PREHOSPITAL CARE

The emerging role of the emergency care practitioner

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Objectives: To examine the emerging role of the emergency care practitioner (ECP) with comparisons to paramedic practice. Key activities were identified of newly appointed ECPs using qualitative methodology and a qualitative and quantitative comparison of patient treatment was made.
Method: A constructivist methodology taking account of stakeholder input and drawing upon the constant comparisons of different group's construction of reality. Four practitioners completed reflective patient case studies and adapted patient report forms, which were compared with a second case group of 11 paramedics. In addition individual and focus groups interviews were performed with key stakeholders.
Results: In the comparison between ECP and paramedic roles, 331 paramedic incidents were compared with 170 ECP reports. ECPs treated 28% of patients on scene compared with 18% by paramedics ($p = 0.007$). Fifty per cent of ECPs patients were conveyed compared with 64% of paramedics ($p = 0.000$). Analysis of the 269 reflective reports and 14 stakeholder interviews revealed four key themes. Firstly, ECPs had a beneficial impact on the deployment of resources, especially relating to non-conveyance. Secondly, their training and education improved their decision making repertoire and developed their confidence for a leadership role. Thirdly, inter-agency collaboration and cooperation was improved, and finally, care benefits were increased especially relating to immediacy of treatment and referral mechanisms.
Conclusions: The results indicate that an investment in the ECP role could be beneficial, however, more work is required to evaluate the development of practice, the quality of care, and cost benefits.

Ambulance services across the UK are increasingly aware of the need to evaluate their educational provision and to consider new and innovative operational practice. Government ministers have been emphasising the importance of team working, maximising the contribution of all staff to patient care, modernising education and training, and expanding the workforce.[1–3] Pressure is being applied on all those involved in healthcare education to produce personnel who are ''fit for practice'' within a seamless service and to break down what Alan Milburn calls ''tribalism'',[4 5] reducing the barriers between professions and specialties.

Issues concerning paramedic education are being raised especially the need for a greater decision making repertoire and ''a greater emphasis on deciding whether or not to treat patients before transporting to hospital''.[6]

One of the most influential publications has been the Joint Royal Colleges Ambulance Liaison Committee (JRCALC) report[7] on the need for an advanced practitioner in emergency care (PEC), (now referred to as an emergency care practitioner (ECP)) encompassing issues related to advanced autonomous practice and multi-professional roles and links, based upon a higher education curriculum. The UK government's Changing Workforce Programme has been actively promoting practitioner developments and foresees a number of advantages within the role including reduced accident and emergency (A&E) attendances, improved patient care, and increased operational efficiency.

With these issues in mind the University of Plymouth (UK) has been running the first multi-professional BSc in Emergency Care since 2000. Between 8 and 10 students have been recruited to each cohort—50% A&E nurses and 50% paramedics. The two year part time programme is made up of seven modules covering issues such as core concepts in emergency care, mentorship, applied skills in emergency care, and leadership and management. Core competencies for paramedic practitioners have been incorporated into the programme based on the ongoing work of the Higher Education Ambulance Development Group (internet appendix 1, http://www.emjonline.com/supplemental). Advanced assessment and patient management skills are a key focus, for example, triage/prioritisation techniques, wound closure, health promotion, utilisation of support services, and major incident management.

Despite these innovations the role of the ECP remains unclear. This paper reports on an evaluation of the role within Westcountry Ambulance Service NHS Trust (UK).

METHODS

On graduation four experienced (mean 10 years/range 9–12) male paramedics were appointed to the practitioner role in September 2002 with an open remit to explore and develop the role. Two were based in West Cornwall and two in West Devon. The two regions serve a population of about half a million in Cornwall and 2 million in Devon, with the ambulance trust employing 741 front line A&E staff in the two counties. The Cornish based practitioners practised in predominantly rural populations while the Devon contingent practised in an urban population (Plymouth) and the rural community of East Cornwall. All the practitioners were based in a local minor injury unit (MIU) for half their working week and their base ambulance station for the remainder. The secondment to the MIUs was in response to local primary care trusts interest and support for the role and as an additional development opportunity for the ECPs. Methods of

Abbreviations: ECP, emergency care practitioner; EMS, emergency medical system; MIU, minor injury unit; PTS, patient transport system; RRV, rapid response vehicle; RITA, rapid intervention, treatment, and assessment; UTV, urgent transport vehicle

transportation varied; motorbike, rapid response vehicle (RRV), air ambulance, or a practitioner car (a converted Volvo estate for the treatment of patients on scene).

Data collection ran for six months (October 2002 to March 2003) and incorporated a period of operational development and refinement before the activation of the patient care phase. Using both qualitative and quantitative approaches the objective was to undertake a scoping exercise to identify the scope of practice of the ECP and to compare that with the paramedic, and to begin to understand the possible impact of ECPs on the patient's emergency care experience. Clearly the roles of ECP and paramedic will differ, the question was how did they differ and was their a benefit?

The programme was designed to evaluate a developing situation, in which the views and experiences of the people involved would be an essential part of the data. To this end a constructivist methodology was chosen.[8 9] This approach takes stakeholder inputs (claims, concerns, and issues) as organisational and developmental foci for the evaluation, drawing upon the constant comparisons of different groups constructions of realities and thereby capturing the dynamics of rapidly changing circumstances and environments.

Two stages of data collection were developed, the first was based upon the four practitioners' reflective reports, MIU documentation, and adapted patient report forms (PRFs). PRFs from this first case group were compared with those completed by 11 paramedics (five from the East and six from the West). Based on a criterion sample of experienced (>3 years) paramedics, 12 staff were initially recruited with 11 completing the relevant documentation; their experience ranged from 3–15 years (mean 8 years) which was comparable to that of the ECPs. The second phase of data collection was based upon individual and focus groups interviews with key stakeholders, ECPs, paramedics, ECP managers, MIU and A&E staff.

Data were analysed using the constant comparison method,[9] filed notes and transcripts were coded, and concepts compared with the aid of QSR N5 (Scolari, London). Emerging concepts influenced the data collection and sampling as the process developed. The objective was to produce analytical generalisation[10] rather than statistical generalisability. However, statistical information was gained from the practitioner and paramedic adapted PRFs and was analysed with the use of the SPSS. Univariate analysis of nominal data was performed using χ^2 analysis with Yates's correction, ordinal data with Spearman (p) rank correlation. These two elements of data were compared ensuring that the qualitative issues were explained in relation to the statistical evidence.

RESULTS

Four ECPs and 11 paramedics participated in the data collection. For incidents within the emergency medical system (EMS) control, an adapted PRF was completed. Data were taken from the MIU patient record for the practitioners' MIU cases.

The paramedics reported on 331 cases while the ECPs reported on 170 cases within the EMS system and 191 MIU cases.

Patient demographics

Of the 692 cases, 51% of patients were male and 44% female. Patient age ranged from <1 year to 99 years. ECPs and paramedics exposure to adult patients did not differ. However, ECPs did have more exposure to patients under the age of 16 years (p = 0.001) mainly attributed to their MIU work.

Chief complaints

Table 1 shows the range of conditions seen from the EMS. ECPs saw significantly less ''other medical'' patients than paramedics (p = 0.017) and significantly more trauma cases (p = 0.014). Internet appendix 2 (http//www.emjonline.com/supplemental) shows the range of conditions seen by the ECPs in MIU of which 30% (57 of 191) of patients had lacerations, and 35% (67 of 191) presented with soft tissue or ligament injuries.

Deployment

There were differences between the way in which the ECPs and paramedics were deployed (p = 0.000). Paramedics were resourced by ambulance control, while ECPs, for example, were self activated 45% (76 of 170) of the time and by ambulance control 34% (58 of 170) of the time. Attending crews (including those in rapid response vehicles (RRVs)) called for ECP assistance in 18% (31 of 170) of cases.

Discharge

ECPs were more likely to treat patients on scene than paramedics (p = 0.007); 28% (48 of 170) by ECPs compared with 18% (59 of 331) by paramedics. None of the ECPs' or paramedics' patients were subsequently conveyed within 24 hours. However, there was a repeat call to an ECP's patient who had fallen for a second time.

Patients were conveyed, either by A&E, urgent transfer, patient transfer, rapid response, air ambulance, or ECP vehicles. ECPs arranged conveyance for 50% (85 of 170) of their patients while paramedics conveyed 64% (212 of 331) (p = 0.000). This paramedic comparison group conveyance rate was comparable to the Trust wide conveyance rate, which for the period of the study equated to 67%. Table 2 breaks down the recorded discharge data including the referral and conveyance rates.

ECPs submitted a total of 269 reflective case reports. Individual and focus groups interviews were performed with the four ECPs, four ECP managers, one senior member of the MIU staff, one A&E consultant, and four paramedics who were not part of the comparison group. (The following quotations are coded as either ''ECP reflective'' (ECPr) or ''Stakeholder'' (St), which may be manager (Man) or clinician (Clin).

Four key themes emerged from the data;

- Resource deployment
  - Transportation
  - Communication

Table 1 Chief complaints (EMS incidents)

Chief complaint	Number of patients seen by paramedics	Number of patients seen by ECPs
Respiratory	34	14
Cardiac	45	21
Gastrointestinal	14	4
Neurological	24	6
Other medical	55	15
Trauma	72	54
Burns	4	2
Poisoning	3	1
Deliberate self harm	9	2
Social need	11	7
Other unspecified condition	12	2
No information	48	42
Total	331	170

Table 2 ECPs patient discharge records

Treated on scene	48
Referred to general practitioner	10
Referred to police	1
Referred to bereavement team	1
Referred to rapid intervention treatment and assessment (RITA) team (RITA)	4
Non-injury/no treatment	5
Patients downgraded for a later response	6
Deceased	6
Children transported to A&E/MIU by parents	2
Conveyed to A&E/MIU by ambulance service	85
No discharge data	2
Total	170

- Training and education
- Inter-agency cooperation collaboration
- Patient care

Resource deployment
Transportation
Practitioners were deployed by various means; either by direct orders from ambulance control, self activation from pager information, or by request from ambulance crews through mobile phones. A major reported benefit of the ECP role was the reduction in unnecessary trips by emergency ambulance to A&E and an ability to re-grade incidents appropriately.

The training, competence, and confidence of the ECPs appeared to improve their decision making repertoire with a significant impact on resources. The following quote illustrates these issues:

> ''Great to do some wound care in the field. Released the crew —they were happy. With the family we discussed a plan. I then liaised with Kernodoc over the phone who were in agreement with me and facilitated a bed in the local community hospital. I took the fairly mobile lady in my practitioner car to the hospital, admitted her and handed her over to the staff. Had freed up WAST (Westcountry Ambulance Service Trust) resource to do other work. This crew would have undoubtedly taken her to a district general hospital A&E which would have been inappropriate for a 96 year old lady'' (ECPr).

A notable event was the redeployment and local management of resources on New Year's Eve 2002. The ''999'' calls to WAST from the town of St Ives in West Cornwall were directed to the on-scene practitioner's mobile phone. This enabled the practitioner to allocate resources appropriately on a local level. Twenty patients were seen of which only five were transported to A&E using four vehicles.

Practitioners were also active in ''standing down'' emergency vehicles on ''red'' 999 calls, reducing the risk to the public. They also cited the benefits of giving patients time to recover instead of rushing them into an ambulance and the local A&E department. Benefits were also perceived from the allocation of patient transport system (PTS) vehicles and staff to the ECPs reducing the impact on A&E transport.

Resource deployment
Communication
In the early days of the trial concerns were raised over the allocation of resources and methods of deployment. Ambulance control had ECPs placed on the ''back screen'' classified as ''other'' resources, leading to long periods of inactivity for the practitioners.

> ''Self activated via my page. Didn't bother to ring control as they are not proactive and it takes too long. Control never phoned me once'' (ECPr).

Adjusting to accommodate the emerging role of the practitioner was a challenge, not helped by the scarcity of practitioners, irregular availability, and the uncertain nature of their role. This was partially resolved by the introduction of a ''response bureau'' based in control, where experienced officers were appointed to identify suitable calls for the ECPs. However, practitioners argued the need for flexibility and the freedom to make their own dispatch decisions based on local knowledge.

Training and education
ECPs and stakeholders agreed that the additional graduate level training the ECPs had received improved their clinical practice. There were also reported benefits from the experienced gained working in MIUs;

> ''… prior to the degree course, I would not have been able to treat a patient with the confidence and competence required. However, having studied both anatomy physiology and clinical evaluation I was in a strong position to treat this patient appropriately'' (ECPr).
> ''The wound did look big but I have treated bigger wounds in the MIU so I knew exactly what to do. I think I may have been fazed had I not have had that MIU experience'' (ECPr).

The ECPs appeared to have developed skills in leadership and reported a level of influence over their own colleagues and in the multi-professional arena, for example;

> ''The degree and appointment as a practitioner has empowered me—It gives me the authority and confidence to take decisions'' (ECPr).

ECPs also appeared to be considering their practice based upon the latest evidence;

> ''…an experienced paramedic began IV placement before leaving the scene. The current *EMJ* (*Emergency Medicine Journal*) has an article referring to the best evidence for fluid therapy …There was no real need for fluid in this patient and I was really wondering whose benefit he was cannulating for'' (ECPr).

Practitioner reports were reflective in nature and often identified areas of weakness, for example, wound care, ionising and radiation issues, radiological interpretation, some advanced examination techniques and suturing skills. Over time these issues were resolved. However, prescribing issues especially in relation to antibiotics and tetanus immunisation were not resolved.

Inter-agency cooperation and collaboration
The practitioners were proactive in building inter-agency links and developed patient referral processes with GPs and the local rapid intervention treatment and assessment (RITA) teams (a group made up of social services, occupational therapists, and physiotherapists) with direct admission policies to community hospitals and care facilities. In

addition they forged links with the community psychiatric service, district nurses, nurse practitioners, physiotherapists, the reablement team, and the falls group (an information based group for falls prevention and awareness). There was evidence to suggest that ECPs were able to identify and initiate actions on behalf of, or in cooperation with, patients and relatives, which might not be identified in current practice between the responsible agencies.

The MIU links were also cited as beneficial to both parties;

> ''I thought it was a good benefit having them, it was a good learning curve for us plus they were lucky to come down to clinics and get some suturing experience''(St/Clin)

Cultural changes relating to emerging roles were an issue, with tensions over the training of practitioners in some UK regions, ''on the cheap'' (St/Clin), and concerns over the placement of paramedics in traditional nursing and general practice roles. Practitioners reported a cautious approach:

> ''Once again I was conscious of the need to be circumspect when dealing with the crew that were ''first on scene'' (ECPr).

Patient care

Practitioners and stakeholders reported a variety of benefits to patient care particularly relating to issues around referral processes and treat and release. They organised direct admission to wards and assessment by appropriate agencies (for example, the falls team). Wound care, including glue and steri-stripping, and advanced examination and assessment skills were frequently reported.

No serious errors in patient care were apparent, however, one diagnostic error was mentioned;

> ''…the bad side was that my diagnosis of a sprain was incorrect and the x-ray showed fracture of the lower fibula'' (ECPr).

In conclusion, one stakeholder summarised the role as follows;

> ''…I've been in the service 22 years, the only time I can remember anything moving the service forward as much as this was when paramedics first came. The potential for the practitioners is fantastic and for the first time ever there is an opportunity for a real link into the rest of the health system… and being taken seriously by the NHS. If we've got the right people driving forward the practitioner role we will have a massive impact on patient care and delivering quality patient care, and I just think it's a really exciting time to be a part of this new way of thinking and working'' (St/Man)

DISCUSSION

This study was set at a time when WAST were receiving an average of 13 000 calls a month, so clearly our sample is small. We were also studying a small and highly motivated group of people, which may not be the case in the future. However, the results of this study indicate that the ECP role is developing along the lines envisaged by a number of advisory and governing bodies.[2 3 6 7] The initial implementation of the role was a significant challenge to the service but ECPs were proactive in their development and made significant efforts to heighten awareness and to resolve some of the tensions inherent in a new role. They were particularly active in their development of inter-agency links and worked closely with ambulance control to resolve communication problems and to identify cases that matched their skills.

There are indications that the role would be best managed by a flexible approach to deployment, and an empowerment of practitioners at a local level. The above report of New Year's Eve 2002 is a good example. Woods[11] supports this view reporting that the implementation of advanced practice is best facilitated with supernumerary status and the autonomy to organise and undertake practice.

The reader should be cautious in the interpretation of the quantitative comparisons between ECP and paramedic as our primary objective was to analyse the overall emerging role of the ECP. The process of patient referral clearly differed to that of the paramedic and therefore patient cases differed (table 1). It is quite possible, for example, that they were more likely to be attend patients who would be less likely to be conveyed. Of course the negative corollary could have been that despite the investment in ECPs there was no difference in the conveyance rates. However, ECPs did seem to have an impact on the operational activity within the service, particularly relating to referral/release practice and non-conveyance issues, which supports the evidence for alternative referral pathways.[12 13] They were active in ''standing down'' responders and downgrading calls and were able to manage patient care for the early release of crews. They were more likely to treat patients on scene than paramedics 28% compared with 18% ($p = 0.007$) and were therefore less likely to convey patients, 50% compared with 64% ($p = 0.000$). ECP and paramedic figures that compare well with 1999 English and Welsh conveyance rates of 83%.[14]

The quality of care in ECP (and paramedic) treat and release practice does need to be challenged. Other than a second call to a patient who frequently fell, our investigations show that there were no secondary emergency calls (within 24 hours) to practitioners' and paramedics' patients. However, a review of the literature relating to emergency ambulance crews (not including practitioners) by Snooks *et al*,[15] produces evidence that a significant minority of patients who are not conveyed are at risk of deterioration.

As in comparable studies,[16] graduate level education was cited as applicable and appropriate. Reports indicated that the programme had empowered people and increased competence and confidence. Practitioners took up the mantle of leadership and were active in the education of staff and patients. MIU secondments were reported as an essential component of development, maintaining and improving practitioners' position on the skills escalator. Unfortunately the future of such courses remains uncertain. Ambulance services continue to fund their own pre-qualifying training and educational provision, with pockets of investment from the Workforce Development Confederations and the Higher Education Funding Council for England. As the Ambulance Service Association reported in 2001[6] ''training for ambulance paramedics and Practitioners in Emergency Care should be funded through the Non-Medical Education and Training budget, as happens for other Allied Health Professions''.

Flexible deployment, reduced inappropriate conveyance, on scene treatment of minor injuries, inter-agency referral mechanisms, and alternative care pathways are likely to produce a more rounded holistic system of care—appropriate care, at an appropriate time in an appropriate place. The results from this study show that an investment in the role could be beneficial. However, more work is required to evaluate the development of practice, the quality of care, and the cost benefits of such schemes, especially those relating to

educational provision, and for example, extended on scene times in comparison with conveyance costs.

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CONTRIBUTORS

Simon Cooper initiated the research, discussed core ideas, participated in the protocol design, and coordinated and assisted in the data collection. He assisted in the analysis and interpretation of the data and wrote and edited the paper. Chris Evans and Sarah Black discussed core ideas, participated in the protocol design, assisted in the data collection, undertook the data entry, assisted in the data analysis, and edited the paper. Barry Barrett, Carlton Real, Simon Williams, and Bryan Wright discussed core ideas, assisted in the data collection, and edited the paper. The guarantor of this paper is Simon Cooper.

The appendices are available to view on the journal web site (http://www.emjonline.com/supplemental).

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APPENDIX 1

COMPETENCIES FOR PARAMEDIC PRACTITIONERS

Discussion document from
Higher Education Ambulance Development Group

11 March 2003

INDEX

1. INTRODUCTION

The Joint Royal Colleges Ambulance Liaison Committee introduced the concept of Practitioners in Emergency Care in January 2000[1]. The PEC would provide "an additional level of pre-hospital care provider who would both respond to life-threatening emergencies and attend those cases in which the need for emergency response had not been determined" (2000, section 4.3).

Recently, the term Paramedic Practitioner (PP) has been recommended as a more appropriate title for this professional. The suffix 'practitioner', when added to an established health care title, is generally accepted to denote that a practitioner works with a high degree of autonomy. The title 'paramedic practitioner' is comparable with similar advanced-practice roles in nursing and the allied health professions: for example nurse practitioner or physiotherapy practitioner.

The Higher Education Ambulance Development Group (HEADG) was constituted in May 2002. The group comprises of representatives from ambulance services and universities involved in collaborative provision of courses for ambulance staff. Representation from relevant professional organisations and bodies was sought and the group meets quarterly. A list of members is shown in appendix 1.

HEADG was formed at a point when several universities had developed courses for ambulance staff, ranging from foundation degrees to postgraduate degrees. Group members believe that there is a need for consistency in this provision. A framework of higher education for ambulance staff from emergency medical technician to paramedic practitioner was therefore developed. By inviting representation from key stakeholders, HEADG offers a consensus view on what constitutes appropriate higher education at each level for this professional group.

Paramedic practitioner schemes have been developed in a variety of regions with, as yet, no strategic direction from government. The formation of HEADG provided an opportunity to gain a consensus on the role, knowledge base and scope of practice for this developing profession.

Local requirements will determine the full scope of the PP role. But it is proposed that there be a core knowledge base and core competencies shared by all PPs. This document sets out the group's proposals for these competencies for consideration by JRCALC, the Ambulance Education and Training Advisory Group (AETAG) of the ASA, and the Health Departments in England and Wales.

[1] The Joint Royal Colleges and Ambulance Liaison Committee and The Ambulance Service Association (2000) *The Future Role and Education of Paramedic Ambulance Service Personnel (Emerging Concepts)* Available from: http://www.jrcalc.org.uk/ [accessed 26 February 2003]

2. GENERAL OUTLINE

Paramedic Practitioners will be Registered Paramedics and so should have all of the competencies of a State Registered Paramedic (SRPara) but with new competencies detailed below. Where these are already included in the current requirements for SRPara, we expect the paramedic practitioner to have developed them to a higher level.

All competencies should be underpinned by an evidence base (where it exists), appropriate anatomy, physiology, and related theory.

In order to develop and maintain clinical practice, paramedic practitioners require mentored clinical practice in at least the following areas;

- Accident and Emergency Units
- Anaesthetic Departments
- Cardiac (Coronary) Care Units
- Primary Care

During these clinical attachments they may have membership (and possibly leadership in smaller hospitals) of any Advanced Cardiac Life Support team and Advanced Trauma Life Support team (or equivalent group).

3. PATIENT ASSESSMENT

The paramedic practitioner will be able to:

3.1 Accurately triage and prioritise patients.

3.2 Complete a holistic patient assessment and demonstrate the use of a variety of techniques to elicit the history of any event, including past medical history and drug history.

3.3 Documentation, written in a clear, accurate, and systematic manner.

3.4 Undertake physical examination including vital signs, inspection, palpation, auscultation, and to use additional basic examination tools, for example,

- an auroscope
- a patella hammer
- clinical thermometry

3.5 Use other diagnostic aids such as:

- urinalysis
- assessment of visual acuity
- venepuncture for blood tests
- 12 lead ECG interpretation

3.6 Carry out other specific assessments, for example, assessment of mental health problems, assessment of ability to cope at home.

3.7 Demonstrate an awareness and / or knowledge of the use of clinical decision support software.

3.8 Demonstrate an awareness of the specific requirements in the event of a major incident with mass casualties.

4. CLINICAL JUDGEMENT

4.1 The Paramedic Practitioner will utilize critical thinking and applied decision making based upon underpinning theoretical knowledge of:

- Emergency and life threatening conditions of both adult and paediatric patients.

- Commonly presenting illness and injury, for example
    - Pyrexia
    - Earache
    - Upper respiratory tract infection
    - Headache

5. PROFESSIONAL SKILLS

The paramedic practitioner will;

5.1 Show effective communication when dealing with:

- Healthcare professionals
- Non health care colleagues such as in the collection/preservation of forensic evidence
- Patients and relatives (age appropriate)
- Breaking bad news
- Defusing violent or aggressive situations

5.2 Be aware of ethics, legislation and regulatory requirements, for example:

- Accountability
- Children's Act
- Confidentiality
- Consent and capacity
- Data protection
- Duty of care
- Human Rights Act
- Medicines Act
- Medico-legal issues including medical notation
- Mental Health Act

5.3 Demonstrate evidence of teaching skills, for example;

- clinical practice situations
- small group tutorial skills
- mentoring and assessment

5.4 Develop skills of an evidence based clinical practice by utilizing applied knowledge of

- clinical audit
- critical appraisal of research
- research methodology
- ethical review
- research governance

6. PATIENT MANAGEMENT

6.1 The paramedic practitioner will demonstrate an ability to treat and / or refer or discharge patients who access the health service through the 999 system, but who do not need hospital admission. Including for example,

- Mild / moderate asthma
- Recovered hypoglycaemic diabetics
- Minor pre-existing psychiatric problems
- Patients who have recovered from epileptic fits
- Minor injuries (including indications for x-rays) for example,

- Limbs injuries
- Trunk injuries
- Minor Head injuries

6.2 The paramedic will be able to:

6.2.1 Utilize support services to manage the unscheduled care of the patient within the primary health care setting by referral to alternative agencies, for example:

- Community Psychiatric Nurse
- District nurse
- General practitioner
- Health visitor
- NHS Direct
- Pharmacy
- Social worker

6.2.2 Measure, assess, and manage pain in adult and paediatric patients using mechanical, pharmacological, and / or other methods.

6.2.3 Demonstrate an awareness of and the implications for tissue viability / pressure area care in relation to;

- Patient transfer
- Application of immobilisation techniques

6.2.4 Demonstrate an ability to assess and manage wounds, making a clinical judgment regarding treatment or referral or discharge

- Aseptic technique
- Wound cleansing
- Infiltration of local anaesthetic
- Wound closure using paper strips, glue, clips or sutures
- Selection and use of an appropriate dressing
- Dressing techniques
- Administration of anti-tetanus therapy
- Appropriate follow up

6.2.5 Demonstrate knowledge and understanding of local and national policies / guidance of infection control particularly in relation to:

- Meningoccal disease
- Methicillin (flucloxacillin) Resistant Staph Aureus (MRSA)
- Blood borne infections such as: Hepatitis B/C HIV

7. PHARMACOLOGY, PRESCRIBING, SUPPLYING AND ADMINISTRATION OF MEDICINES

The paramedic practitioner is able to;

7.1 Understand the principles of pharmacodynamics and pharmacokinetics as applied to clinical interventions.

7.2 Critically evaluate the effect of individual differences in physiology on

drug responses.

7.3 Evaluate adverse drug reaction and interactions, and the reporting and recording procedures associated with these.

7.4 Appraise the impact of co-morbidity's on prescribing and patient management choices.

7.5 Examine the clinical, psychological and cultural factors influencing prescribing decisions.

7.6 Explore the legal basis of prescribing, supplying and administering medicines.

7.7 Supply, administer and prescribe drugs according to national and local policy, protocols and patient group directives.

8. HEALTH EDUCATION AND HEALTH PROMOTION

The paramedic practitioner will;

8.1 Show evidence of participation in health improvement programmes through community education initiatives such as:

- citizen CPR
- public access defibrillation
- healthier life style education projects
- accident prevention

8.2 Understand and apply relevant health promotion and health education strategies, such as discharge advice.

9. MANAGEMENT, LEADERSHIP, HUMAN FACTORS, AND PERSONAL SKILLS

9.1 The paramedic practitioner will be able to do;

- Direct and supervise the work of others
- Manage and organize patient caseload
- Manage the needs of the patient's family
- Work as an effective member and leader of the multi-professional team
- Recognise and manage manifestations of stress in the multi-professional team, carers, patients and self
- Understand and organize own time management
- Demonstrate effective use of information technology in relation to clinical practice
- Engage in self-appraisal and contribute to the development of others through clinical supervision and reflective practice
- Translate the concept of critical resource management in relation to clinical practice and the prevention of adverse events
- Formulate and express ideas concerning human factors in relation to clinical practice such as;
    - Team dynamics
    - Team climate
    - Communication
    - Learning and the organization

APPENDIX 1:

MEMBERSHIP OF THE HIGHER EDUCATION AMBULANCE DEVELOPMENT GROUP (HEADG)

West County Ambulance Service

University of Plymouth

University of Hertfordshire

London Ambulance Service

East Anglia Ambulance Service

Welsh Ambulance Service

University of Wales Swansea

Scottish Ambulance Service

Oxford-Brookes University

BASMED

ASA & AETAG (invited)

JRCALC

HPC (invited)

British Paramedic Association (invited)

Defence Medical Services Training Division

Changing Workforce Programme – Emergency Care Pilot

Appendix 2
Conditions seen by ECPs in MIU

Chief complaint	Number of patients presenting
Burns/scalds	10
Contusion/abrasion	4
Dislocation/fracture/joint injury/amputation	18
Foreign body	1
Head injury	4
Laceration	57
Muscle/tendon injury	3
Nerve injury	2
Ophthalmologic conditions	10
Puncture wound	1
Soft tissue injury/inflammation	48
Sprain/ligament injury	19
Vascular injury	1
Medical condition	10
Other condition not specified	3
TOTAL	**191**