	Suspended
Misconduct	Suspended
Misconduct and failure to disclose convictions	Struck off
Misconduct and lack of competence	Suspended
Misconduct	Struck off
Misconduct	Suspended
Failure to respond to an emergency call	Struck off
A conviction of voyeurism	Struck off
Misconduct	Struck off
Lack of competence and misconduct	Suspended
Misconduct	Suspended
Failure to make a thorough assessment at collision	Suspended
Using cocaine	Suspended
Failure to respond appropriately to emergency call	Struck off
Inappropriate behaviour towards students	Suspended
Failing to appropriately assess a patient	Suspended

Table 7 Detailed breakdown of paramedic referral to HCPC Fitness to Practise Panel 02/02/2012-10/01/2013

Listed in table 8 is the percentage by numbers of registered professionals of the different professional groups that were referred during the same period. This identifies that during 2011, hearing aid dispensers had the highest percentage of registrants of their profession referred to FtP with operating department practitioners second and paramedics third. Out of the 30 that were referred, 53% (16) were struck off and 47% (14) were suspended. There were a total of 70 professionals struck off the register, which means that paramedics accounted for 23% of all those regulated by the HCPC (HCP at that time) that were referred during 2011 and subsequently struck off.

During a recent 3 month period, (January to March 2013) (Appendix 16a), there were 21 referrals to the Fitness to Practice Panel. Of these the highest number of referrals was for paramedics (5) and social workers (5). It should be noted that with 83,584 social workers they number more than 4 times the numbers of registered paramedics.

Profession	Number referred to fitness to practise panel (2011)	Number of registrants (01/05/2013)	% of registrants
Arts Therapist	1	3,199	0.03
Biomedical Scientist	18	22,390	0.08
Clinical Scientist	1	4,884	0.02
Clinical Psychologist	4	19,331	0.02
Dietitian	1	7,921	0.01
Hearing aid dispenser	4	1,811	0.22
Occupational Therapist	22	33,789	0.07
Operating department practitioner	22	11,276	0.20
Paramedic	30	19,428	0.15
Physiotherapist	31	46,853	0.07
Podiatrist	4	12,747	0.03
Radiographer	17	27,830	0.06
Speech and Language Therapist	10	14,061	0.07
Total	165	225,520	1.03

Table 8 Percentage of registrants by profession referred to the HCPC Fitness to Practise Panel 2011

7.5 The role of the education sector to enhance professionalism

The role of educators means that they must engage with ‘professionalism’ as something that can be taught or improved in an educational setting. However, attempts to address concerns about professionalism need to look beyond the educational setting and the behaviour of trainees, to also seriously consider how the working environments and organisational cultures trainees enter can be further developed, to ensure that professionalism is maintained throughout the professional’s career pathway and does not deteriorate in practice. It has been proposed that a more constructive approach to professionalism, for educational institutions and regulators, may be to recode ‘professional behaviour’ simply as ‘appropriate behaviour’. This approach would empower the education institutions to address this problem in the curriculum including how it could be assessed in practice¹⁴.

The Francis Inquiry⁴⁷ made a number of recommendations about professional behaviour. The report emphasised the need for ‘*an increased focus on a culture of compassion and caring in nurse recruitment, training and education at all levels*’. It is widely recognised that although this report focussed on nursing, the same principles must apply to all healthcare professionals⁴⁸. The Francis Inquiry has reinvigorated the debate about how the education and training must adapt to preparing students to care in a setting where most of the patients are older people and the care setting is outside hospitals⁴⁹.

⁴⁷ Francis R (2013) Report of the Mid Staffordshire NHS Foundation Trust Public Inquiry HMSO, London

⁴⁸ Chief Health Professions Officer (2013) The Big Conversation. Allied Health Professions Bulletin, Department of Health.

⁴⁹ Council of Deans of Health (2013) Working Paper on Healthcare Assistant Experience for Pre-registration Nursing Students in England

8.0 The Standards of Proficiency and Scope of Practice of the Paramedic Profession

8.1 Standards of Proficiency

The Standards of Proficiency set by the Health and Care Professions Council (HCPC) are the minimum standards considered necessary to protect members of the public. These apply throughout the career of every paramedic who is required to sign a declaration that they continue to ‘*meet the standards of proficiency that apply to their scope of practice*’⁵⁰. These standards are both generic in that they apply to all those regulated by the HCPC and are also profession specific, for example, only those that apply to paramedics.

The HCPC states that the scope of practice is the area of the profession in which the professional has the knowledge, skills and experience to practise lawfully, safely and effectively, in a way that meets the Standards of Proficiency and does not pose any danger to the public or to the professional themselves. The HCPC points out that a registrant’s scope of practice will change over time and that a registrant’s particular scope may mean that they may not be able to meet all of the standards for a particular profession. For those registrants that want to move outside of the professional scope of practice, they must be certain that they are working lawfully, safely and effectively.



There is often considerable confusion between the concept of scope of practice as set by the professional body in agreement with service providers and the Standards of Proficiency set by the HCPC. The Society and College of Radiographers (SCoR) recently defined the scope of practice as ‘that which the member of the professional workforce is educated and competent to perform’⁵¹. SCoR defines scope of practice within the occupational role and sector of employment and notes that an individual can define their own scope of practice within their role and sector of employment.

The HCPC is currently reviewing the Standards of Proficiency for many of the professions that it regulates. The latest Standards of Proficiency for Arts Therapists, Dietitians, Occupational Therapists, Orthoptists, Physiotherapists and Radiographers have been published⁵². The Standards of Proficiency for Podiatrists and for Prosthetists and Orthotists have been consulted on. Both of these reviews have

⁵⁰ HCPC (2012) Standards of Proficiency -Paramedics

⁵¹ Society and College of Radiographers (2013) Scope of Practice

⁵² <http://www.hpc-uk.org/aboutregistration/standards/standardsofproficiency/>

highlighted the importance of professional conduct and have added this aspect to the standard on maintaining fitness to practise. They have also added that the registrant should be able to keep accurate, legible, comprehensive and comprehensible records in accordance with applicable legislation, protocols and guidelines. Under standard 13 about understanding the key concepts of the knowledge base relevant to their profession a new standard 13.12 has been added which is to understand the concept of leadership and its application to practice. The College of Paramedics is encouraged to take a similar approach.

8.2 The concept of paramedicine

The concept of paramedicine as a specific domain of practice as distinct from the profession of paramedics is important to understand. There is an emerging discourse that debates the development of paramedicine alongside the development of the paramedic profession.

“I wouldn’t want any serving paramedic to feel that they were on the inside lane and paramedicine was going in the outside lane and they couldn’t get engaged in this opportunity and get to a point where they are comfortable in terms of their ability to undertake the role to try and discharge their scope of practice in the right way.” CEO

Paramedicine has been defined as the unique domain of practice that represents the intersection of health care, public health and public safety. It is often described as the totality of roles and responsibilities of paramedics and represents the highest level of practice in out of hospital medicine by non-physicians⁵³. It represents an expansion of the traditional provision of emergency medical services.

‘I do not think we should think of paramedicine in terms of pure paramedics. I think we need to think of other clinical colleagues that work alongside them.’ CEO

It is unclear at this point in time whether all emergency care practitioners see paramedicine as the sole responsibility of paramedics or whether other professionals working in emergency care claim to have expertise in paramedicine. For example, do nurses working in community emergency health see themselves practicing paramedicine? There is evidence that many organisations view an emergency care practitioner (ECP) as a generic practitioner drawn mainly from paramedic and nursing backgrounds. ECPs are working in different healthcare settings in the UK; they are fulfilling a broader public health and Primary Care outreach role in the local community in both rural and urban locations⁴⁰. This development is further complicated by the university sector. Some HEIs in the UK are offering courses in the domain of paramedicine and promote the concept of Emergency or Critical Care Practitioners as either paramedics or nurses⁵⁴. Other universities internationally promote courses in paramedicine leading to a qualification to practice as a paramedic^{55,56}. In a recent report by the King’s Fund⁵⁷ following a review of the Urgent and Emergency Care Services for the NHS South of England there was no

⁵³ <http://en.wikipedia.org/wiki/Paramedicine>

⁵⁴ <http://www.plymouth.ac.uk>

⁵⁵ <http://www.aut.ac.nz>

⁵⁶ <http://www.acu.edu.au/>

⁵⁷ The King’s Fund (2013) Urgent and Emergency Care. A review for NHS South of England

reference to paramedicine or paramedics. It was reported that ‘Ambulance services are often well-placed to act as the co-ordinator of the system’. However, it was acknowledged that a change in direction will require the ambulance service to ‘rethink skill mix and ways of operating’. The report highlighted that ambulance services are under-used and could contribute a great deal more to managing demand pressures and the development of new care models’. This view was further supported by a CEO of an ambulance trust who suggested that *‘paramedicine is at the cusp or cross roads of something very important’*.

“I think that paramedicine in the function of the wider care service can either plateau where it is and there will be work around the scope of practice as it is in the expectation that it is going to remain a service which is featured by clinical assessments, care which has a clear conveyance and transport element to it. Or we can say that we want to go down another route which is really creating a significant partnership between paramedicine and primary care in the first instance and paramedicine and secondary care in the second to drive forward the profession to a far higher level of its ability to assess, to treat and to take the right levels of clinical decision making where both actions are fully recognised and respected by the other clinical professions we work with.” CEO

It is very important that there is a clear understanding of what can be achieved in terms of ‘out of hospital’ and emergency health care. Some ambulance services are considering developing emergency medical retrieval services which could potentially give development opportunities for CCPs at a very advanced level. It is very likely that in the future, paramedicine will include a number of levels where service providers can match the changing demands of the clinical service. One respondent summed it up by stating that ‘if paramedicine is going to move forward then the old practices of the past cannot remain’.

8.3 Scope of practice

As noted in section 7.1.3 a high proportion of 999 calls relates to MSK conditions and is often traumatic in origin. Paramedics are able to autonomously undertake a full clinical examination of patients and determine, with history, the possible MSK injuries present that are not obvious³⁴. Paramedic assessment at the point of contact enables patients to receive BP checks, ECGs, hyperglycaemia checks and orientation assessment. They can advise on physiological risks, such as hypertension and atrial fibrillation and encourage the patient to book a health check with their GP. In addition, as mentioned previously in section 7.1, access ‘falls’ services³¹.

Paramedics have a wide range of therapeutic options within their scope of practice as outlined within the College of Paramedic’s latest Curriculum Guidance⁹. However, there is uncertainty as to exactly what the scope of practice for paramedics is and there is a debate to be had about their scope of practice. One respondent explained that *‘At one level I take the view that scope of practice is something that can be very well defined but at the same time I think it is something slightly nebulous within the profession and far more nebulous when you discuss it with other professions.’* (CEO). An

HR Director agreed with the CEO and advised that scope of practice is a big issue for their ambulance trust particularly the uncertainty about what is core training.

Many of the respondents agreed it is important to clarify the scope of practice and the associated core knowledge. One Medical Director proposed that “*we should write down the detailed scope of practice and that now is the time to move away from rigid guidelines and protocols that have been imposed on paramedics*”. Many interviewees stated that it is really important to be clear as to what is in the scope of practice and what a competency framework would comprise.⁵⁸

“My sense of the scope of practice is that there is a debate to be had:

- *Firstly to understand what paramedicine is;*
- *What role does it have and within that role what level of assessment skills do we want paramedics to have?*
- *What level of skills do we need them to be able to have for them to be able to assess clinical risk?*
- *What level of skills do we want for them to be able to diagnose as I think this is one of the key areas of misunderstanding between the clinical professions, it is the degree to which clinical diagnosis takes place as opposed to clinical risk; and*
- *What interventions do we want our paramedics to be able to apply safely in terms of being able to maintain a professional credibility around that practice?”*

Box 2 A Chief Executive Officer’s view of paramedics’ scope of practice

A number of respondents suggested that once the scope of practice is agreed then the career pathway can be agreed and the implications for education and training and the support required would be better understood. It is recognised that protocol led approach to training paramedics has restricted their scope of practice.

Paramedics Australasia, the Australasian paramedic professional body, has also been addressing this issue. There is recognition in Australia and New Zealand that within paramedicine there are a variety of different clinical roles and scopes of practice⁵⁹ and that scope of practice varies within practice settings and engaging organisations. The approach they have taken to classify this work and identify the different clinical roles within paramedicine is very clear. They have clustered the roles into the Professional Stream which includes paramedics; Technical Stream which includes patient transport and Ambulance Communications Stream which includes Emergency Medical Dispatch Support Officer. With regards to paramedics specifically they list at least seven alternative titles for this role but have clarified what they do through a well-defined definition: ‘A paramedic is a health professional who provides rapid response, emergency medical assessment, treatment and care in the out-of-hospital environment’. They have included the scope of practice for the paramedics (Appendix 10) and added to this the additional responsibilities for the other professionals in the Professional Stream.

⁵⁸ Skills for Health (2010) EUSC17 Manage emergency situations that occur as a result of an EUSC intervention

⁵⁹ Paramedics Australasia (2012) Paramedicine Role Descriptions

The link between the scope of practice and patient care was a repeated theme from the interview data analysis, but it was recognised that employers expect paramedics to treat every patient to the best of their ability within the scope of practice. Many of the ambulance trusts have a strong commitment to treat and leave and to assess and refer. The role of the ambulance trust and the paramedic staff is key to ensuring that people are treated in the right place at the right time⁶⁰. It is important that paramedics are trained to support the transfer of patients to urgent care settings, minor injury units or GP ‘Out of Hours’ service rather than defaulting to a major acute hospital, if it is appropriate to do so. The scope of practice must reflect this service development.

The participants at the summit considered the scope of practice and requested that it should be agreed and standardised (Annex). They posed a number of key questions in relation to scope of practice:

- a. Why is scope of practice so different across the UK?
- b. Standardisation of scope of practice depends on where you work – does this not depend on local advice etc?
- c. Does the scope of practice for paramedics vary more from location to location than in other professionals?
- d. Scope of practice is based on where you are employed i.e. intubation?
- e. Should the ‘scope’ drive the curriculum rather than being employer lead?
- f. If we can’t agree the scope of practice/title can we agree the level/type of education award needed?

Questions about the variation of the scope of practice, depending on where the paramedic works, are evidence of the need to standardise the scope of practice.

The participants also showed that they shared the wider misunderstanding that the regulatory body sets the scope of practice. They asked a number of questions in relation to this misperception:

1. Why are there differences in scope of practice when there are HCPC standards and a national curriculum?
2. HCPC and scope of practice. Surely there is a scope of practice for paramedics?

One activity undertaken at the summit was for participants to create a ‘Wouldn’t it be nice if (WIBNI)’ list (Annex). Several points on this list related to scope of practice including:

- Clearly define a national scope of practice.
- Consistent scope of practice at the point of registration.

When asked to propose the subsequent activities, the participants decided that developing an agreed scope of practice is a priority and that to enable this to happen, key stakeholders should work in partnership to clearly define the paramedic scope of practice for the profession and it should meet the current and potential future service needs. The College of Paramedics reported that during the last decade there has been recognition that the scope of practice of paramedics had expanded beyond critical care and that there are a number of different schemes exploring this potential.

⁶⁰ Health and Social Care (2011) Transforming your Care, Review of Health and Social Care in Northern Ireland

8.3.1 Independent prescribing

The ten year journey to extend prescribing rights to allied health professionals has culminated in a review by the Department of Health of the curriculum frameworks for the education programmes to prepare physiotherapists and podiatrists as Independent/Supplementary Prescribers and to prepare radiographers as Supplementary Prescribers. Following on from this the Health and Care Professions Council is due to publish new standards of proficiency for prescribing by the end of August 2013, subject to successful passage of secondary legislation, underpinning the granting of independent prescribing rights to physiotherapists and podiatrists who have undertaken the appropriate training and gained the required annotation on the HCPC register⁶¹.

Non-medical prescribing provides mechanisms to ensure that services can be delivered via new roles and new ways of working to improve clinical outcomes for the patients⁶², by improving access to services and promoting self-care/self-management with support close to the patient.

Independent non-medical prescribing empowers healthcare professionals to deliver improved clinical outcomes:

- Enabling early intervention to improve outcomes for service users.
- Reducing avoidable hospital admissions.
- Enabling a greater focus on reablement, including return to work.
- Helping older people to live longer in their own home.

It also supports the promotion of health and wellbeing within all clinical interventions by providing a timely response to acute exacerbations of long-term conditions. Non-medical prescribing can also facilitate partnership working through improving discharge from hospital by improving the transition from acute to community care.

Independent prescribing by physiotherapists and podiatrists supports patient-centred care. It can enable new roles and new ways of working to improve quality of services, delivering safe, effective services focused on the patient experience. It facilitates partnership working across professional and organisational boundaries and within the commissioning/provider landscape to redesign care pathways that are cost-effective and sustainable. It can enhance choice and competition, maximising the benefits for patients and the taxpayer. It also creates opportunity for physiotherapist and podiatrist clinical leaders to innovate to inform commissioning decisions. At the time this initiative commenced, it was decided that paramedics would not be included in the independent prescribing and/or supplementary prescribing. The current view is that independent prescribing for paramedics should be reviewed as a priority.

⁶¹ Chartered Society of Physiotherapy (2013) Outline Curriculum Framework for Education Programmes to Prepare Physiotherapists and Podiatrists as Independent/Supplementary Prescribers and to Prepare Radiographers as Supplementary Prescribers

⁶² DH (2011) Equity and Excellence: Liberating the NHS

“I suggest we review the possibility of paramedics gaining independent prescribing rights given the changing medical, social and public health environment and also given the potentially wide range of A & E closures nationally, paramedics will undoubtedly have to manage patients over longer distances. Realising that we live in a compensation culture, service providers need to be able to provide and demonstrate services that are robust and fit for purpose.”

Box 3 A patient’s view of independent prescribing rights for paramedics

9.0 Pre-registration Education and Training-The debate

This is one of the most controversial themes running throughout the study. The key stakeholders in the system are polarised between those who are adamant that the only way forward in the immediate future is for all paramedics entering the profession to be graduates with honours degrees while at the other end of the spectrum there are ambulance staff including paramedics who steadfastly hold the view that being a good paramedic does not require the professional to hold such a high level academic award.

‘The majority of paramedics do not see why everybody has to have a degree to be a good paramedic’.
Ambulance Service Education Lead

Currently, the threshold level of qualification for entry to the HCPC Register for paramedics is ‘Equivalent to Certificate of Higher Education’⁶³. This is the standard against which the regulatory body judges the education and training programmes. The HCPC guidance for education providers about the Standards of Education and Training (SETs) on threshold entry qualification to the register is highlighted in box 4. Repeatedly, the respondents advised that taking the minimum threshold level from Cert HE (level 4) to a BSc(Hons) (level 6) is too big a step and that there should be a phased transition with an interim minimum threshold at level 5. One respondent summed up many views when they stated *‘At this stage the profession does not need to be at a degree level. However, I believe that ultimately we do, but as a profession we are very young and I do not want a triple service. I do not want a scenario where some paramedics have a certificate, some have a diploma and some have a degree. From my perspective the earliest we should start to talk about degrees is 2016’*, Ambulance Service Education lead.

SET 1.1 contains the word ‘normally’ and some of the entry routes include the word ‘equivalent’. This is to show that you may be able to design a programme which leads to a different qualification, but meets the rest of the SETs and the standards of proficiency and so can still be approved by us. This may include programmes set at levels above those given. By law the HCPC could not refuse to approve a programme just based on the form of award.

Box 4 SET 1.1 threshold entry route to the register –HCPC guidance

The threshold level is the **contemporary level of entry to the Register** which applies to programmes not individuals. Changing it does not mean that people who qualified at other levels have to retrain or cannot be registered. For example, diploma level qualified physiotherapists are still registered.

In the third edition of the College of Paramedic’s Curriculum Guidance⁹ there are a number of professional body recommendations including one on minimum threshold level onto the register: ‘The

⁶³ Health and Care Professions Council (2012) Standards of Education and Training

College believes that the range of knowledge and skills required of contemporary practice is such that the minimum academic level required should be level 5 (usually foundation degree or diploma of higher education).’

The issue of the threshold entry qualification was a repeated topic for discussion at the summit (Annex). Examples of the participants’ comments included:

Examples of written comments made by participants who attended the summit

‘The level for registration is vital. In other health settings FdSc/DipHE is for support workers should this not apply to ambulance training?’ (Annex section 3.1.2).

‘Most services have already moved to level 5. That should be the education standard.’ (Annex section 3.2.2).

‘1st step – Increase threshold level, increase effective/standardised commissioning of education – undergrad and CPD. Bursaries and MPET and practice placement educators/monitors.’ (Annex section 5).

Respondents are also concerned about the academic reach for technicians if the threshold is immediately raised to BSc(Hons) and that in the ‘race for a degree’ the door may be closed on the slow track up to paramedic. The outcome of which may be a perception that those with a degree have a ‘proper qualification’ and those without a degree are ‘inferior’. The experience that other professions have had is that it is very important to enable the existing workforce to develop to a position where they are totally accepting of the degree holder workforce and recognise the contribution they can make to the service for the benefit of the patient.

A repeated concern was that the ambulance trusts should provide an opportunity for existing staff to develop to become paramedics and/or to gain a degree; *“we must also be cognisant of the fact that there are a lot of staff that have come through the more traditional route who are still able and would be very interested ... in extending their skills and therefore going into the degree or master’s programme”* (HR Director). The ambulance services have asked for time to put all the arrangements in place as a high percentage of the paramedics do not yet hold a degree. This is seen as important, as the extra time will give the employers a chance to *“get all certificate paramedics up to diploma level. This will increase their level of understanding of evidence based practice so that when it is mandatory for registration that paramedics have a degree there is not a subset of paramedics that feel they are inferior”* (HR Director).

‘It is not about educating and training the individual it is about developing the people for the service needs’
Trust HR lead

Any move to an all degree profession must be supported by the employers, as education and training is about service needs. There is considerable nervousness about retaining a stable paramedic workforce which until now has been secure with staff progressing up the career ladder. Degree holder paramedics are very employable and there is concern that they will elect to work abroad as many other countries are starting to develop this workforce.

The journey to degree level must be clearly mapped out and the rationale explicitly articulated. In 2008, the Nursing and Midwifery Council announced⁶⁴ its intention that by ‘September 2013 only degree-level pre-registration nursing programmes will be offered in the UK’. In 2010, the Nursing and Midwifery Council (NMC) published the standards for pre-reg nursing education⁶⁵ and this announcement was met with some concern by those whose image of nursing rested in the past rather than in the future⁶⁶. However it was argued that the demands on the nursing profession are far more complex than those of the past and that in the future the nursing profession will be faced with meeting new challenges as a result of changes in demography, disease patterns, lifestyle, public expectations and information technology.

The NMC commissioned a review of what nursing and nurse education might look like in 2015⁶⁷. Some of the findings in the NMC commissioned report, which was published in 2007, are similar to the findings from this study. The NMC study reported ‘a tension between policies to widen access to education and the possibility of introducing a degree level programme’ and that introducing graduate level programmes may present difficulties for some of the traditional applicants such as healthcare assistants (HCAs) who may no longer be able to access nurse education.’

The new Education Outcomes Framework¹⁹ (Appendix 5) has been designed to improve education, training and workforce development in England and balances excellence in education with widening participation. Although there is no problem recruiting to paramedic pre-registration programmes, it is important that any changes made to the current system, does not exclude potential paramedics from being given the chance to apply.

The NMC Commissioned report by Marcus Longley and colleagues⁶⁷ outlined the arguments in the nursing profession at that time, such as the arguments for the degree entry, were that ‘bachelor level is more attractive and will recruit more able students’, whereas the arguments against degree preparation for nursing included a belief that nurses do not need degree level skills to provide quality care and that there was the potential risk of limiting the development of more practical skills. These arguments are mirrored in some of the comments from the respondents to this study. For example, when a student was asked about the value of a BSc(Hons) course they pointed out it would give them another year which would be worthwhile as long as it was “*an extra year with extra clinical skills for example recognising early signs of dementia rather than just another year of experience*”. Others reported that they would rather become an independent practitioner at the end of the second year.

The value of an extra year has been evidenced by the NMC’s approach, until 2013, of developing the majority of the nursing workforce in England through the DipHE three year model. This successful example has enabled the delivery of the service required developments to the curriculum including an enhanced focus on clinical decision-making; increased learning opportunities in respect of mental health and social care and where possible integrated placement learning; enhanced focus on supporting patient’s wellbeing. The College of Paramedics⁹ supports this view and underlines the importance of experiential learning and recommends a three year full-time programme ‘to develop knowledge by exposure to practice-based learning, to include 2,250 hours of practice placements’.

⁶⁴ Nursing and Midwifery Council (2010) Pre-registration education in the UK

⁶⁵ Nursing and Midwifery Council (2010) Standards for pre-registration nursing education

⁶⁶ Bernhauser, S (2010) Degrees will equip nurses to meet future challenges in healthcare. Nursing Times; 106:21,8.

⁶⁷ Longley, M., Shaw, C., Dolan, G. (2007) Nursing: Towards 2015 Alternative Scenarios for Healthcare, Nursing and Nurse Education in the UK in 2015 Commissioned by the Nursing and Midwifery Council to inform the debate on the future of pre-registration nurse education.

The affordability of any additional period of learning must be taken into account and may prevent some students from taking up the training, particularly if they have to pay fees. The trusts also noted a financial concern and reported that there might be a risk that additional learning would put the newly qualified paramedic into Band 6 of Agenda for Change (AfC)⁶⁸. There was no readily available evidence to support this assertion other than a view taken by the professionals themselves and the unions that any graduate course would automatically take them beyond the 395 weighting limit for Band 5. The NHS Job Evaluation Handbook includes a section that addresses the difference between level 5 and level 6 box 5 (Appendix 13).

‘There must be a clear step in knowledge requirements between levels 5 and 6, a distinct addition of knowledge compared to what was acquired during basic training and required for professional practice. In broad terms the additional knowledge for level 6 should equate to post-registration or postgraduate diploma level (that is, between first degree/registration and master’s level, but there is no requirement to hold such a diploma.’

Box 5 Difference between level 5 and level 6 according to the NHS Job Evaluation Handbook

A Course Director pointed out that “*You get paid on the AfC by the role that you take, it is not about the qualifications that you have. Some AHPs enter the register with a master’s degree and start on Band 5*”. This point was also raised at the summit (Annex) when it was queried as to whether the specific education awards align to role titles and Bands on AfC.

9.1 Education programmes

As already reported in section 6.1, in response to the ambulance trusts requirements and without a clear direction as to the scope of practice of newly qualified paramedics, there is a diverse range of education and training awards leading to registration.

The exact nature of the programmes varies across the UK and for England by region and sometimes within region and this is linked to the different credit and qualifications frameworks that exist across the UK. Scotland and Wales have a country-specific credit and qualifications framework; the Scottish Credit Qualifications Framework (SCQF) and the Credit and Qualifications Framework for Wales (CQFW) respectively. England and Northern Ireland have a shared national qualifications framework called the Qualifications Credit Framework (QCF). In addition England, Northern Ireland and Wales share a higher education framework called the Framework for Higher Education Qualifications (FHEQ). An attempt has been made to map some of these broad comparisons against the Skills for Health Career Framework (Appendix 17). It is important to note that the SQCF does not include a foundation degree.

⁶⁸ NHS Staff Council, Job Evaluation Group (2010) NHS Job Evaluation Handbook 3rd edition

The majority of awards offered by the English HE sector are foundation degrees at level 5 on the FHEQ. This is a very interesting finding as many universities also offer a foundation degree, as the final award for the support workers who on successful completion, are eligible to apply for an Assistant Practitioner post⁶⁹. None of these institutions offer a DipHE as the final award for development of the healthcare support worker role. Many of the institutions offer a two year programme which they deliver over an extended academic year of 45 weeks. Some of the respondents stated that there *‘should be more practice hours included in a course of study’* and others who state *‘it is essential to have more education hours’*. One way of addressing both of these requests is to make all pre-registration paramedic programmes a three year course either as a three year DipHE or as a three year BSc(Hons).

‘Why the foundation degree is still used is not clear. It is a bad title I would much rather somebody had a higher education diploma. I would rather they had a degree but if we are to start somewhere I would rather they had a DipHE as it is a much more academic award.’ Course Director

The Skills for Health level 4 descriptor⁷⁰ lists assistant or associate practitioners as staff who work to standard operating procedures, protocols or systems of work but the worker makes judgements. It further notes that those working at this level may have passed or be studying for a foundation degree or diploma in higher education. The College of Paramedic’s proposed Career Framework (Appendix 14) sets the education entry onto the register as the foundation degree at level 5 the College’s current Career Framework it is set at level 5, but refers to the award as diploma (Appendix 14). In the absence of an agreed scope of practice at the point of registration the current alignment seems appropriate.

This position is supported by experienced clinicians and by academic staff who appear to favour the diploma in higher education as the preferred minimum entry qualification as the first phase of development. *‘The consensus is that we should ‘raise the bar’ for the paramedic workforce and that the threshold for entry onto the register should be raised as soon as practical to a diploma’* (Consultant Paramedic, College of Paramedics Council Member, Course Director). If the paramedic workforce is to continue operating under clinical practice guidelines then it could be argued that the diploma is the final destination on the journey to raise the minimum threshold entry onto the register. The JRCALC (The Joint Royal Colleges Ambulance Liaison Committee) Clinical Practice Guidelines⁷¹ have just been reviewed and reflect the changes in practice.

An ambulance trust has recently launched a new apprenticeship model to train paramedics (Appendix 18). The student is employed by the trust on a 30 month contract with no guarantee of employment on successful completion of the programme. The student is expected to work a shift rota during that time and is remunerated for this extra work. The student is also required to make a monthly contribution to the course fees. This model is viewed by the education sector as primarily a ‘training’ model rather than an education model. The apprenticeship model is popular with healthcare service providers as it

⁶⁹ Lovegrove, M., Jelfs, E., Wheeler, I., Davis, J. (2013) The Higher Education Contribution to Education and Training for Healthcare Support Worker roles. Council of Deans of Health and Skills for Health.

⁷⁰ Skills for Health (2010) Key Elements of the Career Framework.

⁷¹ Joint Royal Colleges Ambulance Liaison Committee (2013) UK Ambulance Service Clinical practice Guidelines 2013. NHS and Association of Ambulance Chief Executives.

enables them to effectively deliver the service and at the same time develop the staff. Skills for Health has been working with the NHS to develop an agreed approach to developing a Higher Apprenticeship award⁷². The intention is that this award will be suitable to develop the assistant practitioner in the health service. There is no other allied health professional that is ‘trained’ to registration through an apprenticeship model. Although until recently, 4 year part-time in-service education models leading to BSc(Hons) awards were quite popular in Occupational Therapy(OT) for OT assistants already in employment. At a time when the majority of respondents acknowledge that the direction of travel is to enhance the level of education of the paramedic workforce it is interesting to note that this organisation has decided to take a different view and decided to reduce the ratio of education to training whereas the Education Outcomes Framework emphasises excellence in education not on training (Appendix 5).

The IHCD is a vocational model which has been used very successfully in the sector and is continued to be used in parts of the UK while it is being rolled out. The academic institution responsible for delivering the IHCD is now being employed to *‘bridge across from the vocational programme into degree to create a vocational degree in paramedical sciences. This concept of a vocational degree in paramedic science is very important for the future of the profession as it addresses the need to balance the student clinical experience with the development of knowledge, skills and critical thinking’* (Programme development lead). This organisation is currently focussing on the post-registration ‘top up’ to degree to support the existing paramedics who hold an IHCD.

9.1.1 Development of the Combat Medical Technician

There is increasing interest in the opportunity to enable Combat Medical Technicians (CMTs) to gain the necessary skills to gain civilian employment. The Defence Medical Service (DMS) is seeking accreditation of prior learning as well as career progression for this workforce⁷³. The experience they gain as military technicians is very specific and they will not routinely encounter challenges regularly experienced by the civilian paramedic workforce: childbirth, long-term conditions, dementia care, care in the community, carers and other relatives, dealing with bystanders for example. CMTs have highly developed skills in trauma and dealing with very sick and injured patients. These skills are transferable to civilian life. The University of Cumbria has responded to the request to enable the CMTs to develop these skills to enable them to be eligible for employment in civilian life. The first cohort of 20 started in April 2012 and is the product of a partnership development between the university and civilian paramedics at Keogh Barracks in Surrey. There are currently 60 CMTs on the pilot programme which was developed in collaboration with the DMS. The resulting programme ‘provides a progression route in line with civilian roles of:

- Emergency Care Assistant / Health Care Support Worker.
- Assistant Practitioner.
- Paramedic.
- Nursing and Allied Health Professions’.

⁷² <http://www.skillsforhealth.org.uk/about-us/news/secretary-of-state-commends-work-on-apprenticeships/>

⁷³ University of Cumbria (2013) Developing Combat Medical Technicians to Face the Challenges of Civilian Life.

The exit awards currently offered are:

- University Certificate Practice Development: Emergency Care Assistant.
- Certificate of Higher Education in Caring for Patients and Clients in Health Care Settings (Pre-Hospital & Emergency Care).

Once the CMT has successfully completed the Cert HE they are eligible to enter the final year of the FdSc in Paramedic Science or FdA in Caring for Patients and Clients in Health Care Settings.

The holders of a University Certificate have met the requirements to work within an NHS environment as an Emergency Care Assistant, Emergency Care Support Worker or Emergency Medical Technician 1 equivalent. Those with a Cert HE have met the requirements to work within an NHS environment as an Ambulance Technician, Emergency Medical Technician 2 or equivalent.

9.2 The partnership between education and service

We found examples of exemplary partnership with clear evidence of a shared responsibility for the potential for all students to achieve the mutually agreed learning outcomes. Unfortunately this was not the situation throughout the UK and there are areas where the partnership could be strengthened and the degree to which the organisations agree and commit to working more closely together for the longer term benefit of the service should be increased. In particular, areas such as joint recruitment of students, joint course design and where appropriate course delivery and development of mentoring and practice education skills in the clinical workforce. The practice learning environment is considered in section 10.1.

Where the education and training is formally commissioned the governance processes require both educator and service provider to demonstrate appropriate standards of education and training. This includes areas such as the preparation of the clinical environment to take students and the joint approach to student recruitment. Some regulatory bodies mandate that service providers are involved in assessment of prospective students⁷⁴. An unpublished survey of a review of the assessment of recruitment practices for nursing pre-registration programmes⁷⁵ found that the extent to which service providers engaged in recruitment varied. It was also reported that while all universities invited service providers to participate in the interview days the level of engagement ranged from 30% to 100%. This study has also found that service providers are often not able to commit to recruitment days or other key areas of the education and training process.

‘We are rewriting the curriculum at the moment and we are struggling to get buy in from the trust. On recruitment days we sometimes manage to get somebody here.’
Course Director

The HCPC Education and Training Committee agreed in June 2013 to add a SET to require ‘service user and carer involvement’ in education programmes, introduced on a phased basis from 2014/2015.

⁷⁴ NMC (2010) Standards for Education: Standard 3, Processes for selection, admission, progression and completion must be open and fair.

⁷⁵ McArdle, J., (2012) The Chief Nursing Officer’s baseline review of the assessment of recruitment practices for Nursing and Midwifery pre-registration programmes. Department of Health

The proposal⁷⁶ is considering the different ways in which service users could be involved such as selection and recruitment of students and design of the curriculum.

9.3 Moving towards an all graduate profession

Moving to an all graduate profession has important implications for social and economic change in the service¹⁵. Universities work hard to enable people of all ages, backgrounds and attitudes to receive formal recognition for the skills and knowledge they already possess and value the experience of colleagues within the existing workforce. It is hoped that in the longer term this will increase the proportion of black and minority ethnic groups into this service, which currently forms a relatively low percentage of the workforce.

There is strong evidence to indicate that healthcare professionals prepared to degree level enhance the quality of care⁷⁷ and they are better patient advocates than non-graduates. This is particularly evident in nursing as graduate nurses are better at making diagnoses and evaluating the effects of nursing interventions. It is anticipated that in the future the evidence associated with graduate paramedics will be similar. The majority of other non-medical health professions study to degree level, but with nurses there has been deep ambivalence over accepting that managing care and providing treatment in modern health systems requires extensive knowledge and skills and that 21st century practitioners perform many more sophisticated tasks than they did 25 years ago. This situation of profound uncertainty about the value of a graduate workforce is widespread in the existing paramedic workforce.

Some of the early allied health professions graduate pioneers were physiotherapists. The historical timeline leading to physiotherapy graduate profession is set out in table 9.

Date	Key milestones in the development of an all graduate physiotherapy profession
1868	Chartered Society of Physiotherapy was founded
1976	First degree course in physiotherapy (University of Ulster)
1977	Health Care 1977 Bill Physiotherapists given first contact rights
1981	First degree programme in London at the Royal London Hospital
1992	Physiotherapy in the UK became an all graduate profession at entry.

Table 9 Development of the physiotherapy graduate profession⁷⁸

The longer term aspiration of many of those interviewed as part of this study is that the paramedic profession should become an all graduate profession. One respondent reported that *‘we understand and support the fact that we will move to degree level education at a stage’* however they pointed out that *‘2016 is too soon as we haven’t done enough on grand parenting, behaviours, reflective practice, all the development that has to happen to embed it in the service’* (HR Director).

One very experienced paramedic articulated the views of many experienced paramedics with regards to the rationale for an all graduate profession (box 6)

⁷⁶ <http://www.hpc-uk.org/assets/documents/10003F12Enc09-serviceuserinvolvementineducation.pdf>

⁷⁷ Corner, J. (2011) Degrees will build in values to underpin and ensure good care Nursing Times 107 (15-16):7

⁷⁸ Moore, A. (2011) Developments in physiotherapy in the UK. JAARCONGRES presentation

The move towards an all graduate profession is an opportunity to put in place the infrastructure (see section 11.1) that will enhance the quality of the student learning for the benefit of the patient and enable the educational development needs to keep pace with development of the profession²⁶.

“This service is now about a much more complex case mix and unscheduled care patients. This requires a different set of knowledge, procedural skills and attributes to manage it. It would be easy to stay with an algorithm. However, the reality is that there is a paucity of appropriate pathways for lower acuity patients in terms of capacity to manage that caseload and the competency of the individuals to manage these patients to the point of closure.

In terms of education the recommendation has to be that we move at an early stage to a level 6 threshold entry education package.

The rationale for this position is that diplomas/foundation degrees will never be substantial enough in terms of the education content to test the skills required to manage this case mix. We need the curriculum to include endocrinology, therapeutics, clinical decision making and exposure to the right practice areas in a relatively short space of time. To spring board a paramedic to master’s level study where they are managing this caseload is a massive jump.

I would also like to see a very clear scope of practice and a practice framework for paramedics in the UK at that level alone. If the scope of practice is about managing the unscheduled case mix we need to make sure the education programmes and curricular reflect the necessary knowledge and skills to do so.”

Box 6 An Advanced Paramedic Practitioner’s case for an all graduate profession

9.4 Graduateness

As the paramedic profession moves to an all degree profession at the point of registration, the perceived dissonance between the concept of graduateness and work-based learning is important to understand. This is particularly significant during the undergraduate (UG) years when the student develops from a novice practitioner in year one to an autonomous graduate (G) practitioner at the end of the final year.

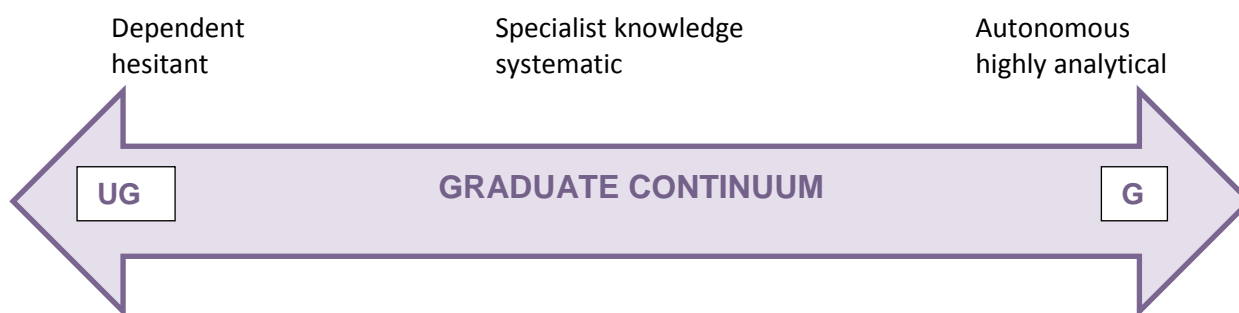


Figure 2 Line of graduate continuum indicating shift from novice to expert⁷⁹

The concept of work-based learning by its very nature takes place outside of the university and is not centred on acquisition of subject knowledge⁸⁰. Despite the development of the foundation degree model, which requires integration of learning in the workplace with the taught component, the acceptance of the learning that takes place outside of the university is still contested and its contribution to graduateness (figure 2) is un-quantified.

The university sector embeds the concept of graduate learning outcomes into any honours degree programme as shown in table 10 below.

This is further evidenced through the Qualifications Academic Agency (QAA) Framework for Higher Education Qualification (FHEQ) which state that ‘*qualifications should be awarded on the basis of achievement of outcomes*’ and not determined by the number of years of study. The FHEQ descriptors outline the nature and characteristics of the main qualification at each academic level of study and makes comparisons between qualifications at different levels. These qualifications develop graduates with high level analytical skills and a broad range of competences. They are intended to be seen as distinct from training or solely the acquisition of higher level skills⁸¹. FHEQ descriptors are in two parts (table 10):

- a. The first part is a statement of outcomes, achievement of which is assessed and which a student should be able to demonstrate for the award of the qualification.
- b. The second part is a statement of the wider abilities that the typical student could be expected to have developed.

⁷⁹ Anglia Ruskin University (2009) Graduate Learning Outcomes

⁸⁰ Walsh, A., Kotzee, B., (2010) *Reconciling ‘Graduateness’ and Work-based Learning*. Learning and Teaching in Higher Education, Issue 4-1.

⁸¹ Quality Assurance Agency for Higher Education (2011) UK Quality Code for Higher Education, Part A Setting and maintaining threshold academic standards.

Level of Award	Example of award	Part one statement of outcomes	Part two statement of wider abilities
Level 4	Certificate of Higher Education	<p>Typically, holders of the qualification should have :</p> <ul style="list-style-type: none"> • knowledge of the underlying concepts and principles associated with their area(s) of study and an ability to evaluate and interpret these within the context of that area of study • an ability to present, evaluate and interpret qualitative and quantitative data, in order to develop lines of argument and make sound judgements in accordance with basic theories and concepts of their subject(s) of study. 	<p>Typically, holders of the qualification will be able to:</p> <ul style="list-style-type: none"> • evaluate the appropriateness of different approaches to solving problems related to their area(s) of study and/or work • communicate the results of their study/work accurately and reliably and with structured and coherent arguments • undertake further training and develop new skills within a structured and managed environment. <p>AND Have the qualities and transferable skills necessary for employment requiring the exercise of some personal responsibility.</p>
Level 5	Foundation Degree Diploma of Higher Education	<p>Typically, holders of the qualification should have :</p> <ul style="list-style-type: none"> • knowledge and critical understanding of the well-established principles of their area(s) of study and of the way in which those principles have developed • ability to apply underlying concepts and principles outside the context in which they were first studied, including, where appropriate, the application of those principles in an employment context • knowledge of the main methods of enquiry in the subject(s) relevant to the named award and ability to evaluate critically the appropriateness of different approaches to solving problems in the field of study • an understanding of the limits of their knowledge and how this influences analyses and interpretations based on that knowledge. 	<p>Typically, holders of the qualification will be able to:</p> <ul style="list-style-type: none"> • use a range of established techniques to initiate and undertake critical analysis of information and to propose solutions to problems arising from that analysis • effectively communicate information, arguments and analysis in a variety of forms to specialist and non-specialist audiences and deploy key techniques of the discipline effectively • undertake further training, develop existing skills and acquire new competences that will enable them to assume significant responsibility within organisations. <p>AND Have the qualities and transferable skills necessary for employment requiring the exercise of personal responsibility and decision-making.</p>

Level of Award	Example of award	Part one statement of outcomes	Part two statement of wider abilities
Level 6	Bachelor's degree with honours Bachelor's degree	<p>Typically, holders of the qualification should have :</p> <ul style="list-style-type: none"> • a systematic understanding of key aspects of their field of study, including acquisition of coherent and detailed knowledge, at least some of which is at, or informed by, the forefront of defined aspects of a discipline • an ability to deploy accurately established techniques of analysis and enquiry within a discipline • conceptual understanding that enables the student: <ul style="list-style-type: none"> • to devise and sustain arguments and/or to solve problems, using ideas and techniques, some of which are at the forefront of a discipline • to describe and comment upon particular aspects of current research, or equivalent advanced scholarship, in the discipline • an appreciation of the uncertainty, ambiguity and limits of knowledge the ability to manage their own learning and to make use of scholarly reviews and primary sources (for example, refereed research articles and/or original materials appropriate to the discipline). 	<p>Typically, holders of the qualification will be able to:</p> <ul style="list-style-type: none"> • apply the methods and techniques that they have learned to review, consolidate, extend and apply their knowledge and understanding and to initiate and carry out projects • critically evaluate arguments, assumptions, abstract concepts and data (that may be incomplete), to make judgements and to frame appropriate questions to achieve a solution - or identify a range of solutions- to a problem • communicate information, ideas, problems and solutions to both specialist and non-specialist audiences. <p>AND Have the qualities and transferable skills necessary for employment requiring:</p> <ul style="list-style-type: none"> - the exercise of initiative and personal responsibility - decision-making in complex and unpredictable contexts -the learning ability needed to undertake appropriate further training of a professional or equivalent nature.

Table 10 Framework for Higher Education Qualifications award level descriptors⁸¹

The first part is very relevant to those that are designing programmes (academic institutions) and the second part is of particular importance to those with an interest in the capabilities of the award holder (ambulance trusts).

The QAA suggests that learning outcomes for honours degree programmes would normally be achieved on the basis of study equivalent to three full-time academic years.

9.5 Enhancement to the existing curriculum

One of the recurring themes from the data is that when the education providers are reviewing the curriculum both pre-registration and post-registration the following areas should be further developed:

- a. Dementia and mental health awareness.
- b. Clinical leadership skills.
- c. Multi-professional learning opportunities.
- d. Integrated Care.
- e. End of Life Care.
- f. Inclusion Health.

(a) Dementia and mental health awareness

One of the priorities of the Government's mandate to HEE⁸² is the training for staff to deliver better prevention and care to patients with long-term conditions including those with dementia.

'Dementia is the illness most feared by people in England over the age of 55, yet in the past it has not received the attention it needs. This has inspired the Prime Ministers Challenge on Dementia, which was launched in March 2012. The Government's goal is that diagnosis, treatment and care of people with dementia in England should be among the best in Europe.' (HEE mandate)

Another priority in the mandate is to give mental health and physical health conditions equal priority and mental health is a matter for all health professionals.

There is evidence that this area of the curriculum is either missing or should be enhanced. For example, a patient's comment: *'I have a history of mental illness and I come across so much discrimination'* The patient went on to explain that this was the attitude of the ambulance crew when she was taken to hospital suffering a respiratory problem (Appendix 11). One of the interviewees reported a scenario where they were working with an ambulance crew who were attending a lady who had suffered a stroke. The ambulance crew was very efficient and cared for the patient, however they neglected to look after the elderly father with dementia and the younger sister with a learning disability.

A student summed up the experience that many of the interviewees described:

"We learn about dementia just through seeing it for ourselves. We haven't been taught how to recognise the signs and symptoms. Normally you get told by somebody or they wouldn't be living on their own. However, an extra year with extra clinical skills for example recognising early signs of dementia would be good. It was mentioned in the neuro session (student)."

The JRCALC guidelines⁷⁷ and the IHCD outline syllabus⁸³, which are used as the basis for many programmes leading to eligibility to register as a paramedic, focus on physical conditions and refer to

⁸²Health Education England (2013) Delivering high quality, effective, compassionate care: Developing the right people with the right skills and the right values.

⁸³ Edexcel IHCD Paramedic v 3

mental health conditions under the nervous system. There should be greater emphasis on dementia care and mental health awareness.

(b) Clinical leadership skills

There is significant potential for paramedics to further develop their clinical leadership skills as they are so well regarded by the general public: *‘There was no fuss, no messing about and I felt absolutely that I could trust them in what was for me a very scary situation’* (Appendix 11).

The NHS Leadership Framework is based on the concept that leadership is not restricted to people who hold designated management and traditional leader roles, but in fact is most successful wherever there is a shared responsibility for the success of the organisation, services or care being delivered⁸⁴.

In 2012, the HCPC published a supportive position statement about the NHS Clinical Leadership Competency Framework (Appendix 19) and commended it to registrants, commissioners and education providers⁸⁵ and welcomed the focus on improved outcomes for service users. This report has already acknowledged the significant contribution that paramedics make to the QIPP agenda (section 7.1 and Appendix 9) and the changes to some of the recently reviewed Standards of Proficiency.

(c) Multi-professional learning opportunities

Many paramedic students learn in a uni-professional service environment and often only learn from and with paramedics. This is particularly the situation for pre-registration paramedic students. The LETBS are required to evidence that they take a ‘multi-professional approach to workforce planning, quality improvement, education and training’⁸⁶. This is a particular challenge for institutions educating and training the paramedic workforce and very dependent on the opportunities available.

‘We really benefitted from learning alongside the ODP (operating department practitioner) students’ (Newly qualified paramedic).

Post-registration study normally provides a greater opportunity for paramedics to benefit from multi-professional learning and also to significantly contribute to the group learning. (Post-graduate studies course leader).

(d) Integrated care

In January 2012⁸⁷, there was a clear proposal to align the Public Health, Adult Social Care and NHS Outcomes Frameworks. In the Public Health Outcomes Framework it stated that: ‘The responsibility to improve and protect our health lies with us all – government, local communities and with ourselves as individuals. Services will be planned and delivered in the context of the broader social determinants of health, like poverty, education, housing, employment, crime and pollution. The NHS, social care, the voluntary sector and communities will all work together to make this happen.’

⁸⁴ <http://www.leadershipacademy.nhs.uk/discover/leadership-framework/>

⁸⁵ HCPC (2012) HCPC position statement on the NHS Clinical Leadership Competency Framework (CLCF)

⁸⁶ DH (2012) Liberating the NHS: Developing the Healthcare Workforce. From Design to Delivery Gateway Reference:16977

⁸⁷ DH (2012) Improving outcomes and supporting transparency Part 1A: A public health outcomes framework for England, 2013-2016

Another priority set out in the Government’s mandate to HEE⁸² is integrated care: ‘The future needs of the NHS, public health and the care system will require greater emphasis on community, primary and integrated health and social care than in the past.’

The longer term aim is that it will be easier for staff to work and move between health and social care settings. The mandate made particular reference to the HEE taskforce urgent review of workforce issues in emergency medicine.

This point was noted by a participant in the summit who noted “*Future role of paramedics is in a more social care service environment*” (Annex). Pre-registration and post-registration paramedic programmes should include the relevant aspects of these three Outcomes Frameworks to ensure that the paramedic workforce is prepared for the emerging integrated health and social care.

(e) End of Life Care

The crucial role that paramedics have in end of life care has already been noted in this report (7.2.1). This study has highlighted that this topic is seldom discussed by the practitioners, neither is it referred to in the JRCALC guidelines nor in the IHCD Ambulance Personnel syllabus. With the increasing number of elderly in the population and the widely publicised concerns about the quality of end of life care in the UK it is essential that all appropriate paramedic curricular reflect this care (Appendix 12).

‘Good end-of-life education and on-going training is essential so that paramedics feel competent in end-of-life care’. (Compassion in Dying).

(f) Inclusion Health

In 2010, the Social Inclusion Task Force of the Cabinet Office and the Department of Health (DH)⁸⁸ jointly published a report into the primary health care needs of socially excluded groups: Homeless; Gypsies, Travellers and Roma; Sex Workers; and Legal Migrants. The report stated that these groups experience poor health outcomes across a range of indicators and that it was important to embed Inclusion Health in undergraduate training for all nurses, doctors and dentists. This applies equally to allied health professions in particular to paramedics who are often the first healthcare professional to see and treat them.

⁸⁸ Cabinet Office Social Inclusion Task Force and Department of Health (2010) Improving the way we meet the primary health care needs of the socially excluded

10.0 Factors that Influence the Future Education and Training of Paramedics

The evidence from this study is that to enable the development of an all graduate paramedic profession requires a whole systems approach. As illustrated in figure 3, there are a number of key stakeholder organisations that influence the education and training of paramedics and aspects of development of skills, to ensure that student paramedics are developed in a safe and effective environment to safeguard the future of the paramedic led clinical service.

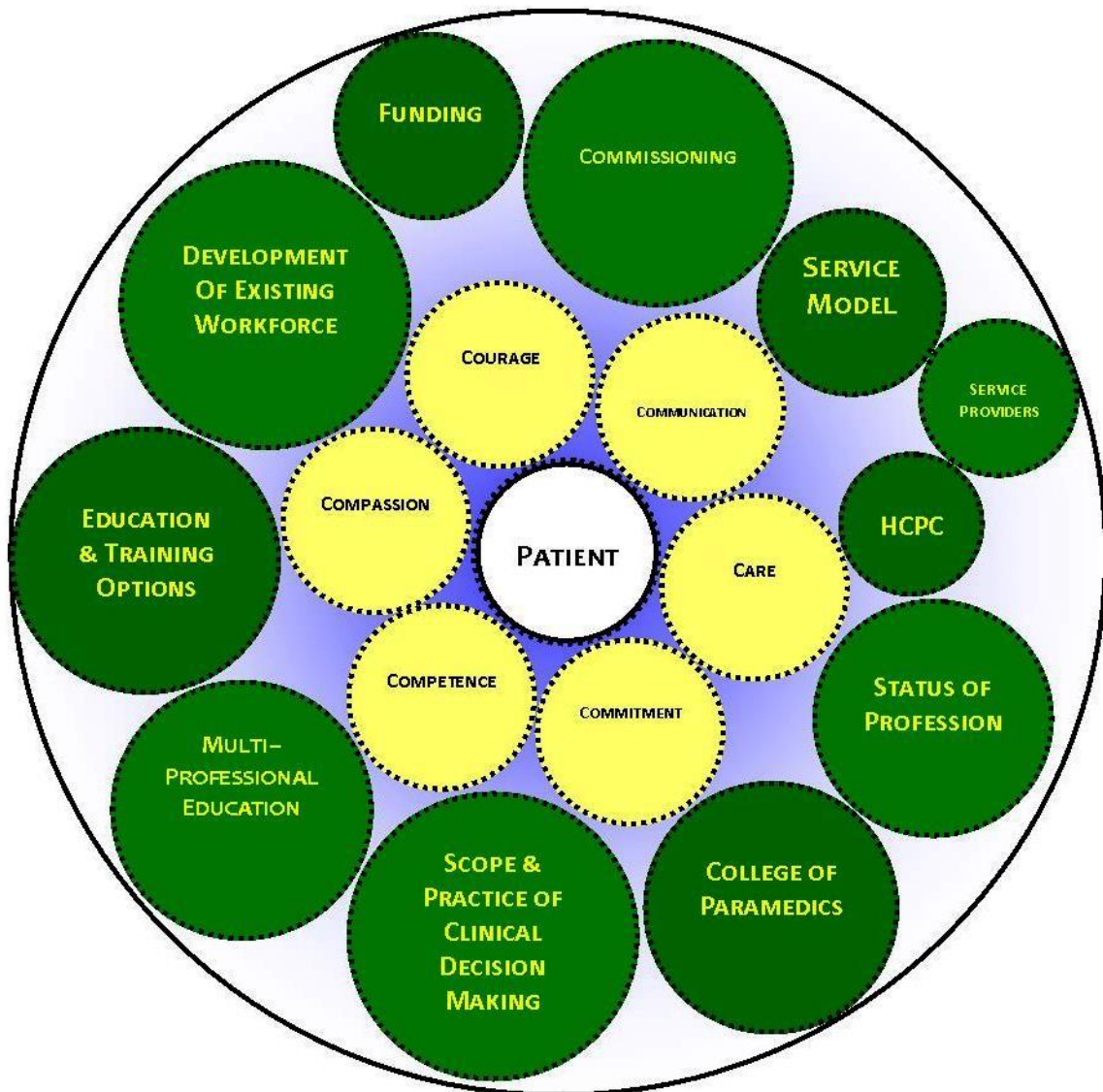


Figure 3 Whole systems approach

In developing this workforce there are two areas that require significant development:

- a. Clinical decision making skills.
- b. Critical thinking skills.

(a) Clinical decision making

Effective paramedics make clinical decisions with and on behalf of their patients and families. Depending on the nature of the decision to be made, the complexity of the decision is on a spectrum from a decision which is relatively simple to make where the uncertainty is low and the potential risk of the wrong decision is relatively low to a very complicated decision where the uncertainty is high and the potential risk of the wrong decision is high as illustrated in figure 4.



Figure 4 Decision making spectrum⁸⁹

Good, effective clinical decision making requires a combination of experience and skills (Appendix 20).

The ability to make effective, informed decisions in clinical practice requires that students and practitioners know and apply the processes of critical thinking⁹⁰.

(b) Developing critical thinking

Critical thinking ‘requires knowledge, assumes maturity, is more than a set of skills, it also involves deductive reasoning and inductive reasoning, analysis and synthesis and includes feelings and reflection and challenges the status quo’²⁹. A respected and frequently used model is Paul’s Model of Critical Thinking (figure 5). This model focuses on three aspects of thinking which are the elements of thought or reasoning, intellectual standards and intellectual traits. Critical thinking is described as the “the art of thinking about your thinking, while you are thinking in order to make your thinking better: more clear, more accurate and more defensible” .

⁸⁹ <http://www.effectivepractitioner.nes.scot.nhs.uk/practitioners/clinical-decision-making.aspx>

⁹⁰ Sullivan, E.A. (2012) Critical thinking in clinical nurse education: Application of Paul’s model of critical thinking Nurse Educator in Practice Vol 12, Issue 6 pages 322-327.

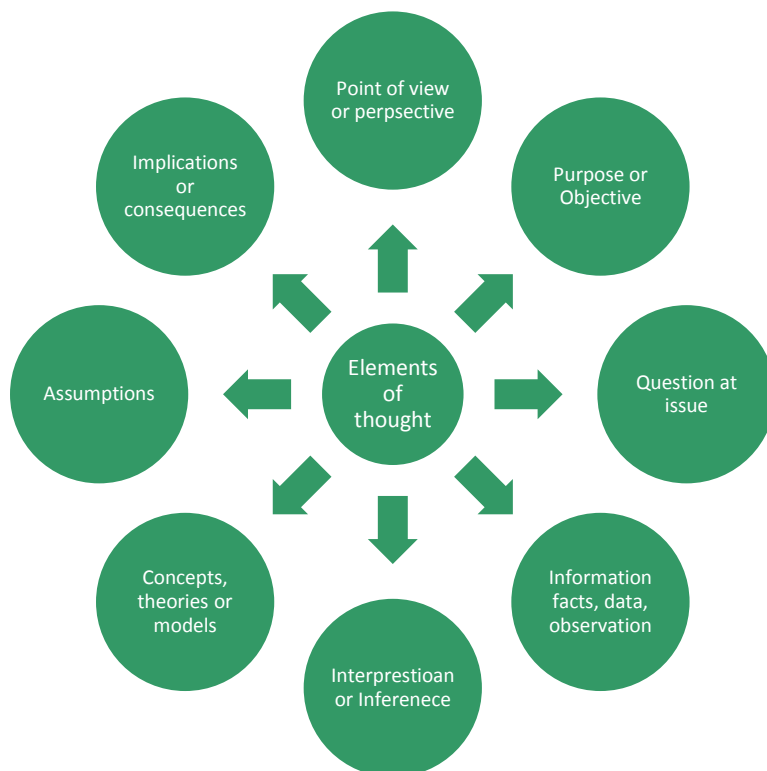


Figure 5 Paul's model of critical thinking⁹¹

It is important for paramedics and paramedic students to be able to reflect on the decisions that are taken and the processes that are used to make these decisions and to learn from the decision and about the process. The extent to which this happens in practice is very varied. Enhancement of clinical thinking enhances clinical decision making skills. If the service is demanding a higher level of competence and performance and we are demanding that paramedics are more autonomous and have more autonomy to make decisions and to keep patients out of hospital then we have to develop them accordingly. *'We are expecting our paramedics to leave patients at home and as a consequence we are expecting them to make high level clinical decisions with only two years education. This is not long enough'*. Course Director

In 2010, the Welsh Assembly published a report on the strategic direction for primary and community services in Wales⁹². The report acknowledged that the majority of health and care needs are provided by Primary Care and community services. It also recounted that 'the access to and quality of services is highly dependent on where people live'. However, it also noted that there are a number of interlocking problems including the fact that the capacity across the system is not well developed and that : 'paramedics are not sufficiently empowered to make clinical decisions on assessment, that a patient can safely remain at home'⁷⁵.

Some trusts have put in place a robust system that bridges the gap between the out of hospital service and the acute sector. For example, West Midlands Ambulance Service has developed Hospital

⁹¹ Paul, R., Elder, L. (2006) 2nd ed. Critical Thinking. Tools for Taking Charge of Your Learning and Your Life. Pearson Prentice Hall, Columbus, Ohio.

⁹² Welsh Assembly Government (2010) Setting the Direction Primary & Community Services Strategic Delivery Programme.

Ambulance Liaison Officers (HALOs) to help manage the ‘queuing of ambulances outside of accident and emergency (A&E) departments.

The HALOs are based inside the hospital and take patients that are non-life threatening from the ambulance crew to release them to do something else. The HALOs are working alongside the A&E staff all the time so if the paramedics request feedback they will be able to find the information for them either from the support desk or directly from the A&E clinical staff.

Students report the value of getting this feedback and recognise that ‘clinical mentors are very influential’. However, the evidence indicates that this rarely happens (box 7).

‘There is very little chance to get feedback from the doctors, unless there is good communication between them and the paramedic crew. It is sometimes dependent on how many times you have interacted with them.

Feedback is one of the most important learning tools for students

We get feedback from our mentors. However, the feedback we get depends on the mentors themselves. With the technological advances today why can’t we have more feedback about the patient and the decisions that the crew has made’.

Box 7 A student’s experience of feedback

One respondent reported that they had spoken to “lots of paramedics who say this is their frustration and they had no way of following up. One of the issues is the informatics that gets in the way of them being able to follow up what happens to their patient. The paramedics state that it is key to their CPD i.e. did they get it right?”

The clinical service also recognises that clinical mentors can facilitate access to feedback about decisions taken by ambulance crews as noted by one respondent, “feedback on practice could also come through our clinical mentors. If a paramedic is assigned a clinical mentor” HR Director.

‘We know that feedback is an important and much needed area and it is so important to the paramedics that they know what happened’.
HR Director

This important issue is noted in the review of the NHS Constitution⁹³ where it is stated that ‘The delivery of high quality care is dependent on feedback’. High quality feedback enhances the professionals’ ability to critically think about clinical decisions made.

10.1 Practice learning environment.

The emphasis on the importance of practice learning must be underpinned by standards to support learning and assessment in practice. One Practice Education Facilitator (PEF) stated that “It is important that the practice learning is governed as well as the academic learning. We have pockets of good practice and pockets of poorer practice. There is no national standardisation”. The NMC has

⁹³ NHS (2013) Handbook to the NHS Constitution.

updated its standards⁹⁴ which set out criteria for mentors, practice teachers and teachers. These standards outline what is expected from post-holders of these roles and the education and training that is required to ensure they are properly prepared for the role. This includes ‘approving mentor and practice teacher preparation programmes so that that they can be assured of the consistency of preparation for supporting learning and assessment in practice’. The nurse mentors are reminded that they ‘have a duty to facilitate students and others to develop their competence’.⁹⁵



Some allied health professional bodies support the professionals by guiding the universities to offer appropriate courses to develop the placement educators. For example as physiotherapists or occupational therapists become more experienced as a Clinical / Practice Placement Educators, they can develop their skills further by studying to become an accredited educator. Both the Chartered Society of Physiotherapists and the College of Occupational Therapists run accreditation schemes: ACE (Accreditation of Clinical Educators) and APPLE (Accreditation of Practice Placement Educators) respectively. Both are national schemes designed for those who have been employed in their professional role for at least one year⁹⁶. The accreditation lasts for five years at the end of which the Clinical/Practice Placement Educator is required to demonstrate their

continuing competence.

In 2007, the Quality Assurance Agency published a code of practice on work-based (box 8) and placement-learning⁹⁷. It set out three key principles with regards to learning outcomes associated with practice which are extremely important in setting the standards of quality for any paramedic placement that leads to clinical learning:

- They are clearly identified.
- They contribute to the overall and coherent aims of their programme.
- They are assessed appropriately.

Work-based and placement learning is not restricted to undertaking work experience or going on a placement. It is primarily concerned with identifying relevant and appropriately assessed learning, expressed in the form of learning outcomes, that can be linked to that work or placement

Box 8 QAA code of practice on work-based and placement learning

⁹⁴ NMC (2008) Standards to support learning and assessment in practice

⁹⁵ <http://www.mentorupdate.co.uk/learning.php>

⁹⁶ NHS HE Yorkshire and Humber ACE and APPLE Schemes

⁹⁷ QAA (2007) Code of practice for the assurance of academic learning and standards in higher education Section 9: Work-based and placement learning.

This study identified a particularly good example of how the practice learning environment is supported by the ambulance trust as shown below:

Case Study- A practice learning model

An ambulance service established a clinical education team to support all staff and students who were involved in pre-registration learning. This small team is comprised of five Practice Education Facilitators (PEFs) and their goal is to improve the quality of practice placements for the pre-registration student learning environment. This team reports to the Medical Director of the Trust. The partnership between the ambulance service and the universities it works with is very strong and the approach to supporting the students is standardised. Initially all the qualified paramedics were invited to the HR department of the Trust where they reviewed the job descriptions of the non-medical workforce. They included in the job descriptions for the Senior Paramedics (employed at Band 6) and the Advanced Paramedic (employed at Band 7) the expectation for them to sign up to be mentors. These staff have been supported to develop mentoring skills by the PEFs who spend most of their time working with the mentors across the whole trust. It has been important to support the mentors to help the students develop clinical decision making skills. There is a formal reporting line for ensuring the quality of the student placement learning environment for all students who are commissioned by the local SHA (now called LETB). The local SHA sets the job descriptions for the PEFs even though they are employed by the ambulance service and set specific performance targets for the Band 6 and Band 7 paramedics to audit the clinical learning and the students experience. The PEFs have set up a bronze/silver/gold skills passport system to help the mentors easily identify what the student should be able to do at any particular time in their training and specifically what they are not allowed to do.

One of the PEFs reported *“that the standards of placement are not sufficiently emphasised. If it wasn’t for the guidelines set by the local SHA/LETB for the commissioned students I would not have so much influence on the quality of the student learning in placement. The fact that this key aspect of the programme is governed by the commissioning process really helps me to do my job”*.

This is a very significant argument in favour of commissioning education and training for paramedics. The implications of not commissioning education and training for the paramedic workforce are considerable and in addition to limiting the influence over the quality of the clinical learning environment there is also less accountability for the universities as they will not have to report annually to the commissioning body about the success or otherwise of the NHS funded students in the way that they do for the other non-medical students commissioned and funded by the NHS. The consequent risk that there will be a variation in standards of education and as one senior academic advised *“no guarantee of the quality of the care the patients will receive”*.

10.2 Quality of the learning environment

In 2012, the Department of Health published *Liberating the NHS: Developing the Healthcare Workforce*⁶². In this publication it was reported that the EOF (Appendix 5), which would provide a comprehensive system of ‘quality governance and explicit educational outcomes’, should be developed as soon as possible. The aim in developing the EOF (box 9) is that the system will be able to demonstrate education quality outcomes for the benefit of patient experience, care and safety. One of the objectives to achieve this aim is for the approach to the quality of education and training to be improved and for there to be new education and training programmes for all professions, which will have quality and patient outcomes at the core of the curriculum.

Excellent Education

Education and training is commissioned and provided to the highest standards, ensuring learners have an excellent experience and that all elements of education and training are delivered in a safe environment for patients, staff and learners.

Competent and Capable Staff

There are sufficient healthcare staff educated and trained, aligned to service and changing care needs, to ensure that people are cared for by staff who are properly inducted, trained and qualified, who have the required knowledge and skills to do the job service needs, whilst working effectively in a team.

Flexible Workforce Receptive to Research and Innovation

The workforce is educated to be responsive to changing service models and responsive to innovation and new technologies with knowledge about best practice, research and innovation, that promotes adoption and dissemination of better quality service delivery to reduce variability and poor practice.

NHS Values and Behaviours

Healthcare staff have the necessary compassion, values and behaviours to provide person centred care and enhance the quality of the patient experience through education, training and regular Continuing Personal and Professional Development (CPPD)

Widening participation

Talent and leadership flourishes free from discrimination with fair opportunities to progress and everyone can participate to fulfil their potential. Recognising individual as well as group differences, treating people as individuals and placing positive value on diversity in the workforce and there are opportunities to progress across the five leadership framework domains.

Box 9 Education Outcomes Framework: Domains

In 2013, the EOF¹⁹ was published. With the stated aim to ‘Ensure the health workforce has the right skills, behaviours and training, available in the right numbers, to support the delivery of excellent healthcare and health improvement’.

To further understand the context of the EOF to services delivered by paramedics each of the five domains has been mapped to the strategic system drivers that influence the paramedic workforce (table 11).

EOF Domain	Strategic System Drivers that influence the paramedic workforce
Excellent education	<ul style="list-style-type: none"> • Paramedics are required to deliver excellent and safe services, working across an extreme range of patient care needs and a range of health and social care boundaries. • Paramedics are part of a wider healthcare team and must be educated on principles that include strong inter-professional learning.
Competent and capable staff	<ul style="list-style-type: none"> • The Paramedic workforce must be delivered through effective planning and commissioning to meet demand within a provider-led system. • Paramedics have a key role for patients in respect of competencies to assess, treat and refer, this having a link to the current key performance measure of ‘admissions avoidance’ and delivery of QIPP targets. • Public health and public protection are key elements of Paramedic practice.
Flexible workforce receptive to research and innovation	<ul style="list-style-type: none"> • Paramedics practice across potentially all clinical pathways including trauma, mental health, learning disabilities, end of life care. The workforce must be flexible to facilitate professional practice across all clinical areas. • Continuing professional development must be embedded as part of the professional culture to ensure research and innovation is appropriately reflected in evidence-based clinical practice and service improvement.
Values and behaviours	<ul style="list-style-type: none"> • Paramedics are a first point of contact for patients, often in distressing or uncontrolled circumstances. The workforce must therefore have the core values and behaviours at its heart.
Widening participation	<ul style="list-style-type: none"> • The widening participation agenda for the paramedic workforce is crucial as they practice across all communities. Pre-registration education must be commissioned in such a way to enable all aspects of the widening participation agenda. • To support the ambulance career pathway, there must be clear progression routes for Band 1-4 staff.

Table 11 Education Outcomes Framework and the paramedic workforce

10.3 Specialist and advanced practice

In order to illustrate the potential of paramedics, there are references and examples in this report to the contributions made by specialist and advanced paramedics, such as that given specifically in ‘*section 7.1 Paramedics contribution to Quality Innovation Productivity and Prevention.*’ These examples underscore the growing complexity of the service and the robust preparation needed during pre-registration education and training as the platform for progression to the specialist and advanced levels.

However, within the paramedic profession, there is a lack of clarity about the concept of specialist and advanced practice. This is further complicated by the inconsistent use of titles as explained in section 7.3.5 and that in some nations for example they do not recognise specialist or advanced paramedic practitioners (Scotland) and in other nations they have developed the advanced practitioner roles (Wales) (Appendix 21, Appendix 22).

The College of Paramedics Career Framework (Appendix 14) is very specific and differentiates between specialist and advanced practice. This framework aligns specialist paramedics with level 6 and records that they have a higher degree of autonomy and have specialised in a specific area of clinical or educational practice following further study at level 6 in a relevant Science Degree. The advanced paramedic is aligned to level 7 in the framework and describes the advanced paramedic as an experienced paramedic with advanced clinical skills, or educational knowledge following post-graduate studies.

The HCPC has published an education factsheet⁹⁸ about paramedics and specialist paramedics, but it doesn’t consider the advanced paramedic or the consultant paramedic. Unfortunately this information includes the concept of paramedic practitioners as specialists. However it does discuss the concept of CCPs (section 6.4.1) and note that these paramedics work in a variety of environments ‘for example on rapid response cars, air ambulances, as expedition paramedics, either working alone or as part of a team alongside other health and emergency service’.

The lack of standardisation of specialist and advanced practice has been commented on by respondents and summit participants.

“No standardisation of role descriptors, e.g. specialists and advanced paramedics”. (summit participant). One paramedic observed that *“the critical care role is developing; the primary care role is developing. You start with your basic knowledge and skills and then you have additional skills that people are interested in. We are a trust that is starting to look at providing groups of paramedics with additional skills for areas of practice they want to work in”*. This idea of paramedics choosing their specialist areas was a repeated theme that emerged during the study. Another respondent suggested that *“specialist paramedic roles are going to be steered by people’s own interests”*.

‘We have a lot of paramedics with specialist interest in particular fields based on opportunity and personal interest.’
Paramedic from Scotland

⁹⁸ Health Professions Council (2010) Education Factsheet Paramedics and Specialist Paramedics.

The clinical service of the UK Ambulance Trusts continues to change rapidly with even greater emphasis on the clinical service rather than the historical transport service that they used to offer. This trend is illustrated by the inverted triangles⁹⁹ shown below.

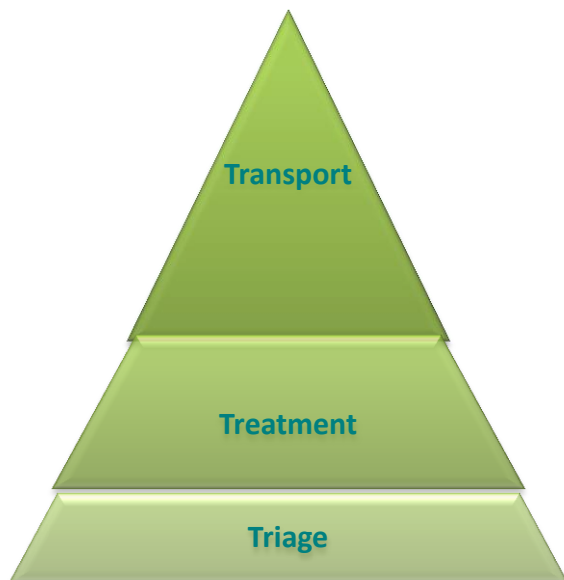


Figure 6 Original model of service delivery

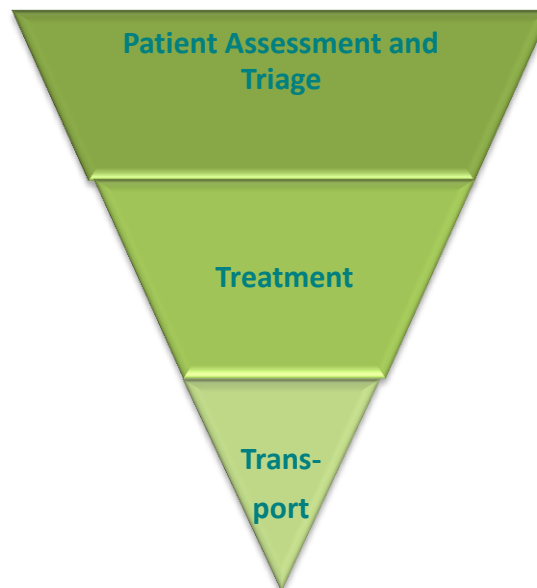


Figure 7 Current model of service delivery

The current model of service delivery needs all paramedics to develop more skills in patient assessment and referral. This requires a high percentage of the paramedic workforce to undertake specialist training and education to enable them to manage patients with primary and critical life threatening conditions more effectively. One respondent who has been a community paramedic for six years reported “*I have finished a course at the university on minor illness and minor injuries and now I am studying advanced pathophysiology and advanced clinical assessment skills*”.

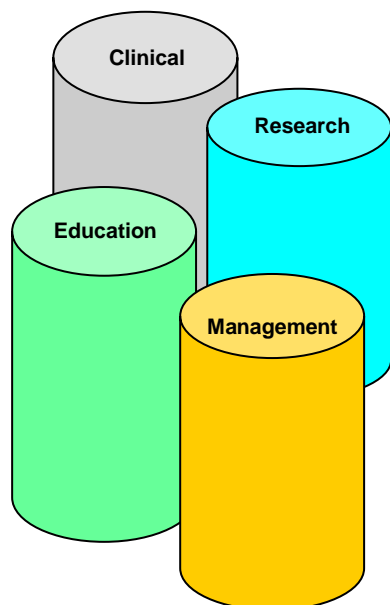
The challenge for much of this workforce is access to protected time to develop these skills and any funding to support this development. If the service is serious about enabling these specialist skills to be developed it should be strategically planned.

In 2010, NHS Wales launched a framework for advanced professional practice in Wales¹⁰⁰. This framework is designed on the principle that ‘advanced practitioners are at the frontline of delivering services and care to patients’ and that Masters/CQFW level 7 education (see Appendix 21) must underpin all advanced practitioner role development. This framework promotes the four pillars of advanced practice to underpin the development.

⁹⁹ South East Coast Ambulance Service (2009) Paramedics Skill Levels, Specialist Roles and Timescales; the Cornerstone of a High Quality Ambulance Service

¹⁰⁰ GOG Cymru NHS Wales (2010) Framework for Advanced Nursing, Midwifery and Allied Health Professional Practice in Wales

Four pillars of Advanced Practice



With a change in emphasis to provide more clinical care in the community and to deliver more out of hospital urgent care, the clinical pillar is a key area of development for the experienced paramedic workforce. All senior paramedics should focus on developing their clinical decision making/clinical judgement, problem solving, critical thinking and analytical skills including critical reflection. The major difference between working in the pre-hospital acute setting and the community was set out very well in Peter Mulholland's (2012) dissertation about comparing rural and urban paramedics in Australia¹⁰¹. He found that paramedics working in rural settings practice very differently and practice a community response rather than a case dispatch response. He also reported that they are multidisciplinary team members rather than being just members of an ambulance team and work more in isolation than having access to the full resources. It is possible that as paramedics become more engaged in community health care there will be useful lessons to learn from the Australian paramedic community.

There are numerous examples where paramedics are working as advanced practitioners even if they are not afforded this title. One such example is an experienced paramedic working on Stornoway. This paramedic reported that he '*attended a paramedic practitioner course in 2007 with the University of West Scotland. We have been running a paramedic practitioner course here since then. I also work part-time for NHS as a skills instructor on a multi-professional, multi-maternity programme. I teach obstetrics and neonatal resuscitation*'. Paramedics based in these rural locations are often called upon to perform clinical procedures that would normally be undertaken by medical personnel or other healthcare professionals. For example, on 11th December 2012 it was reported that a paramedic successfully delivered a baby in the Shetland Coastguard helicopter.

¹⁰¹ Mulholland, P. (2012) A comparison of the practice of rural and urban paramedics: bridging the gap between education, training and practice. Master of Medical Science Dissertation, University of Tasmania.

10.4 Paramedics alignment with Allied Health Professionals

In England, the Department of Health and in Wales, the Department of Health and Social Services list the Allied Health Professions (AHPs) as: art therapists, drama therapists, music therapists, chiropodists/podiatrists, dietitians, occupational therapists, orthoptists, prosthetists and orthotists, paramedics, physiotherapists, diagnostic radiographers, therapeutic radiographers, speech and language therapists. Very recently Scotland welcomed paramedics into the Scottish AHP community. However the Department of Health, Social Services and Public Safety in Northern Ireland do not list paramedics as one of the AHPs. Conversely the professional body, the College of Paramedics, supports all paramedics irrespective of location and similarly the HCPC regulates all UK based paramedics.



There is no doubt that there is significant benefit for the professionals if they belong to the wider AHP community as this raises the profile of the contribution they make to patient care; the awareness of other healthcare professionals and equity of access to funding for education and training.

“One of the themes which is on my list and keeps being mentioned to me is ‘where they fit’. You mentioned this yourself: some of them do not know they are an AHP, some of them only want to be part of the blue light community so they are more closely aligned with police or the fire service.”
(Senior government official, Department of Health, Social Services and Public Safety, Northern Ireland).

The level of support offered to the paramedic workforce in terms of funding for education and development is closely linked to the professional alignment. In England and Wales it is very clear that paramedics are part of the Allied Health professional community. In Scotland they are very recently aligned to AHPs. However, there are no plans in Northern Ireland to include paramedics as part of the AHP community.

11.0 Recommendations

This section provides a fuller justification for the recommendations summarised in section 2 of this report. It highlights a number of areas worthy of closer consideration and action, by Health Education England, the College of Paramedics, the ambulance services, the education providers and a range of other related organisations that set the framework for the future education, training and development of the paramedic workforce.

11.1 Pre-registration education development model

In table 12 overleaf is a proposed model leading to an all graduate entry paramedic profession by September 2019. The data collected as part of this study suggests that many may contend that this timeframe is too long and that the only reasonable approach is to bring in an all graduate profession immediately. However, this approach is strongly opposed by a sufficiently large number of the ambulance services workforce surveyed to indicate that this would be a very flawed approach and would result in potential discord in the service. Central to the success of this service is the partnership and trust between the ambulance services and the education sector. The proposed model attempts to address the key stages of development required to ensure all key stakeholders are empowered to engage and inform the development in a unified approach resulting in an education and development framework that is sustainable and no longer disparate.

11.1.1 Stages of development

It is proposed that the College of Paramedics establishes a UK wide stakeholder steering group to take forward this development. Each stage of the development must be owned by an organisation and/or individuals as without this clear line of accountability, the current situation will continue. The Gantt chart lists the key deliverables against a realistic and achievable timeframe.

a. Agreed Scope of Practice

This stage is a priority and is the responsibility of the College of Paramedics working in partnership with the ambulance service; the acute and out of hospital urgent care services; community and social care and the wider paramedic and ambulance service staff. Without this agreement for both pre-registration and post-registration development, the remaining development is at risk.

b. Review of Standards of Proficiency

The HCPC is currently reviewing a draft of existing Standards of Proficiency (SOPs) and the review of the SOPs for paramedics is scheduled for autumn 2013. Once this review is complete, the HCPC Education and Training Committee will begin to consider a request to raise the minimum entry into the paramedic profession to a Diploma in Higher Education. A public consultation will be required.

Activity/Deliverables	Jun-13	Jul-Aug 2013	Sept-Dec 2013	Jan-Jul 2014	Sep-14	Sep-15	Sep-16	Sep-17	Sep-18	Sep-19
Report to College	█									
Agreed Scope of Practice	█	█								
Review of Standards of Proficiency for paramedics			█	█						
Review of the funding model to support pre-registration students				█	█					
Phase one of HCPC review of minimum entry threshold to Dip HE					█					
Student paramedics to enrol on minimum of DipHE						█				
Review of Foundation Degrees					█	█				
Continuing Personal and Professional Development /Learning Beyond Registration opportunity for qualified workforce in particular paramedics who hold the IHCD and technicians					█	█				
Embed the whole systems approach to develop all degree paramedic workforce					█	█	█			
Phase two of HCPC review of minimum entry threshold from DipHE to BSc(Hons)							█			
Pre-reg paramedic programmes approved at BSc(hons)								█		
Student paramedics enter a 3 year BSc(Hons) programme									█	

Table 12 Proposed paramedic pre-registration education development model

c. Review of funding model to support pre-registration students

This stage is urgent, particularly in England and should comprise a review of the fees; the bursary support and the tariff for learning in practice. Health Education England and its partner organisations in the other three nations should work together with the education commissioners to undertake this review.

d. Review of existing education models

The work to be undertaken at this stage is very varied: by nation; by ambulance trust; by education provider and award. The proposal is to implement the Dip HE as the minimum threshold award across the UK as this will enable institutions to offer a three year model in transition to a BSc(Hons) programme. Careful consideration is needed concerning the appropriateness of the foundation degree for the September 2014 entry. Those universities that currently offer the foundation degrees are urged to review the use of this award and its suitability for a regulated profession.

e. Evaluate education and development opportunities for the existing workforce

As the changes to the pre-registration education and training model are made, care must be taken both to recognise the important contribution that the existing qualified ambulance service staff (paramedics and technicians) make to the quality of the learning environment for student paramedics and also to fully value this existing workforce by putting in place an education and training opportunity for all who aspire to develop their knowledge and skills aligned to this new framework. This stage should involve the College of Paramedics, the unions the service providers and the HE sector.

f. Embed a whole systems approach to enhancing the learning environment for the student paramedic

Although all students spend at least 50 per cent of their programme in clinical placement, there is an assumption that student paramedics do not have sufficient experience of carrying out fundamental care within a university based curriculum. However, it is really important to understand exactly what the clinical placements contain and the quality of the 'hands-on' experience that students get including the feedback about clinical decisions. Central to this approach should be how the system can meet the objectives of the EOF in a multi-professional environment. The EOF enables a whole systems approach, as it provides a focal point for the necessary partnership working between the system for the education, training and workforce development of the paramedics and those organisations with the responsibility for the development of their professional standards and regulation. This stage would require the implementation of a standardised approach to developing and maintaining the practice educator workforce and require engagement from all stakeholders.

11.2 Commissioning model

One of the key recommendations from this study is that there should be a nationally agreed commissioning model for pre-registration paramedic education. The commissioning model reflects workforce demand locally and nationally based on the core principles of equal access to education and training, equity of access to funding, harmonised approach to underpin consistency of clinical care and service delivery.

11.3 Partnership model

The evidence collected as part of this study indicates that a clear strategic all systems approach to developing the paramedic workforce in the UK is essential. A whole systems approach centred on patient care to educating and training the paramedic workforce is predicated on a robust partnership between the key stakeholders:

- Patients.
- Ambulance services.
- Professional Body.
- Regulatory Body.
- Health Education England and Local Education and Training Boards.

These plans should be developed through a partnership approach and address patients' specific requirements.

11.4 Paramedic leadership in England

The particular challenges in England concerning the lack of standardisation of an education and training model requires an all-England approach to resolving this problem. The proposal is that somebody should be appointed to manage the education and training development for paramedics in England. The funding for this post should be sought from Health Education England with the aim of appointing to the post by autumn 2013.

All ambulance services in England should be effectively engaged in active partnership with their regional HEIs to jointly:

1. Design the paramedic pre-registration education and training curricular.
2. Plan the clinical placements including the non-ambulance placements.
3. Deliver the curriculum.
4. Recruit students.
5. Annually review the programmes.

To enable this to happen and in the absence of a critical mass of members of the College of Paramedics, serious consideration should be given to a national approach to pre-registration and training of paramedics in the way that the police force and the fire service have standardised their approach. This would suggest that the appointment of a national lead for the education and training of paramedics who would work in partnership with HEE, the HEIs and the Ambulance Services to facilitate standardisation of all aspects of education and training of paramedics in England.

11.5 Knowledge and skills enhancement

There are a number of areas in the curricular where the education sector and service providers working in partnership should augment the curriculum and further develop the clinical learning environment to enhance the student learning outcomes in line with the emerging service needs:

a. Dementia and mental health awareness

This study has highlighted that that development of dementia care and mental health awareness knowledge and skills is a priority for the students and the qualified paramedic workforce. Much of the knowledge in this field is gained through observation or in the neurology part of the syllabus. Education providers are advised to assess the dementia care and mental health knowledge and skills of the paramedic workforce.

b. Clinical leadership skills

As the role of the paramedic is further developed and the service that paramedics currently offer and will undoubtedly provide in the future is refined, clinical leadership skills will be tested by service users and clinical colleagues. Recently the HCPC and the AHP professional bodies that have reviewed their standards of proficiency have included a new generic standard about clinical leadership. The College of Paramedics is urged to do the same.

c. Multi-professional learning

The benefits of multi-professional learning for healthcare professionals are well researched. This study has underlined the fact that this is a particular challenge for education institutions and service providers educating and training the paramedic workforce particularly pre-registration students. The education providers should pro-actively seek ways to provide multi-professional learning opportunities.

d. Integrated care

Current health and social care policy points to closer alignment of these services. Paramedics are exceptionally well placed to work across the two sectors in particular public health. It is recommended that The College of Paramedics and the education providers ensure that the newly qualified and existing workforce is fully prepared to work in this new integrated care arena.

e. End of Life Care

A clear understanding of patient's wishes for their end of life care is very important for paramedics as they transform the service they provide from a transport facility to a highly professional health care service. The College of Paramedics and ambulance trusts should ensure that paramedics can demonstrate the appropriate skills for service users approaching end of life.

f. Inclusion Health

Paramedics are often the first healthcare professional to respond to the health needs of socially excluded groups. This study did not set out to gather detail about paramedics interaction with this group but in light of the emerging evidence about the increasing numbers of socially excluded in the UK it is recommended that the College of Paramedics includes this topic in the revised syllabus.

g. Clinical Decision Making

It is important for paramedics and paramedic students to be able to reflect on the decisions that are taken and the process that was used to make these decisions. The challenge for the paramedics and the students is the nature and timing of the feedback about their clinical decisions. The ambulance trusts should ensure that a clinical decision feedback loop is in place to ensure on-going development of the clinical decision making skills of the paramedic workforce

11.6 Standardised approach to identification

One of the main findings of this study is the lack of a standardised approach to many aspects of education and training of the workforce. This lack of standardisation extended to identification of the workforce including the uniform and the numerous different titles that ambulance staff are given.

Two particular issues emerged:

- The easily recognised ‘green uniform’ isn’t just worn by paramedics, which is not well understood by patients and the general public. The fact that other non-regulated professionals wear this uniform can lead to misuse of the ‘professional’ identity by those who would wish to be a paramedic.
- The variety of titles that are given to the qualified paramedic workforce is very confusing for the service users and other healthcare professionals. A particular problem is the use of the term ‘paramedic practitioner’ which is often used as a title for an experienced paramedic. Other healthcare professions use the title ‘practitioner’ to refer to the newly qualified professional or those employed in a non-specialist role normally at Band 5. The College of Paramedics is urged to promote standardisation of the post-registration title for a particular scope of practice. For example if the paramedic is a specialist in cardiac care then that should be made clear to all and the job description should reflect this scope of practice.

To help the patient, service users and the general public, the ambulance services in partnership with the College of Paramedics should take a consistent approach to the identification of the qualified paramedic workforce.

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