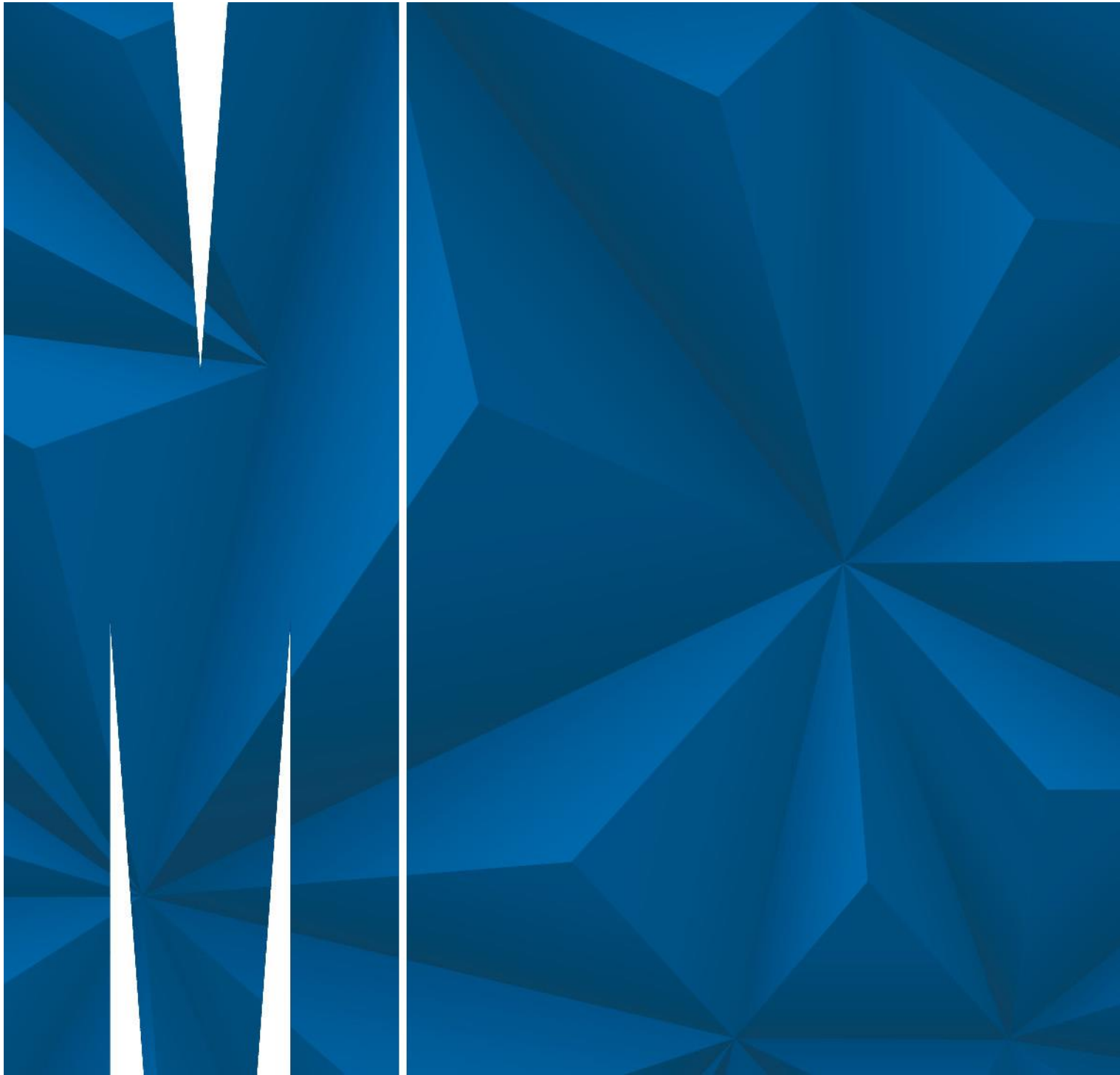




Pre-Hospital Emergency Care Council

# Community Paramedicine Practice Framework Scoping Exercise



A scoping Framework exercise brokered by the Pre-Hospital Emergency care Council of Ireland.

January 2022.

This report was prepared by:

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## Summary

### Implications for Ireland

#### PROGRAMME DESIGN AND IMPLEMENTATION

Community paramedicine programmes have been implemented across a wide variety of contexts including urban, rural, remote, and offshore settings, using proactive (i.e. preventative care), reactive (i.e. appropriate care) and mixed models which align with previously outlined community paramedicine models of care (1). Referrals to programs are often from other health and social care professionals, while a number of programs interface directly with vulnerable populations such as those experiencing homelessness.

#### SCOPE OF PRACTICE

All programmes employ an increased scope of practice for community paramedics. This most often includes expanded assessment and diagnostic options (including enhanced physical examination and history taking), the ability to refer patients to other healthcare professionals and more appropriate care destinations if required and expanded medication and intervention options. Notable expansions of scope include the ability to administer suboxone by community paramedics in Alberta, Canada, and the ability to perform occupational screening by community paramedics in remote and offshore settings in the USA. These reflect an expanded scope to meet the specific healthcare needs of the communities served, which is a core principle in developing community paramedicine programmes (1).

#### ENTRY REQUIREMENTS

Entry requirements to community paramedicine education vary but most often require applicants to be a certified or registered paramedic with several years of experience. In jurisdictions where differing clinical levels of paramedics exist, opportunities are often available to all levels, with extra training available to those who lack specific skills for the role.

#### PRACTICE REQUIREMENTS

Practice requirements for community paramedics vary from the completion of in-service orientation training to the completion of a postgraduate degree (most often a Master's degree in the United Kingdom and Ireland).

#### GOVERNANCE AND SUPERVISION

Governance structures range from pre-determined protocols (most restrictive) to case-by-case reviews (most flexible). Most often community paramedicine programmes are governed by ambulance services under existing clinical governance structures, with specific resources made available such as on-call physician/senior practitioner support. Programmes use a mix of rotational and non-rotational staffing models.

## INTEGRATION WITH PRIMARY CARE

A number of programmes are fully integrated with primary care whereby community paramedics collaborate with primary care providers. This includes working in primary care clinics, performing primary care home visits, and care planning and coordination with primary care providers.

## BARRIERS

Common barriers reported by community paramedicine programmes include a lack of legislation to facilitate the role; challenges with funding of programmes; a lack of suitably qualified and interested personnel to staff the programme; the demands of COVID-19 responses; access to medical records; a lack of understanding of the community paramedicine programme among other healthcare professionals; the lack of central dispatch; and a lack of appropriate literature to support the implementation and development of the programme.

## FACILITATORS

Common facilitators reported by community paramedicine programmes included senior management support of the programme; commitment of funding on a permanent basis; the implementation of shared documentation models; partnership and integration with primary care providers and other healthcare professionals; and dedicated staff within the community paramedicine programme.

## ADVICE

Advice from established programmes includes: the importance of addressing identified needs in the community that are not otherwise being met; meeting with other facets of the healthcare system to facilitate a multidisciplinary approach to planning and implementing a programme; successful integration of community paramedicine into the primary care system requires discussion, clear guidelines, and engaged stakeholders; recruiting, educating, and supporting community paramedics in practice is essential for the success of the programme, and the outcomes of patients; measure the outcomes in meaningful ways for patients and the healthcare system (i.e. not by means of standard ambulance service key performance indicators).

## Introduction

Community paramedic roles have evolved over the last twenty years across the globe. Within the United Kingdom, paramedics with extended skills within ambulance services sought to treat more patients in the community from 2002 (2). At a similar time in Nova Scotia, community paramedics worked alongside nurses and family physicians in a home-visiting model (3), with evidence of rural paramedics adopting a community approach in Australia for at least a decade (4), and much more recently in the United States of America (5). Now, such programmes are widely implemented across Australasia, Canada, Finland, the United Kingdom and the United States of America. The main drivers for the community paramedicine model have been the changing paramedic service caseloads that reflect aging populations and declining access to other health services. These developments provide an opportunity for community paramedics to be more widely employed across the health system in ‘non-traditional’ roles that meet the needs of disadvantaged communities who often lack access to high-quality emergency health services or primary health care. For health services looking to implement community paramedicine programmes, such as PHECC, there can be many factors to navigate. Therefore, we sought to understand the current community paramedicine programmes that exist, in order to inform the development of community paramedicine in Ireland.

### Community Paramedicine

While there is currently no consensus on the definition of community paramedicine, for the purposes of this scoping exercise we adopted the following definition from the international round table on community paramedicine (6):

*“Community paramedicine is a model of care whereby paramedics apply their training and skills in ‘non-traditional’ community-based environments, often outside the usual emergency response and transportation model. The community paramedic practices within an ‘expanded scope’, which includes the application of specialized skills and protocols beyond the base paramedic training. The community paramedic engages in an ‘expanded role’ working in non-traditional roles using existing skills.”*

## Research questions

1. What are the characteristics of community paramedicine programmes in Australia, Canada, Finland, New Zealand, the United Kingdom, and the United States of America?
2. How can the characteristics of these programmes inform the development of community paramedicine in Ireland?
3. What barriers and facilitators were experienced when implementing these programmes, and how can these “lessons learned” inform the development of community paramedicine in the Ireland?



## Methods

We conducted a practice framework scoping exercise. The purpose of a scoping exercise is to map a wide range of literature, and in doing so outline gaps that exist and where innovative approaches may lie (7). We sought to elicit responses from a diverse range of programmes across multiple jurisdictions while acknowledging that it would not be possible within this scoping exercise to identify or describe every implementation of community paramedicine within these jurisdictions. Thus, this approach was predominately stakeholder-led, which enabled the identification of target programmes across the jurisdictions concerned. First, we established a team with expertise in community paramedicine across four jurisdictions: Australia (BS, KB, BW, POM), Canada (MN, JH, ML, AB, CL), the United Kingdom (GE), and the United States of America (GW). We contacted colleagues with expertise in community paramedicine in these jurisdictions, as well as Ireland, Finland, and New Zealand. This approach harnessed the expertise and network of the team.

### Data collection

Following identification of appropriate stakeholders within each jurisdiction, team members sent out an online survey using Qualtrics. The survey design and wording of items was informed by the criteria of the scoping exercise. The survey consisted of 13 open-ended questions (see Appendix 1). We piloted the survey for content and clarity before administering it and sent a reminder to optimise participation. This survey requested details on the following characteristics of community paramedicine in each jurisdiction:

- Population characteristics
- Model of service delivery
- Scope of role (if extended from entry scope)
- Education entry requirement (experience and/or previous qualifications or scope)
- Education level on completion
- Supervision requirement
- Clinical governance
- Other structural or organizational supports
- Integration with primary care or rotational models
- Outcome data gathered

Responses to the survey were exported to a CSV file. This file was shared with members of the team to review. Continuous content analysis was performed on the data. Individual and synthesised results (as applicable) were categorised according to the requirements of the scoping exercise, namely: scope of role (to include medication prescribing as appropriate); methods of service delivery; entry requirements; education; integration with primary or urgent care services; and governance arrangements including clinical supervision and supports. This data was analysed by BS, with review by AB and GE. An initial draft of the manuscript was produced by BS, AB and GE. This draft was subsequently revised by KB and BW and sent to the team for review and feedback. Narrative analysis was used to categorise results.

## Results

A total of thirty-five individual responses were received representing seven jurisdictions (Table 1). Three submissions were removed at screening as they were programs still under development and not yet established with clinical governance or processes in place useful for this scoping exercise, one was removed at organisations request. Following cleaning, thirty-one responses were included in this report and were received from Australia (n=7), Canada (n=7), Finland (n=2), New Zealand (n=1), the United Kingdom (n=6), the USA (n=8), and Ireland (n=1). Figures 1, 2 and 3 give a geographical overview of community paramedicine programme locations.

*Figure 1. Included community paramedicine programme locations in Europe*



Figure 2. Included community paramedicine programme locations in North America



Figure 3. Included community paramedicine programme locations in Oceania



Raw outcome data has been presented in the following tables in the appendixes at the end of this report:

- Table 1- Jurisdiction and programme summary

- Table 2- Scope of practice
- Table 3- Model of service delivery
- Table 4- Education requirements

Written synthesis of the results has been presented below in sections corresponding to individual community paramedicine programmes. Each jurisdiction is presented in alphabetical order. Overview tables are provided as appendices. For ease of comparison and synthesis of data collected related to the scope of practice please see *Table 2- scope of practice* as referenced in the written results below.

## Australia

Seven responses were received from community paramedicine programmes in the states of New South Wales, Queensland, South Australia, Tasmania and Victoria. Two (2) responses were also received from Western Australia, but these programmes were still in early development and data received was deemed not yet relevant to the scoping framework exercise.

## New South Wales

### Background information

New South Wales is a south-eastern state in Australia, it has a land area of 801,150 km<sup>2</sup> and ambulance services are managed by one single jurisdictional ambulance service New South Wales Ambulance Service. Most of the population lives in the metropolitan area greater Sydney (5.3 million) with ~2.9 million people spread throughout regional and remote areas in the state.

### Community paramedicine programme

NSW ambulance service utilises an Extended Care Paramedic (ECP) programme as its community paramedicine model. The ECP programme is largely used in major cities and inner regional areas which are often coastal locations. In more coastal regions rather than a rural health initiative. The ECP programme commenced in 2007 with the focus on better meeting the needs of patients (consumers) with unplanned/unscheduled healthcare needs who were accessing care via an emergency call-taking system. It was a significant part of the demand management 'solution' when first introduced. ECPs are considered specialists in the assessment and management of low/lower acuity work for cases where non-conveyance / diversion was most likely. Initial patient areas of focus included: older persons including falls; wounds, minor injury (soft tissue injuries, eye injuries, dislocations, bites, wounds), minor illness, limb injuries, back pain and other painful conditions, infections (chest/urinary), catheter problems.

ECPs in the programme have been used in a reactive model as a demand management tool in metropolitan regions predominantly with requests identified at call taking level as well as by generalist

paramedics primarily on scene. There is work being undertaken to provide a proactive community paramedic approach in the future which is designed to be useful in remote and rural areas.

ECPs entering the role do one-year full time operating in the ECP model. ECPs can then rotate through onto a general ambulance response but their specialisation continues to be able to be used but they are not a designated ECP resource. For those that are also intensive care trained there can be difficulties having them released back to an ECP response as the demand for their intensive care skill set in the emergency response is too high.

## Scope of practice

The detail of the scope of practice is contained within *Table 2 - Scope of practice*.

## Entry requirements to community paramedic education

Minimum education requirements within Australia to practice as a Paramedic is a bachelor's degree in Paramedicine (or equivalent) and registration with the national registration authority. NSW ECP paramedics require generally 2 years' experience to enter into the ECP education programme.

## Education requirements to practice as a community paramedic

ECP paramedics undertake an in-service training programme prior to beginning clinically in the role.

## Clinical governance of community paramedicine

As one of the first programmes in Australia implementing this model of care governance processes were robust and included: clinical support/advice / remote supervision; operational reporting; case review and patient outcomes follow up as well as incident reviews (very few). This has been largely unchanged however the veracity has reduced over time and is currently focussed on integrating ECP practice governance into mainstream governance with prospective evaluation. ECP paramedics also have clinical practice guidelines to guide practice as needed.

## Clinical supervision of community paramedicine

The programme Initially had clinical supervision by a manager who was qualified as both a medical doctor and as a paramedic as well as a medical educator. As the programme matured experienced ECPs were trained as educators and became the primary clinical supervisors. Supervision currently is more peer-based now with access to an educator and a clinical assistance line (this service is also available to non ECPs).



## Integration with primary care

Integration with primary care is not yet seamless. As the programme moves to a more proactive model in the future, particularly in rural locations, better integration to local health services and with primary care will be important.

## Barriers and facilitators experienced

The community paramedic model had some unique barriers and facilitators to implementation and delivery:

- Governments have continued to fund ECPs - this has allowed the programme to grow from 12 trained to almost 200 trained over 14 years. There has however been attrition and dilution with many ECPs being distributed across the state integrating their knowledge and skills into standard emergency crews. Some extended scope has been supported in these non-dedicated settings.
- A major challenge has been to continue to staff the rosters. Operations have prioritised emergency ambulance rosters over ECP rosters as there is no disincentive for doing so (operationally at least) - capturing data on utilisation, shifts filled (or not) and return on investment is recommended. During periods of high operational demand, the wait times for low acuity work increases and there are often no low acuity specialists available to manage.
- There is no legislation to support prescribing or Medicare billing like nurse practitioners can in Australia. However, it was not difficult to enable ECPs to be in possession of and to administer scheduled medications including antibiotics as they are part of the health system which approves pharmaceuticals.
- Ensure you have systems in place to monitor that ECPs are current, and competent as time away from a dedicated roster or funded training time can lead to skill decay.
- The education programme was excellent but was "in house". Yet to create a pathway with a tertiary institution to provide formal academic accreditation.
- Relationships with other professionals are important such as peak medical bodies, nursing unions (worried about role substitution) and paramedic unions so work on the role development in collaboration.
- Engagement with primary care (primary health care networks / GPs) has been positive as has engagement with local health districts
- In retrospect, more work was needed to ensure that operational managers understand the programme, role and their responsibility - they often get mixed signals about priorities - ECPs have never fitted in like other specialties e.g., intensive care paramedics

- Recommend that risks be reviewed regularly and modified to ensure that remains contemporary.
- There remain a large number of physicians, nurses and allied health professionals involved in the education. Placements are an important part of the programme as was the involvement of a clinical school in the early days.
- Having a medical director that was qualified also as a paramedic overcame many barriers in the early days - it also shaped the education and governance and clinical support.

New South Wales ambulance service representatives suggest the following considerations for others looking to implement a similar community paramedicine programme:

- Know what problem you want to solve (is it yours to solve)
- Be clear on your value proposition - who is funding you / where does the money come from
- Evaluation is important. Consider covering:
  - Patient outcomes
  - Experience of patients
  - Experience of clinicians providing care
  - Does it add value (health economics)
- Remuneration should be adequate - it sends a signal of value and responsibility
- Local communities have local needs - one size fits all does not work.
- How will you get ECPs to cases they can help best with?
- Immersion is critical - ECPs need to think differently at the end of their training.
- How ECPs think is more important than what they do - drugs and procedures is only a small part
- Technology can be used as an enabler to diagnosis e.g., POC testing and pathology
- Consider telehealth. NSW are exploring the use of ECPs as virtual care specialists as their clinical risk management training fit this well model of care
- Invest in bringing the rest of the operational staff along to sell the model of care

## Queensland

### Background information

Queensland is a north-eastern state in Australia, it has a land area of 1.853 million km<sup>2</sup> (22 times the size of Ireland). Ambulance services are managed by one single jurisdictional ambulance service the Queensland Ambulance Service (QAS). Most of the population lives in the South-eastern corner of the state with 5.8 million people living in the state. The QAS operates as a state-wide service within

Queensland Health and is accountable for the delivery of pre-hospital ambulance response services, emergency and non-emergency prehospital patient care and transport services, interfacility ambulance transport, and planning and coordination of multi-casualty incidents and disasters. The QAS delivers ambulance services from 302 response locations through 15 Local Ambulance Service Networks, geographically aligned with Queensland Health's Hospital and Health Services' boundaries.

## Community paramedicine programme

The Local-area Assessment and Referral Unit (LARU) is the QAS equivalent of a community paramedicine programme. It is designed to serve predominantly low acuity patients identified at the initial call taking process (a list of call categories can be provided on request). The LARU paramedics are utilised throughout the state of Queensland but have predominantly been used in more densely populated regions in order to ensure efficacy in programme use as it is designed to assist pressure on the ambulance and ED systems. It is a purely reactive model of service delivery responding to patients when they seek care via the emergency call-taking system or if a primary emergency paramedic crew requests attendance by the LARU paramedic. LARU paramedics are an appointed position but LARU paramedics can rotate back through into emergency ambulance crew as well as spending time in the go through into secondary phone triage referral service as well, but this is at individual paramedic request.

## Scope of practice

The detail of the scope of practice is contained within *Table 2 - Scope of practice*.

## Entry requirements to community paramedic education

Minimum education requirements within Australia to practice as a Paramedic is a bachelor's degree in Paramedicine (or equivalent) and registration with the national registration authority. LARU paramedics require generally 2 years' experience as a paramedic to be competitive in the selection process to be accepted into the LARU education programme

## Education requirements to practice as a community paramedic

LARU paramedics undertake an accredited in-service postgraduate certificate titled "advanced assessment and critical reasoning" within 2 years from appointment.

## Clinical governance of community paramedicine

Clinical governance is no different to existing governance structures used within QAS. There was at the commencement of the programme a monthly governance meeting just for LARU, but this changed to more an in-service working group and is now under the realms of existing clinical governance.



## Clinical supervision of community paramedicine

When LARU paramedics enter the programme there is ad hoc one on one supervision for the first weeks in the role. Ongoing clinical supervision of LARU paramedics is undertaken at a local district level by an experienced LARU paramedic or an appointed clinical support paramedic. There is also support for clinical care via 24/7 consultation service with emergency physicians as required.

## Integration with primary care

Integration with primary care is limited to referring to a general practitioner with referral letters.

## Barriers and facilitators experienced

The LARU programme was designed to provide more nuanced care and is ultimately a cost-effective alternative to a double paramedic crewed emergency ambulance dispatch. There was a strong culture of understanding the value of further education within QAS and this meant the development of an in-service postgraduate certification to expand beyond the standard scope of practice to community paramedicine was well supported.

Early in the programme implementation paramedics began working in the LARU role prior to completing an in-house education programme and it was expected to be completed over a period of time. This was changed to an in-service graduate certificate which must be completed in 2 years, otherwise, an officer will revert back to their previous scope of practice

QAS suggests the following considerations for others looking to implement a similar community paramedicine programme:

- Ensure the operating environment is understood, prior to the integration of the programme. This includes an understanding of funding models.
- It is important to clearly outline what the benefits are to the organization in order to get buy-in from senior management.
- It is easy to focus on increasing skills even if this skill may not be used frequently or provide great benefit to the community. Always question what value the skill has and if it can be done by existing external (or internal) programme/services then this is desirable. Integration with existing systems and services is more efficient and reduces complexity. Co-responder programmes is an area to explore if possible
- Most importantly community paramedicine programmes need to be responsive to the local community needs and will require a flexible approach.

## Background information

South Australia is a southern state in Australia, it has a land area of 983,482 km<sup>2</sup> (11 times the size of Ireland). Ambulance services are managed by one single jurisdictional ambulance service, the South Australian Ambulance Service (SAAS). Most of the population lives in the state capital of Adelaide with 1.8 million people living in the state.

## Community paramedicine programme

SAAS operates two models of community paramedicine in their service. The first is an Extended Care Paramedic programme which operates only in the metropolitan area of Adelaide. The ECP programme in SAAS is the most established community paramedicine programme in SAAS with 38 FTE positions. The ECP paramedics target all patients independent in the home, focusing mostly on elderly patients where safe ED avoidance could occur. There is also a growth area of caring for aged care facility patients. The ECP programme uses a purely reactive approach to service delivery responding to patients identified at call taking level as fitting the ECP scope of practice which is given oversight by ECP working in the call taking area who dispatch fellow ECPs. Referrals are also pre-booked for patients requiring ECP care who are in aged care facilities via a designated booking line. ECPs rotate in and out of the ECP role, to then work in communications dispatching fellow ECPs to appropriate cases.

The second programme is a community paramedic programme that operates in two remote areas of South Australia in Ceduna and Robe. Ceduna has a population of 2,157 people and is 778 km northwest of Adelaide. Ceduna has the highest percentage of Aboriginal people of all local government areas in South Australia, with the population currently standing at 24.8% (911) of the population. A number of Aboriginal communities in adjacent unincorporated areas rely on the available services in Ceduna and use the town as a base for a variety of reasons. The CP programme focuses primarily on supporting patients to manage chronic disease i.e., diabetes, health promotion and injury prevention, indigenous health. Robe has a population of 1090 people and is 337km southeast of Adelaide. The CP programme in Robe focuses primarily on supporting the local GP to deliver chronic disease management, transitional care/discharge planning, health promotion & illness prevention, low acuity care in-home and transport to appointments. This is an appointed position and there is no rotational model to other positions.

The major point of difference is the proactive approach undertaken by the community paramedic in the two remote sites in comparison to the ECP in metropolitan Adelaide. The community paramedics assist to fill local primary care shortages and health promotion activities, and this is not the role of the ECP which is more used as an ambulance dispatch resource. The community paramedics in the remote town will also provide clinical support to local emergency crews when emergency calls cannot be resourced, but this is via negotiation with managers in dispatch settings.

## Scope of practice

The detail of the scope of practice is contained within *Table 2 - Scope of practice*. The scope of practice of the community paramedic and ECP is similar however the skills performed frequently and endorsed by the ECP vs the community paramedic differs due to the community needs and model of service delivery, as in Table 5.

*Table 5- Comparison of scope between ECP and community paramedic in South Australia*

ECP	Community Paramedic
Enhanced (beyond non specialist role) physical examination and history taking	Enhanced (beyond non specialist role) physical examination and history taking
Administer medications (beyond non specialist role) including analgesics, antibiotics, antihistamines, topical medications, and vaccinations	Administer medications (beyond non specialist role) including analgesics, antibiotics, antihistamines, topical medications, and vaccinations
Assisting hospital staff at particular times or with specific skills in the absence of other appropriate medical staff	Assisting hospital staff at particular times or with specific skills in the absence of other appropriate medical staff
Health promotion activities	Health promotion activities
Investigate factors underlying the excessive use of acute care resources for primary care conditions (lack of transportation, social support, and health literacy)	Investigate factors underlying the excessive use of acute care resources for primary care conditions (lack of transportation, social support, and health literacy)
Phlebotomy	Phlebotomy
Urinalysis	Urinalysis
Wound care and wound closure (glue, staple, suture)	Wound care and wound closure (glue, staple, suture),
Urinary Catheterisation (indwelling catheter/suprapubic catheter)	Urinary Catheterisation (indwelling catheter/suprapubic catheter)
Assisting local medical facilities in fulfilling community demand for services as required by the health department on a location-by-location basis	Assisting local medical facilities in fulfilling community demand for services as required by the health department on a location-by-location basis
Referrals to other specialties (medical, social or otherwise)	Referrals to other specialties (medical, social or otherwise)
Refer patients to social care services	Refer patients to social care services
Palliative care management	Palliative care management
Otoscopy	Health monitoring

Prolapsed Bowel management	Chronic disease assessment and monitoring (CCF, Diabetes, COPD),
Splinting and plastering	Multiple system assessments including home assessments
Ear Nose and Throat (ENT) foreign body removal	Activity of Daily Living (ADL), mobility, falls, and cognitive assessments
Conscious sedation IN or IV midazolam	
Spirometry	
Local and regional anaesthesia	
Arterial or venous blood gas sampling	
Dislocation assessment/management	
Sonography	
Carry out and interpret diagnostic tests (beyond non-specialist role)	

## Entry requirements to community paramedic education

Minimum education requirements within Australia to practice as a Paramedic is a bachelor's degree in Paramedicine (or equivalent) and registration with the national registration authority. In SAAS both the ECP and community paramedic role require a Graduate Diploma in intensive care with clinical experience of 2 years at intensive care level. Most applicants have at least 10 years of clinical experience as a paramedic.

## Education requirements to practice as a community paramedic

Both ECP and community paramedics undertake an in-service training programme. This is a short course for both roles. The ECP then undertakes a 6-week internship clinically and 6 weeks internship in communications, all 12 weeks is a 1 on 1 mentorship programme.

## Clinical governance of community paramedicine

Clinical governance is no different to existing governance structures used within SAAS. Clinical guidelines are formulated, peer-reviewed and approved by the medical advisory committee, and this governs practice

## Clinical supervision of community paramedicine

Outside of the initial mentorship, there is a case review fortnightly during work time, as well as clinical team leaders will review cases randomly. The service medical director also randomly audits cases. There is also support for clinical care via 24/7 consultation service with emergency physicians or general practitioners across both programmes as required.

## Integration with primary care

Integration with primary care for the ECP programme is limited to referring to general practitioners as needed. The community paramedic programme works alongside general practitioners in the regional and remote areas.

## Barriers and facilitators experienced

The community paramedic model had some unique barriers to implementation and delivery:

- There was difficulty to get staff to commit to working in remote areas.
- The role requires largely unsupervised practice and can be isolating. Therefore, the role requires the correct candidates of suitable capability with an ability to shift to working proactively over-reactive to dispatched calls only
- Across both the ECP and community paramedic roles the requirement for potential candidates in this role to be experienced ICP paramedics has led to a limited pool of paramedics available to be recruited and trained which has led to decreased ability to cover staff roll over and to expand the programme.
- The ECP role does use a rotational staffing model going from high acuity complex patients to low acuity complex patients which can be hard for paramedics to adjust to.
- The in-service delivery of the initial course is very pragmatic and the ideal educational delivery would be to shift to an accredited formal qualification even if this does require further investment and time by individual paramedics looking to undertake either role.
- Across both roles, there has been a lack of investment in research early on to formally evaluate the impact of the role and to produce reproducible and defensible evidence to support further investment and development.
- The facilitators of the role across both programmes have been patient satisfaction surveys. The community has found the value and reporting this back has increased organizational confidence in continued development and investment.
- A strength in particular for the ECP programme has been the investment in allowing ECPs to have access to health patient summaries which is vital and recommendation for other programmes to implement if possible.

SAAS representatives suggest the following considerations for others looking to implement a similar community paramedicine programme:

- It is important to consult heavily with the community both at implementation and delivery of community paramedicine programmes. This can be achieved by being proactive in networking with members of the community as well as with local health professionals. This will allow you to listen and respond to the actual community needs as they exist and develop over time.
- Research can support the development of the role as well as increase the organisation confidence in the value of the role, so it is important to collect data from the start. Management needs to understand what value the ECP programme brings as it challenges traditional metrics used to assess ambulance services.
- Outreach promotion of the programme is important as it helps to build relationships with other professions about what value the community paramedicine programme can add to their existing work and that it is not about replacing or taking over their area of expertise or client/patient base.

## Tasmania

### Background information

Tasmania is a south-eastern state in Australia, it has a land area of 68, 401 km<sup>2</sup> and ambulance services are managed by one single jurisdictional ambulance service Ambulance Tasmania. Most of the population lives in the metropolitan area of Hobart (240,889) with ~300,000 people spread throughout regional and remote areas in the state.

### Community paramedicine programme

Ambulance Tasmania utilises an Extended Care Paramedic (ECP) programme as its community paramedicine model. The ECP programme is largely used in the two main cities in Tasmania: Launceston and Hobart. There is a large low socioeconomic population that comprises a reasonable proportion of the patients that the ECP program services. There is also a large proportion of older adults (greater than 65 years of age), which comprises a significant amount of the cases attended to by ECPs.

ECPs in the programme have been used in a reactive model only. The ECP programme relies on patients calling for an ambulance who may then be determined either by the primary call taking dispatch system or by a secondary triage officer as suffering from a lower acuity complaint suitable for the ECP scope of practice. The ECP also responds to emergency cases as required. There is no rotational model undertaken.

## Scope of practice

The detail of the scope of practice is contained within *Table 2 - Scope of practice*. In addition to this ECPs will undertake dental care including tooth avulsion management, local anaesthesia, and pain management. ECPs also undertake epistaxis management including administration of local vasoconstriction medication spray, and insertion of rapid-rhino devices.

## Entry requirements to community paramedic education

Minimum education requirements within Australia to practice as a Paramedic is a bachelor's degree in Paramedicine (or equivalent) and registration with the national registration authority. Further to this Ambulance Tasmania ECPs require a Graduate Diploma in intensive care with clinical experience of 2 years at intensive care level to enter the ECP education programme.

## Education requirements to practice as a community paramedic

ECPs undertake an in-service training programme prior to beginning clinically in the role. The education program consists of an in-service training course of 10 weeks duration. It incorporates three weeks in class teaching, clinical placement in an emergency department fast-track/minor injury area; and is finalised with on-road supervision with a qualified ECP.

## Clinical governance of community paramedicine

ECP cases are audited by a clinical support officer in a regional training unit. ECP paramedics also have clinical practice guidelines to guide practice as needed.

## Clinical supervision of community paramedicine

The programme initially has clinical supervision during the training program but beyond this there is no ongoing clinical supervision outside of random audit as detailed above.

## Integration with primary care

Integration with primary care is usually through referring a patient to a GP for further examination, management and/or treatment or follow-up within 24-48 hours post ECP management. ECPs will also contact a patient's GP to discuss their presentation, who may then provide advice for the patient in terms of home management/self-care or ECPs will outline any management they can provide and deliver this in collaboration with the GP. Other primary care providers ECPs may interact or refer to include physiotherapists and dentists.

## Barriers and facilitators experienced

The community paramedic model had some unique barriers and facilitators to implementation and delivery:

- Retention of ECPs has been a challenge with ECPs working in the role for a period of time before transitioning into different roles.
- There is funding for equipment associated with the role but not for ongoing education and professional development.
- Legislation which supports medication prescribing is not supported which limits the scope of practice of ECPs.
- There has been no published research which would support ongoing development of the role

Ambulance Tasmania representatives suggest the following considerations for others looking to implement a similar community paramedicine programme:

- Ideally, the paramedics should be well experienced with greater than 5 years' experience with post-graduate university qualifications in community paramedicine/paramedic practitioner.
- In-service education programs should be focussed on developing good physical examination and diagnostic skills as well as sound clinical decision making and reasoning abilities.
- Appropriate equipment e.g., blood gas analysis devices, should be provided to allow for adequate assessment and safe decisions to be made at the point of care.
- Practice guidelines/protocols should be robust and allow for adjustment based on clinician judgement. They should also be evidenced-based, and paramedic led with advice from medicine, but not dictated by medicine.
- Clinical governance should be provided by trained and experienced ECPs.

## Victoria

### Background information

Victoria is a south-eastern state in Australia, it has a land area of 227,444 km<sup>2</sup> (almost 3 times the size of Ireland). Ambulance services are managed by one single jurisdictional ambulance service. Most of the population lives in metropolitan Melbourne (5.078 million) with ~2 million people spread throughout regional and remote areas with most having access barriers to both primary, acute and specialist medical care. Ambulance Victoria operates within a 2-tier system emergency response system with advanced life support paramedics being supported by intensive care paramedics for high acuity cases



in both air and road responses as required. A network of contracted private companies provides non-emergency response to pre-booked or low acuity cases.

## Community paramedicine programme

The Paramedic Community Support Coordinator (PCSC) is the Victorian equivalent of a community paramedic role. It serves communities across 16 rural and remote locations across Victoria which were identified to not have timely access to an ambulance response. Paramedics in this role identify and support community needs through health promotion activities and the recruitment, development and support of community-based first responders. There is no rotational model and is an appointed position. The PCSC is still expected to respond to emergency calls as dispatched but their caseload in the regional and remote areas is low which affords the ability to undertake proactive response in the community as identified by the individual as well as community health promotion activities.

## Scope of practice

The scope of practice of the PCSC is equivalent to the existing scope of practice of the paramedic undertaking the role which can be at ALS or ICP level. The PCSC uses existing scope of practice to refer patients in the community to other services as required and work within local hospitals as required to assist staff when there is an absence of other qualified staff to assist. Due to a lack of access in some communities to palliative care services some PCSC paramedics are assisting in palliative care in consultation with palliative care specialists.

## Entry requirements to community paramedic education

Minimum education requirements within Australia to practice as a Paramedic is a Bachelor's degree in Paramedicine (or equivalent) and registration with national registration authority. PCSCs require generally 5 years' experience as a paramedic to be selected into the role.

## Education requirements to practice as a community paramedic

There are currently no formal education requirements to practice as a PCSC outside of existing requirements to be a registered and qualified paramedic.

## Clinical governance of community paramedicine

Clinical governance of PCSC is the same as that required for all paramedics within the service with clinical practice guidelines approved by a multidisciplinary medical advisory committee and medical directors. This is possible due to the lack of expanded scope provided by the PCSC role.

## Clinical supervision of community paramedicine

Clinical supervision of PCSC is the same as that required for all paramedics within the service with ad hoc case audit and review provided by in-service educators and direct managers.

## Integration with primary care

Integration with primary care is limited to referring to general practitioners.

## Canada

Responses were received from community paramedicine programmes in the provinces of Alberta (AB), British Columbia (BC), Manitoba (MB), Newfoundland and Labrador (NL), Ontario (ON), Prince Edward Island (PEI), and Saskatchewan (SK). These responses were supplemented with Census information, and details from a number of publications on community paramedicine programme implementation in Canada.

## Alberta

### Background information

The province of Alberta is located in Western Canada and has a population of approximately 4 million people (2016 census). It covers an area of 640,330 km<sup>2</sup> (almost 8 times the size of Ireland). The barriers to healthcare access in Alberta include rural service delivery, significant distance to tertiary and specialist care centres, and geographical challenges.

### Community paramedicine programme(s)

The Community Paramedic Programme in Alberta Health Services focuses on proactive and reactive approaches for patients with multiple comorbidities who often rely on acute care. Access to programme services is structured to avoid hospital admission and to reduce the length of hospital admission. Partner agencies and community healthcare staff call the Assess Treat and Refer programme directly to request services or complete a referral form with specific patient treatment and/or diagnostic orders. Alberta health partners with healthcare providers and agencies to provide an alternative to 911 and transport to the emergency department for urgent low-acuity patients. The programme also serves those with cognitive impairment or physical disabilities that make accessing care difficult. Community healthcare staff in continuing care sites (e.g., long-term care), family physicians, homecare case managers and EMS practitioners can call the programme directly for seniors at risk of an emergency department or hospital admission. In addition, the programme focuses on those with substance use disorders and/or mental health issues, and patients requiring expedited work-up or short-term interventions. Partner healthcare and support staff working with vulnerable populations in community shelters can call the programme directly for patients at risk of an emergency department or hospital admission due to mental health and/or substance use disorder. Finally, partner cancer centres can complete a referral form to provide symptom management for patients at risk of an emergency department admission. Partnered acute care clinics and family physicians can complete a referral form for patients requiring specialized treatment currently not available outside of a hospital. The programme also supports the early discharge for patients at the Rockyview Hospital, South Health Campus, and the University of Alberta Hospital Virtual Hospital. Community Paramedic teams support patients

attached to the Complex Care Hub by providing assessments, diagnostics and treatments in the home that would otherwise require an acute care bed.

## Scope of practice

The detail of the scope of practice is contained within *Table 2 - Scope of practice*.

## Entry requirements to community paramedic education

The minimum entry requirement to undertake community paramedicine education in Alberta is ACP qualification, and there is no minimum experience requirement.

## Education requirements to practice as a community paramedic

To practice as a community paramedic with AHS EMS, applicants must complete the programme orientation and training.

## Clinical governance of community paramedicine

The programme is supported through clinical guidance documents, operational protocols and direct physician medical consultation. The model differs from existing ambulance services as most clinical governance is established with direct verbal consultation and not through pre-existing written protocols.

## Clinical supervision of community paramedicine

Clinical competency is supported through passive and active processes. Staff complete an annual self-competency profile assessment. Active clinical supervision occurs through patient care record audits and programme Team Lead shadow shifts. The community paramedicine programme employs a rotational staffing model.

## Integration with primary care

The AHS EMS community paramedicine programme works closely with primary care physicians to support medical orders and receives referrals from primary care in the community.

## Barriers and facilitators experienced

Barriers:

- Challenges with the number of available ACPs provincially and competition within EMS between ambulance and community paramedic positions.

- As support is directly tied to the 911 or EMS service model, it can be challenging to receive internal funding.
- Some late adopters to the model of care and trust in Paramedic practice.
- Multiple patient care databases and stakeholders outside healthcare organization
- Expanding the scope of practice and restricted activities with the provincial health branch of government. Model of care doesn't fit perfectly into existing legislation and creates challenges for those interpreting and approving new skills.
- All education is internal and post-hire. Significant cost and delay to urgent staffing needs.
- Lack of existing literature to support model of care

Advice to others:

- Senior Leadership support for the model is essential, as is dedicated operational funding.
- Seek programme champions outside EMS, including primary care and local physician groups.

## British Columbia

### Background information

The province of British Columbia is located on the West coast of Canada and has a population of approximately 4.64 million people (2016 census). It covers an area of 922,500 km<sup>2</sup> (almost 11 times the size of Ireland). The barriers to healthcare access in British Columbia include rural service delivery, significant distance to tertiary and specialist care centres, and geographical challenges.

### Community paramedicine programme

The British Columbia Emergency Health Service (BCHS) community paramedicine programme primarily serves rural, remote, and Indigenous communities, using a proactive, scheduled service care model (i.e., not responding to unscheduled calls for service), and works to bridge health service delivery models in these communities in a collaborative model. Local physicians and nurse practitioners can request referrals to the community paramedicine programme.

### Scope of practice

The detail of the scope of practice is contained within *Table 2 - Scope of practice*.

## Entry requirements to community paramedic education

The minimum entry requirement to undertake community paramedicine education in BCEHS is Primary Care Paramedic with IV certification (also referred to as PCP-IV), and there is no minimum experience required.

## Education requirements to practice as a community paramedic

To practice as a community paramedic with BCEHS, applicants must be certified as PCP-IV and complete a community paramedicine education programme offered through the Justice Institute of BC.

## Clinical governance of community paramedicine

Clinical governance of community paramedicine within BCEHS falls within the general clinical governance of BCEHS, similar to all roles and licenses across the service. There is a memorandum of understanding between BCEHS, the Ministry of Health and the Emergency Medical Assistant Licensing Board which provides further governance for the community paramedicine scope of practice

## Clinical supervision of community paramedicine

Newly qualified community paramedics are supervised by their local Unit Chief and receive a minimum of 6-months of mentorship from a qualified community paramedic mentor. The community paramedicine programme does not employ a rotational staffing model.

## Integration with primary care

There is no integration with primary care.

## Barriers and facilitators experienced

Barriers:

- General staffing issues across BCEHS (not unique to community paramedicine)
- Challenge integrating into the existing system of health care (viewed as role/scope creep), and a general lack of understanding about the role and value of a community paramedic within a team.
- Challenges sharing data across multiple data platforms within different health authorities.
- Licensing is slightly different for community paramedics, which results in confusion and misunderstanding around scope and legislation.
- Community paramedics have not been engaged in delivering and supporting research.

- Union issues affecting the general membership impact the community paramedic cohort

#### Facilitators:

- The community paramedic programme provides stable employment to paramedics in the community (many rural parts of BC are served by an “on-call” system of paramedics and responders)
- A large proportion of calls are for low acuity and complex calls, and this has been driving the case for new models of paramedic care. The scheduled community paramedicine model is but one of a number of organizational approaches to better connect patients to more appropriate care.

#### Advice to others:

- BCEHS is working towards introducing a number of paramedic care models that will not be labelled as community paramedicine but may be doing work that is considered classic community paramedicine work such as low acuity care.

## Manitoba

### Background Information

The province of Manitoba is located in the centre of Canada, with a population of approximately 1.38 million (2020 census). It covers an area of 552,370 km<sup>2</sup> (almost 6.5 times the size of Ireland). The barriers to healthcare access in Manitoba include rural service delivery, significant distance to tertiary and specialist care centres, and geographical challenges.

### Community paramedicine programme(s)

Community paramedicine in Manitoba is delivered through a number of distinct proactive and reactive programmes. These include the EPIC (Emergency Paramedics In the Community) at-risk-referral programme for those aged over 65 in Winnipeg, who call 9-1-1 and require additional follow up. The virtual COVID outpatient programme which serves adults with positive COVID test results in Winnipeg, lets patients connect with a healthcare team while they are self-isolating or after they have been discharged from hospital. The Main Street Project, which serves those experiencing homelessness in the City of Winnipeg provides on-site medical coverage 24 hours a day, 7 days a week at the Main Street Project homeless shelter and provides medical clearance for individuals who are detained under the Intoxicated Person Detention Act to ensure patient safety. Outside of Winnipeg, the Altona Urgent Care programme serves the rural town of Altona, the Alternate Isolation Accommodation site for COVID serves First Nations communities who need to isolate. Community paramedics presently manage any

person in Manitoba requiring COVID isolation and requiring medical support and monitoring. A new low acuity 911 telephone consult programme was launched in 2021, whereby 911 calls classified as Omega or Alpha via AMPDS are forwarded to community paramedics.

## Scope of practice

The detail of the scope of practice is contained within *Table 2 - Scope of practice*.

## Entry requirements to community paramedic education

The minimum entry requirement to undertake community paramedicine education in Manitoba is PCP level training, and there is no minimum experience required to enter the education programme. However, to practice as a community paramedic, paramedics are required to also be experienced at ACP level so will require ACP training and certification on top of the community paramedic training programme.

## Education requirements to practice as a community paramedic

To practice as a community paramedic in Manitoba, applicants must be certified as an Advanced Care Paramedic (ACP) with a minimum of 2 years of experience at ACP level.

## Clinical governance of community paramedicine

Clinical governance for community paramedicine is provided by Shared Health Manitoba. Additional clinical governance for community paramedicine programmes within the City of Winnipeg is provided by the Winnipeg Fire Paramedic Service. A notable difference between community paramedicine and ground ambulance services in Manitoba is direct physician contact available to community paramedicine programmes. Typically, there is limited access to direct physician contact for ground ambulance paramedics in Manitoba.

## Clinical supervision of community paramedicine

Clinical supervision of community paramedics is overseen by medical physicians. The community paramedicine programme employs a rotational staffing model whereby community paramedics rotate out to “traditional” 911 paramedic roles, with the exception of the Winnipeg EPIC programme in permanent community paramedic roles with no rotational requirements.



## Integration with primary care

The Alternate Isolation Accommodation (AIA) site is integrated with a team of primary care physicians. Paramedics refer AIA clients to physicians for further assessments and/or prescriptions. Paramedics also refer AIA clients to obstetrics for following throughout isolation. Collaboration with these primary care providers is ongoing throughout the client's isolation.

Community paramedics also refer those with positive COVID-19 tests to Internal Medicine physicians within the Virtual COVID Out Patient (VCOP) programme. Clients enrolled in the VCOP programme are cared for by a team of health providers that include community paramedics.

## Barriers and facilitators experienced

### Barriers:

- General staffing challenges have been exacerbated by COVID
- Continued efforts to seek funding for future programme ideas. Community paramedic programmes were 'pilot programmes' for many years, and are currently funded in collaboration with the provincial government.
- Relationship building has required attention and engagement. Concerns from primary health care providers have needed additional attention.
- Continued collaboration with the College of Paramedics of Manitoba (regulatory body) to develop awareness for the scope of work is ongoing.
- Supplemental education has been required to achieve engagement in the expanded scope of work.

### Facilitators:

- Collaborative funding from the Provincial government has driven the expansion of existing community paramedicine programmes.
- Health professionals seeking partnerships to provide community care have driven the expansion of community paramedicine programmes, as has innovation and collaboration within Shared Health Manitoba.
- COVID-19 pandemic significantly advanced programme development

## Newfoundland and Labrador

### Background information

The province of Newfoundland and Labrador (NL) is located on the East coast of Canada, with a population of approximately 590,000 (2016 census). Approximately 94% of this population live on the island of Newfoundland and the surrounding islands. The province covers an area of 405,720 km<sup>2</sup> (5 times the size of Ireland). The healthcare system consists of 4 regional health authorities (RHA), each responsible for the operations of health care in their geographical region. These include Eastern Health, Central Health, Western Health, and Labrador-Grenfell health. Barriers to healthcare in NL include rural service delivery, significant distance to tertiary and specialist care centres, and geographical challenges.

### Community paramedicine programme(s)

Until recently, each RHA was responsible for paramedicine operations/initiatives in their region, and individual teams were working towards the implementation of community paramedicine in their region. In 2021 the RHAs formed a community paramedicine working group that is responsible for developing the framework in which community paramedicine programmes will operate across the province. This includes developing the education requirements, creating a scope of practice, identifying patient populations and making recommendations for models of care. Current initiatives in Eastern Health include:

1. Paramedicine Palliative Care programme in two sites as part of a national collaboration between the Canadian Partnership against Cancer and Healthcare Excellence Canada, one in the metro region and one in a rural region. The programmes provide in-home care for any patient diagnosed with a life-threatening condition receiving a palliative approach to care, focusing on improved quality of life. This programme utilises a proactive model. Patients are referred to the programme by collaborative partners (the specialized palliative care consult team, primary care, geriatric medicine, the Home Dementia programme, community nursing). Once connected, a paramedic working with the programme will contact the patient to explain services, programme access, and address any concerns. The patient can then access the programme at any time by calling 911 and using a unique identifying number that notifies the team who is calling. An automated email notification is then sent to alert the referring team that their patient has accessed services from the paramedic team. Protocols were developed for in-home treatment of common palliative emergencies. Depending on the region the patient is in, an ambulance or a Community Support Unit (CSU - solo ACP in a car) can respond to the call.
2. Programme for residents living in assisted living facilities offering an alternative type of care for low acuity 911 calls. There are plans to expand this work to include frail older adults living in the community, with a focus on the prevention of hospitalization. The initiative is reactive but does have options for proactive care - when a 911 call is received for a patient living in an assisted living facility, the call is screened using ProQA. Specific determinants have been

selected as appropriate for a treat-in-home response. In these cases, a CSU is sent to the call. Enhancements have been made to scope to allow for treat-in-home, such as fast track diagnostic imaging processes allowing the patient to have an image completed and read by radiology without going through the ER.

3. Public Health collaborative swabbing and vaccination services (COVID-19 and Influenza) for homebound clients who cannot travel to a clinic setting for infection prevention/control services. Patient referrals are sent through a secure internal service and the paramedic team follows up to arrange the request. The provincial community paramedicine working group is exploring both proactive and reactive service delivery models to be included in their framework. Models of care that use referrals from key stakeholders as well as 911 calls are being investigated.

## Scope of practice

The detail of the scope of practice is contained within *Table 2 - Scope of practice*.

## Entry requirements to community paramedic education

The minimum entry requirement to undertake community paramedicine education in NL is PCP or ACP, and applicants require a minimum of 2 years' experience in ground ambulance operations.

## Education requirements to practice as a community paramedic

Education is presently delivered via each RHA, but there are plans to establish a provincial community paramedicine education programme that will be required to practice as a community paramedic.

## Clinical governance of community paramedicine

In addition to the programme manager and existing governance arrangements, an online medical control physician is available 12 hours a day specifically to support community paramedics.

## Clinical supervision of community paramedicine

Currently, each RHA is responsible for overseeing any community paramedicine initiatives that exist. In Eastern Health, a programme manager and an operations manager provide oversight, both of who reports to the Director of Paramedicine. To work in the community paramedicine role in Eastern Health, each paramedic is required to complete supervised shifts before being allowed to respond independently. Adherence to protocols is overseen by the programme manager through documentation review, which currently occurs by reviewing paper PCRs. However, by the end of 2022 implementation of an electronic PCR record is anticipated. To support this a QA/QI process for community paramedicine is being developed. The community paramedicine programme employs a rotational staffing model whereby community paramedics rotate out to "traditional" 911 paramedic roles.

## Integration with primary care

Community paramedicine programmes work closely with primary care but are enhancing relationships. The programmes currently accept referrals from primary care for palliative care and collaborate with primary care on the low acuity 911 initiative. Enhancements seek to work with primary care to build programmes based on the identified needs in communities.

## Barriers and facilitators experienced

### Barriers:

- Labour shortages make it challenging to implement new models of care when there are already not enough paramedics on the road for 911 calls.
- Eastern Health model utilizes advanced care paramedics only - the rest of the province has a very limited number of ACPs so the creation of roles for PCPs is required.
- Reporting has been a challenge due to data collection.
- All programmes to date have been implemented with third-party funding (through CPAC and HEC) and finding sustainability through the Government and the RHAs has been challenging. This is limiting the expansion of programmes.
- Challenging to identify who needs to be a key stakeholder and find ways to connect with them.
- It is difficult to reach physicians and nurse practitioners in the community to get their buy-in.
- Fragmented documentation system. Different health care teams use different documentation systems, some still are paper-based. Therefore, community and information sharing is extremely challenging and very time-consuming.
- No standard education to date for community paramedics. Developing it requires someone with knowledge and the capacity to do so.
- Paramedicine in the province is a mixed model of services - private, community and hospital operators create challenges for establishing widespread treat-in-home programmes.
- No central medical dispatch center - each operator is responsible for dispatching their own services.

### Facilitators:

- Creation of community paramedic programmes without buy-in and collaboration with primary care will not work
- Increased ambulance and ER utilization has highlighted the need to prevent 911 calls and pull calls out of the system - this has pushed development.

- Third-party funding to explore models and types of care.
- Palliative care work has connected community paramedicine to other groups who want to further community paramedicine programmes and have ideas on how paramedics can assist in the care
- Data collection has uncovered huge gaps in care that need to be addressed to improve patient-centred care in the province.

#### Advice to others:

- Create a loose framework and adjust as you go.
- Specifically, designate someone with a focus on programme development/management for the initial phases of the project.
- Determine your evaluation plan before you begin - how are you going to collect outcome data? What will your data metrics include?
- Follow a continuous quality improvement evaluation model so you can make programme adjustments in a timely manner.
- Identify and engage key stakeholders and multi-disciplinary teams before and upon implementation.

## Ontario - provincial overview

### Background information

The province of Ontario is located in the centre of Canada, with a population of approximately 13.5 million (2016 census). The province covers an area of 908,699 km<sup>2</sup> (11 times the size of Ireland). The healthcare system consists of a mix of provincial and regional functions, and paramedic services are delivered on a municipal level. Barriers to healthcare in ON include rural service delivery in Northern Ontario, a lack of primary care human resources in many communities, and geographical challenges.

### Community paramedicine programme(s)

A total of 54 paramedic services across Ontario deliver one or more community paramedic programmes, with a total of 143 programmes in place in 2019 (8). Community Paramedicine Programmes are generally designed to serve the needs of their community while reducing 911 calls. These include

- Assessment and Referral Programmes
- Community Paramedic-Led Clinics
- Community Paramedic-Specialist Response Programmes

- Home Visit Programmes
- Hospital Discharge/Transitional Care Support Programmes
- Influenza Surge Programmes
- Mental Health and Addictions Support
- Palliative Care Support
- Remote Patient Monitoring Programmes

Community referral programmes, through which frontline paramedics connect individuals calling paramedic services with other care providers, is the most common community paramedicine programme, model. See Table 6 for details of programme models.

*Table 6. Community paramedic programme models in Ontario*

Community Paramedic Programme Model	Brief description
Community assessment and referral	Community paramedics connect individuals with other care providers, including community care services.
Community paramedic-led clinics	Community paramedics advertise and promote health promotion and preventative care services (including influenza vaccination, chronic disease education, blood pressure checks)
Home visit programmes	Community paramedics work with other healthcare services to maximize “at-home “services for those who repeatedly call or are at risk of frequent 911 utilisation due to medical conditions and/or unmet social needs.
Remote patient monitoring programmes	Community paramedics work with primary care providers to address issues proactively via 24-hour home-based monitoring programmes for chronic health conditions such as COPD, CHF and diabetes.
Community paramedic specialist response	Community paramedics work closely with 911 colleagues in a coordinated and cooperative manner to enable access to other health care providers.
Hospital discharge/transitional care support	Community paramedic programmes partner with hospitals to facilitate improved timeliness of discharge from hospital, with follow-up by community paramedics.
Mental health and addictions support	Community paramedics are part of mental health crisis response teams, provide care in homeless shelter programmes, and assist in medical care provision and oversight at safe consumption and treatment sites.
Palliative care support	Community paramedics provide care for palliative care patients at home aligned with care preferences of those receiving care.
Influenza surge programmes	Community paramedics work with at-risk populations to increase vaccination rates and manage influenza-like presentations in retirement, nursing and other residential

## Scope of practice

The detail of the scope of practice is contained within *Table 2 - Scope of practice*.

## Entry requirements to community paramedic education

This varies per programme and can be PCP, PCP-IV or ACP, with or without experience requirements.

## Education requirements to practice as a community paramedic

This varies per programme and consists of a mix of in-service education offerings, and education programmes designed and delivered in collaboration with higher education institutions. There is no mandated provincial education for community paramedicine.

## Clinical governance of community paramedicine

Governance of 911 ambulance services in Ontario is through the Ministry of Health, the Ambulance Act, and the base hospital physicians for advanced life support patient care. Governance of community paramedicine is under the College of Physicians and Surgeons of Ontario via delegation of controlled medical acts, and mandate for clinical practice guidelines. Delegation processes are in place to facilitate community paramedic programmes. In addition, many programmes have medical directives, and medical advisors for community paramedicine and palliative care encounters.

## Clinical supervision of community paramedicine

Clinical supervision varies per programme, but many services have a dedicated member of the management team for community paramedicine who provides oversight. In addition, services perform audits and have documentation standards and clinical pathways in place. Community paramedicine programmes employ a mix of staffing models depending on the programme, which includes both permanent community paramedics and rotational staffing models whereby community paramedics rotate out to “traditional” 911 paramedic roles.

## Integration with primary care

Some models have embedded community paramedics into primary care teams to support primary care providers in monitoring at-risk patients through more frequent home visits. Many programmes, for example, the County of Renfrew Paramedic Service are integrated with family health teams and work

closely with regional initiatives (Virtual Triage and Assessment Centre), hospital discharge planners, and physicians.

## Ontario - County of Renfrew

### Background information

The County of Renfrew is geographically the largest in Ontario, encompassing approximately 7,645km<sup>2</sup>. Located in the heart of the Ottawa Valley, it stretches along the shores of the Ottawa River from the outskirts of Ottawa in the east to the northern tip of Algonquin Park's wilderness in the west. Renfrew County is home to over 900 pristine lakes and four major river systems. There are a total of 18 municipalities in Renfrew County. Barriers to healthcare include rural service delivery, a lack of primary care human resources in many communities, lower socio-economic status, and geographical challenges. The primary patient population are 60 and over with a combination of chronic health conditions. Barriers for these patients may include mobility issues, lack of transportation, financial vulnerability, isolation, and no primary care provider.

### Community paramedicine programme(s)

Community Paramedics in Renfrew County are Advanced Care Paramedics who also provide first response (self-dispatched). The programme receives referrals from various stakeholders including hospitals, family health teams, Home and Community Care Support Services, Renfrew County Virtual Triage and Assessment Centre, Public Health, and Renfrew County Paramedics (911 side). A request for service form needs to be signed by a nurse practitioner or physician (as the referring physician/nurse practitioner, they are delegating authority to the community paramedics to operate under the Clinical Practice Guidelines for the Community Paramedicine Programme). The base of the programme is to be accessible, proactive, responsive, and safe. The services offered depend on the needs of the community, gaps in service, and the criteria outlined in funding agreements. Given the current needs of residents and visitors of the County of Renfrew, the following services are offered by the Community Paramedic Programme:

- Community Paramedicine for long-term care
- Palliative Care
- Remote Patient Monitoring
- Renfrew County Virtual Triage and Assessment Centre

The County of Renfrew Community Paramedicine Programme is based on the model of care inclusive of care, coordination, and response. This model of care entails acting in expanded roles and scope of practice in applying paramedic competencies in non-traditional community environments through collaborative or differentiated practice. The aim is to reduce the number of patients transported to emergency departments either by re-directing them to service providers not located at a hospital or by



providing the necessary care in place (1). The response model is 24/7, 365 days a year, in-person or virtual visits.

## Scope of practice

The detail of the scope of practice is contained within *Table 2 - Scope of practice*.

## Entry requirements to community paramedic education

The minimum entry requirement to undertake community paramedicine education in Renfrew County is ACP and there is no minimum experience required.

## Education requirements to practice as a community paramedic

To practice as a community paramedic in Renfrew County, applicants must complete internal training and orientation.

## Clinical governance of community paramedicine

Governance of 911 ambulance services in Ontario is through the Ministry of Health, the Ambulance Act, and the base hospital physicians for advanced life support patient care. Governance of community paramedicine is under the College of Physicians and Surgeons of Ontario via delegation of controlled medical acts, and mandate for clinical practice guidelines. Delegation processes are in place to facilitate community paramedic programmes. In addition, many programmes have medical directives, and medical advisors for community paramedicine and palliative care encounters.

## Clinical supervision of community paramedicine

File audits, documentation standards, clinical pathways, Clinical Practice Guidelines, and other resources have been created for Community Paramedics. There is a Commander responsible for oversight of the programme and identifying education needs and supports for the whole team as well as individually. This is captured in many ways including performance appraisals, and weekly base visits where the Commander has interactions and goes on visits with Community Paramedics. The programme utilises a rotational staffing model, with those who work casually as Community Paramedics, and those who work full-time as Community Paramedics but complete rotations in the 911 system.

## Integration with primary care

The programme is integrated with family health teams and works closely with regional initiatives (Virtual Triage and Assessment Centre), hospital discharge planners, and physicians.

## Barriers and facilitators experienced

### Barriers:

- Community paramedic positions can often be contract positions and therefore difficult to recruit and retain
- There are a variety of funding streams spent on the programme, each with different reporting requirements which is time-consuming
- Funding for initiatives is often temporary or annual (requiring re-application every year) and therefore a challenge to establishing and scaling up programmes
- There was a perception from some home and community care services, and nursing organisations that Community Paramedics were trying to take their jobs - need to demonstrate we are here to fill a gap in the healthcare system and help in other ways.
- Difficult to share information with stakeholders due to the protection of personal health information.
- Lack of a regulatory college in Ontario presents numerous obstacles to paramedics working in non-traditional roles
- There is a lack of research and published studies on community paramedicine

### Facilitators:

- Increased staffing means that we can respond in a timelier manner, and take on more patients, and more projects to strengthen our programmes and services.
- In 2020, the Ministry of Health announced a more permanently funded integration of Community Paramedicine with regional long-term care planning.
- Community paramedics were able to assist with controlling outbreaks of COVID-19 across the province by providing community swabbing and vaccination clinics in convenient, accessible locations.
- Integration with family health teams has been a key success.

### Advice to others:

- A good referral pathway with programme criteria and scheduling criteria to determine the frequency of visits and urgency of visits will go a long way.

- Data Collection is very important for many reasons including quality assurance and improvement purposes.
- Relationship building is also key. Stakeholder engagement and education will take a lot of time, but it is worth it.

## Prince Edward Island

### Background information

The province of Prince Edward Island (PEI) is a small, isolated, rural/remote region on the East coast of Canada with a population of approximately 143,000 (2016 census). It covers 5,686 km<sup>2</sup> (almost 14 times smaller than Ireland). Paramedic services in PEI are operated by a private non-profit company contracted by the government. There are numerous barriers to healthcare access in this province, including a lack of primary care providers, significant distance to tertiary and specialist care centres (most are out-of-province), and a shortage of health human resources. PEI has the longest wait times in Canada for access to home-care services, and a significant backlog for access to long-term care beds.

### Community paramedicine programme

The community paramedicine programme in PEI is operated in a proactive approach, and referrals come mainly from home care, hospital discharge or the mental health and addictions hotline.

### Scope of practice

The detail of the scope of practice is contained within *Table 2 - Scope of practice*. In addition to this community paramedics in PEI can undertake COVID-19 testing and assessment.

### Entry requirements to community paramedic education

The minimum entry requirement to undertake community paramedicine education in PEI is ACP and there is no minimum experience required.

### Education requirements to practice as a community paramedic

To practice as a community paramedic in PEI, applicants must complete a community paramedicine certificate programme.

## Clinical governance of community paramedicine

The PSO in PEI is a private non-profit company acting within the provisions of respective service agreements with either the government (direct) or the health authority (indirect accountability to government).

## Clinical supervision of community paramedics

Quality management is provided by peers, managers, online medical control, Care coordinators (nurses) supervise from the home care programme. In the mental health programme, the team lead is a clinical psychologist. The community paramedicine programme does not employ a rotational staffing model.

## Integration with primary care

There is a general lack of integration with primary care that has been identified as a priority to address.

## Barriers and facilitators experienced

- Barriers:
- Change management integrating with Home Care Nursing.
- Health care silos. It took 3 years for a data-sharing agreement to be implemented.
- Some staff are in the programme due to their seniority rather than their commitment to the ethos of the programme

### Facilitators:

- Having dedicated staff working on the project
- Outline a change management plan, and have persistence in following through
- There needs to be broad support from the management of the paramedic service

### Advice to others:

- If at all possible, build a programme that is outside both EMS and the regional health service but is composed of members of each. This will enable staff to own the programme and not be beholden to their respective silos.

## Saskatchewan

### Background information

The province of Saskatchewan is located in the centre of Canada, with a population of approximately 1.09 million (2016 census). It covers an area of 588,243 km<sup>2</sup> (7 times the size of Ireland). The barriers to healthcare access in Saskatchewan include rural service delivery, significant distance to tertiary and specialist care centres, and geographical challenges.

### Community paramedicine programme(s)

A total of 39 PSOs operate community paramedicine programmes in Saskatchewan. Community paramedicine programmes include both proactive and reactive approaches. Proactively, the province collaborates with ambulance services to create community paramedicine programmes based on the needs of individual communities. These include home health monitoring, discharge planning, detox support, home IV antibiotics, medication assistance, community phlebotomy, wellness check-ins, COVID assessments, vaccinations, and palliative care support. Reactively, patients can request just in time support for services such as pain management, assessment, and follow-up. At times in certain communities, if a paramedic crew is on the scene, they can request a community paramedic follow-up with the patient. Saskatchewan has a centralized intake process for referrals, with support from Medical Communication and Coordination Centers (EMS dispatch), and a formal community paramedicine department of the Saskatchewan Health Authority (SHA) to support the advancement and enhancement of community paramedicine.

### Scope of practice

The detail of the scope of practice is contained within *Table 2 - Scope of practice*.

### Entry requirements to community paramedic education

The minimum entry requirement to undertake community paramedicine education in Saskatchewan is PCP, and there is no minimum experience required.

### Education requirements to practice as a community paramedic

To practice as a community paramedic in Saskatchewan, applicants must be certified as a PCP. However, they do not have to be endorsed as a community paramedic - training is provided for specific skills if not within the existing scope of practice of the individual.

## Clinical governance of community paramedicine

The Saskatchewan College of Paramedics licenses both ground paramedics and the endorsed community paramedic. Governance is provided by a Provincial EMS Medical Director and regional (North, Central and South) EMS Medical Directors, SHA EMS Manager of Clinical, Quality and Education as well as a Provincial Manager of Community Paramedicine.

## Clinical supervision of community paramedicine

Day to day oversight occurs within each ambulance service through managers, supervisors, and owners. Saskatchewan uses a collaborative approach that links EMS teams to local SHA agencies, physicians, nurse practitioners, patients, families and others involved in the patient care. The community paramedicine programmes employ a mix of staffing models depending on the programme, which includes both permanent community paramedics and rotational staffing models whereby community paramedics rotate out to “traditional” 911 paramedic roles.

## Integration with primary care

All programmes are associated with primary care. SK has a number of Health Networks which includes primary health care, acute care, long term care, home care, and palliative care.

## Barriers and facilitators experienced

Barriers:

- There is a staffing shortage provincially, exacerbated by COVID staffing issues due to isolation/illness, and a lack of paramedics in general in SK.
- Not everyone is suited to a community paramedic role but overall, most are receptive.
- Lack of provincial electronic documentation tools.
- Reporting varies across the province.  
Shortage of IT resources to support building databases.
- Only four programme areas have dedicated funding, otherwise continuously trying to find money from unused budgets.
- The volume of time and energy required to build relationships. Essential work but time-consuming; Note: relationships are not a barrier, but not enough time to have needed conversations therefore programme expansion is sometimes delayed.
- Lack of legislation to support some areas of work such as a treat and release protocol.
- Lack of a billing structure for palliative care treatment at home situations

- Provincial SHA is new, therefore building provincial clinical pathways is in the infancy whereby all areas of health fall under common clinical protocols/standards.
- Expensive and time-consuming to go back to school to acquire the community paramedic endorsement; need to build employer-driven community paramedic education training modules.
- Lack of human resources to do research; we collect a lot of data but no means to move it forward.
- Time and resources required setting up a safe space for contracted and SHA paramedics to work within non-traditional EMS roles.
- Small EMS Department to roll out a large and needed service. Not enough people to do the work.

#### Facilitators:

- Interest and engagement from other areas of the healthcare system when they become aware of the community paramedic programme and what it can offer.
- Acquiring enhanced IT support and documentation.
- Transition to the SHA had huge impacts regarding the amalgamation of standards.
- Development of the community paramedic endorsement through Saskatchewan College of Paramedics and the educational institute (Sask Polytechnic)

#### Advice to others:

- Start with early adopters, people interested in starting the programme that will become champions.
- Develop guidelines and communication of standard points so all teams are sharing a common message.
- Be clear of what the community paramedic programme can and cannot do to support care teams.
- Engage four key stakeholders for every patient encounter (patient/family, paramedic, physician/nurse practitioner/ and the care team).
- Detailed conversations to occur at the beginning of every new project which identifies key stakeholders, budget, documentation, communication, follow-up, expectations, education required, equipment required, additional supports, standard processes, etc.
- Explore readiness of ambulance services as well as other areas of health.
- For those new to community paramedicine, expose them to the model of care. Engage other experts in the EMS team to gain a large perspective of health. Continue to collaborate with, and



## Finland

Two (2) responses were received from community paramedicine programmes within Finland with one providing an overview of programmes and another providing specifics on a community paramedicine programme in the southwest.

### Background information

Finland is a northern European country that has a population of approximately 5.5 million people spread throughout metropolitan, regional, and remote areas with the country having a land area of 338,440 km<sup>2</sup>.

### Community paramedicine programme(s)

There are three different community paramedic models in Finland:

- Model 1: A reactive model for the non-emergency calls from the emergency dispatch centre and calls directly from the police (blood draws; substance abuse) or attending calls together with psychiatric nurses.
- Model 2: Proactive model where a discharge nurse from hospital refers to the community paramedic programme for ongoing home care.
- Model 3: A combined reactive and proactive model that features dispatch on non-emergency calls from the dispatch centre, and assessment and management of palliative care during nights and weekends.

Some community paramedic models have a rotational component, with time split between community paramedic roles and traditional ambulance staffing.

### Scope of practice

The detail of the scope of practice is contained within *Table 2 - Scope of practice*.



## Entry requirements to community paramedic education

Individuals must have a bachelor's degree in prehospital emergency care and be a registered nurse. They must have at least 5 years' experience in an emergency department or ambulance unit.

## Education requirements to practice as a community paramedic

No additional education requirement.

## Clinical supervision of community paramedicine

All community paramedic programmes have both formal and informal support. Formal support consists of monitoring utilisation, and informal support includes discussion with the community paramedics regularly. The supervisor is usually a primary care physician; however, the community paramedics can also access direct specialist advice from physicians in hospital.

## Integration with primary care

Integration with primary care is more focused on relationship building and primary care physicians provide medical oversight as needed via consultations.

## Barriers and facilitators experienced

Barriers:

- Relationships with social care providers need to be more active.
- No common documentation system for community paramedics to use, and the documentation system is not accessible by other health services. The quality of documentation is poor and additional training is required.
- The reimbursement system does not consider the care provided, materials used, or time spent with the patient.
- Irregular meetings with the collaboration teams prevent the progression and development of the role.
- There are only a few education providers for community paramedicine
- The job entails longer driving times, long times with the patient, additional medical equipment and fewer payments for staff. This is not a challenging combination.

Facilitators

- The most important partner is home care and community nursing team meetings to keep the focus on those patients who most need proactive care.
- Some new further education possibilities are on the way, e.g., point-of-care testing, digital ECG.
- A broad and multi-professional steering group (including a patient member) with a clear agreement regarding the monitoring and measurement methods of the programme.

## Southwest Finland

### Background information

The programme serves the city of Turku and surrounding urban areas, with a population of approximately 250,000 located in the southwest of Finland.

### Community paramedicine programme

Community paramedics usually work about 50% time in a community paramedicine unit and 50% in traditional emergency response ambulances. Within the ambulance service, the community paramedicine model is reactive. The main target group of the community paramedic programme is the elderly living in the area and seeking help for acute health problems, although all suitable emergency calls are evaluated and responded to if decided fit for the community paramedic unit by the community paramedic or the field supervisor.

Calls to the hospital's acute help desk may activate the community paramedicine unit if the nurse taking the call considers the community paramedic unit fit for the task. The unit is loosely integrated into the geriatric evaluation unit and provides urgent care and evaluation services to the home care and other assisted living models in elderly care when their nurse is not available, or specialist equipment is needed.

### Scope of practice

The detail of the scope of practice is contained within *Table 2 - Scope of practice*. Paramedics in the CIS can also refer patients to other professions (medical, social, or otherwise), and refer patients to social care services, speech and language therapists and rehabilitation schemes.

### Entry requirements to community paramedic education

All community paramedics must complete a Nurse-Paramedic bachelor's degree. There are no strict experience requirements, but a few years of experience in EMS and general interest in community paramedicine is required. Crucial is the ability to work alone.

## Education requirements to practice as a community paramedic

All community paramedics complete a 1-week training course covering bedside testing equipment, diagnostic assessments that are additional to the role, management of wounds (including local anaesthesia and suturing), and specialist medications available to community paramedics.

## Clinical governance of community paramedicine

Community paramedics operate under the university hospital district's EMS governance as one of the EMS units. Community paramedics are recognised in Finnish EMS legislation, as a single-person unit that focuses on evaluating patients' need of care, providing acute care and supporting other EMS units.

## Clinical supervision of community paramedicine

Paramedic-nurses in Finland generally work independently in ambulances, and community paramedics work under the standard clinical supervision and operating procedures within the service. An on-call doctor in the hospital emergency department is available for clinical consultations, especially in non-transportation cases.

## Barriers and facilitators experienced

### Barriers

- Although the community paramedic unit has fulfilled its goals in reducing emergency department admissions and EMS workload, no long-term funding is directed to community paramedicine.
- Hospital call centre nurses are not all aware of the existence of the community paramedic programme and many potential patient interactions are directed by mistake to the regular EMS units.
- Community paramedic data collection should have been designed better in advance for research use.

### Facilitators and advice to others:

- Successful implementation of a community paramedic programme requires long-term funding to enable the development of the programme. All relevant stakeholders (EMS, ED, primary care, social services etc.) must be included from the planning phase onwards.
- Evaluation of the community paramedic programme must be constant, and the programme should be flexible when reformation needs appear.
- Ambulance services are facing funding cuts in Finland as a part of general health care budget pressures. Community paramedicine programmes are seen as a way to save on EMS staffing

costs. They should be seen also as a way to reduce emergency department congestion and costs, but this is found to be difficult to calculate.

- Community paramedicine is seen as a way to bridge the gap between primary care and specialised care and provide advanced assessment and care services that are outside regular EMS scope and usually done in hospital ED. The shift towards home care of the elderly has increased non-urgent EMS calls and this stresses the EMS system.
- Finnish nurse-paramedic education is very comprehensive and so the additional education needed to work as a community paramedic is minimal.

## New Zealand

A response was received from a community paramedicine programme operating in the national service of St Johns Ambulance Service. There is only one other ambulance service within New Zealand outside of St Johns Ambulance Service.

## St John's Ambulance Service

### Background information

New Zealand has a population of approximately 5 million people and the service covers all areas of New Zealand which is geographically broad and covers an area of 268,021 km<sup>2</sup> encompassing metropolitan, regional and remote areas (3 times the size of Ireland). St John's ambulance service covers the provision of out of hospital ambulance services for approximately 90% of New Zealand.

### Community paramedicine programme

The community paramedicine programme in St Johns NZ is a well-established programme of Extended Care Paramedics. The ECPs programme is designed to be utilised in all areas of New Zealand including in geographically isolated communities with limited access to healthcare and where paramedic caseload of low acuity work is high in comparison to high acuity work. There are no strict patient diagnoses the programme focuses on and instead takes a broad approach on low acuity yet complex patients who could have definitive care provided in the community. This reduces the need for lengthy transfers in remote areas as well as reduces the burden on emergency departments.

There are currently 31 ECPs currently being used by the service. The ECP programme uses a purely reactive approach to service delivery responding to patients identified at call taking level as fitting the ECP scope of practice which is given oversight by ECPs working in the call taking area who dispatch fellow ECPs. The ECP programme can also take referrals from other health care professionals directly, but the preference is that they get filtered through the emergency call-taking system as this allows for quality assurance and health professionals can then also provide further information and pre-booked appointments can be made based on triage at the time of the call.

ECPs can rotate in and out of the ECP role, into working on traditional emergency ambulance response, to then work in communications dispatching fellow ECPs to appropriate cases but this is dependent on the location of work and clinician preference

### Scope of practice

The scope of practice of the ECP is expansive and St Johns New Zealand has a robust suite of clinical practice guidelines. The detail of the scope of practice is contained within *Table 2 - Scope of practice*.

Outside of this ECPs in the programme also undertake the following skills:

- Conscious sedation IN or IV midazolam
- Constipation management
- Dental blocks and treatment of dental emergency
- Emergency contraception
- End of life documentation for deceased patients
- Concussion assessment and management
- Epistaxis management
- PEG management
- Eye assessment and management
- GORD management
- Gout management
- Prolapsed bowl management
- Rectal prolapse and external haemorrhoid management
- Splinting and plastering

## Entry requirements to community paramedic education

Minimum education requirements within New Zealand to practice as a Paramedic is a bachelor's degree in Paramedicine (or equivalent) and registration with the national registration authority. In St Johns ECPs most applicants have at least 10 years of clinical experience as a paramedic, but this is not a formal requirement.

## Education requirements to practice as a community paramedic

ECPs undertake an in-service training programme. This is a short course comprising one weeklong block course as well as 40 hours of clinical placements. ECPs are expected to have already undertaken or be undertaking an education pathway to achieving a postgraduate diploma in health science and extended care paramedicine. All ECP skills must be supervised, and competency signed off before independent practice of each skill. The service is looking to move towards a formal postgraduate diploma but awaiting suitable courses becoming available from the university sector.

## Clinical governance of community paramedicine

Clinical governance of the ECP programme is supported through medical directors' direction and clinical practice guidelines. There is similar clinical governance as other specialty paramedic roles. Direct consultation with a medical director does allow using skills outside of the pre-defined scope of practice.

## Clinical supervision of community paramedicine

ECPs are clinically supervised by programme leads who are experienced ECPs themselves, doctors, nurses, and nurse practitioners. There is monthly training with case reviews, and this is used as clinical practice development which is used to maintain registration. There is also a voluntary peer case audit process informally undertaken.

## Integration with primary care

Integration with primary care is limited to referring and consulting with general practitioners and other primary care providers.

## Barriers and facilitators experienced

The ECP model had some unique barriers and facilitators to implementation and delivery:

- There is only a limited pool of 31 ECPs and ideally, the programme needs to develop with increased numbers.
- Potential ECPs need to be emotionally intelligent, experienced, clinically competent and can build trust and relationships not just with patients but other health professionals including other paramedics. Promotion of the role and selling its importance can be difficult as the role challenges traditional paramedic roles. ECPs can overcome this by selling the idea of the ECP. Making the scope of practice freely available so that other paramedics can know what ECP can do and offer to their patients has helped to overcome this barrier.
- The ECP model can be expensive to set up but has benefits in the long term, in New Zealand there was significant funding from the government.
- Information sharing is important but there can be privacy issues associated with information sharing and the technology in New Zealand is not yet set up to share hospital discharge summaries, one information sharing system for all information would be ideal.
- The workload associated with working full time and studying is very difficult, making education more accessible would lead to greater equity to potential ECP candidates.
- Legislation changes that required national registration have been a significant driver of the role and this is something that has facilitated the advancement of the role
- Supportive organisational governance has allowed ECPs to work outside of a predefined scope of practice but requires consultation and supportive medical directors to give authorisations.

St Johns New Zealand ECP representative suggests the following considerations for others looking to implement a similar community paramedicine programme:

- In 2020 there was a sharp increase in the scope of the role, what was planned to be introduced over 5 years happened immediately as the COVID pandemic forced to change and has seen great value to patients.
- It is important to recruit the right person for the role. Recruitment processes need to identify that candidates have the right personality and must be passionate about the role and value and action patient advocacy and primary care over critical care medicine.
- It's important to have good support structures. An ability to have direct consultation with GPs, nurses and medical directors with 24-hour access to medical oversight is something to aim for.
- Precepting is important, if ECPs feel they need extra support this should be considered.
- Leadership training would be something to consider for the first group undertaking the community paramedicine programme. This will allow them to be effective leaders or positive change agents for the role.
- Promotion of the programme to other external health professionals is important and the best messaging focuses on how the ECPs can best support other health professionals to help with their workload. Allowing and inviting health professionals to do placements with programme clinicians so they can understand and see what ECPs do is important. It makes the role seem less threatening to other professional boundaries.
- Routinely (annually or 6 monthly) review programme procedures and scope of practice to identify and adapt to changing community needs. Don't be closed off as community paramedicine is an ever-evolving role and must routinely adapt to community needs and expectations.



## Ireland

A response was received from a community paramedicine programme operating in Ireland. This program should be noted to only be a small pilot program, however, was included to act as a point of comparison for the purposes of the scoping exercise which was to explore the international experience of community paramedicine to inform further development of similar programmes in Ireland.

### Background information

Ireland is located on the Western bounds of Europe. It has a population of approximately 4.75 million (2016 census). It covers an area of approximately 70,273km<sup>2</sup> of the 84,421km<sup>2</sup> of the island of Ireland. Ambulance services are provided by two PSOs- the National Ambulance Service (NAS), and Dublin Fire Brigade (DFB). The barriers to healthcare access in the ROI include rural service delivery, and a lack of primary care human resources.

### Community paramedicine programme(s)

One of the NAS community paramedic pilot programmes is targeted at low acuity 999/112 calls - comprising all ages, all types of address, urban, suburban and rural. All ethnicities and all socioeconomic settings are targeted. Community paramedics also undertake work with a GP practice that serves a proportion of patients from deprived areas of west Dublin where mental health problems, substance use disorder, and crime are more prevalent. The programme is delivered in a largely reactive approach, responding to people who called for an ambulance. Some informal links have been created, e.g., local public health nurses or GPs may request, or patients who have used service before (often for urinary catheter issues) may ask for community paramedics, however, all calls are still processed through emergency call numbers.

### Scope of practice

The detail of the scope of practice is contained within *Table 2 - Scope of practice*.

### Entry requirements to community paramedic education

The minimum entry requirement to undertake community paramedicine education in the ROI is Paramedic or Advanced Paramedic registration with the Pre-Hospital Emergency Care Council. Applicants may hold a Diploma or Bachelor of Science in Emergency Medical Science/Paramedic Science depending on when they entered the service. A minimum of 5 years' experience is required.

## Education requirements to practice as a community paramedic

To practice as a community paramedic in the ROI applicants must complete postgraduate education. The initial cohort completed a Postgraduate Diploma from Glasgow Caledonian University, while more recent cohorts are completing MSc degrees in University College Cork.

## Clinical governance of community paramedicine

Community paramedics are authorised to practice outside national clinical practice guidelines by NAS Clinical Director. Authorisation for an enhanced scope of practice is based on education programme outcomes.

## Clinical supervision of community paramedicine

Allotted time with a GP practice is undertaken with phone support from NAS Clinical Directorate as required.

## Integration with primary care

Community paramedics spend dedicated time in a GP practice working under supervision. Family doctors also provide mentorship and discuss recent patient presentations to facilitate learning.

## Barriers and facilitators experienced

### Barriers:

- Lack of staff - difficult to develop service. New staff have allowed for expansion.
- Relationship building has been slower than hoped due to the COVID-19 pandemic. Has not impacted the nature of the work yet but some may come to fruition.
- No legislation is currently in place to support this role. No licensing and this means not currently being paid for the extra skills and responsibilities.
- No research to investigate which patients from the programme.
- The current fleet and some equipment are not ideal for the role. Some issues with inappropriate dispatching to patients who did not fit the scope of the role.

### Facilitators:

- A notable difference with new staff, more crew requests now as we have more visibility and

cover almost every day.

- General Practitioners are very supportive have allowed integration.
- Clinical oversight from the medical director has facilitated the role well.
- Education has provided confidence in undertaking the role and when meeting interdisciplinary colleagues.

Advice to others:

- It's critical to recruit the right staff and have engaged stakeholders.
- Enable the staff to do their job well, give them the tools, education and autonomy they need. Give them unlimited time on scenes, and measure outcomes cautiously.
- Operationally look to see who can safely benefit the most from the project. What cohort attend ED by ambulance and don't get admitted. Who is most at risk in ED, e.g., dementia, intellectual disabilities, palliative patients, and how can they avoid attendance? Then look upstream at how to use paramedics to keep people well, not just respond to them when in crises.

## United Kingdom

Six responses were received from several community paramedicine programmes from within the United Kingdom (UK). They included responses from London, North-West England, Northern Ireland, Scotland and Wales.

## England – Community Independence Service, London

### Background information

The Community Independence Service (CIS) operates exclusively within the Royal Borough of Kensington and Chelsea. This is an Inner London borough with royal status. It is the smallest borough in London and the second smallest district in England; it is one of the most densely populated administrative regions in the United Kingdom.

The borough is the least populated of the 32 London boroughs. At the 2011 census, the borough had a population of 158,649 who was 71% White, 10% Asian, 5% of multiple ethnic groups, 4% Black African and 3% Black Caribbean. The borough has a higher proportion (16.6%) of high earners (over £60,000 per year) than any other local government district in the country. It has the highest proportion of workers in the financial sector and the lowest proportion working in the retail sector. The borough has the greatest income inequality of any London Borough. However, the borough's poverty rate of 28% is roughly in line with the London-wide average. CIS is available seven days a week from 8am to 8pm for adults over the age of 18 who are geographically located in Southwest London (Kensington & Chelsea, Hammersmith & Fulham and Westminster)

### Community paramedicine programme

The Community Independence Service (CIS) is an intermediate care service with a multidisciplinary team providing advanced assessment and treatment from paramedics, short-term nursing care, occupational therapy, pharmacist-led medicine review, physiotherapy, and social care to people with immediate health or functional needs, who would otherwise require hospital admission. Patients are generally housebound either due to frailty or medical conditions and require visits from the team for face-to-face assessments for acute conditions.

The service aims to offer safe care at home which enables people to avoid unplanned hospital admissions. Patients are referred into the service mainly by General Practitioners and clinicians from the London Ambulance Service NHS Trust. Patients are normally referred for acute illnesses or acute chronic exacerbations. The service provides an initial rapid clinical assessment (within 2 hours). This is a holistic assessment of medical and social needs including medicine review, mobility, equipment

review, social care review. Integration with primary care is through the GP referring into the team for holistic assessment of their patient and assessment and the recommended treatment plan is discussed with the referring GP before initiation. The GP will organise prescriptions as necessary, and the CIS will be responsible for administration and monitoring.

Depending on individual circumstances the patient is supported/monitored with a daily review for up to 5 days before either being discharged from the service or admitted to ward-based care in a hospital.

## Scope of practice

The detail of the scope of practice is contained within *Table 2 - Scope of practice*.

## Entry requirements to community paramedic education

Bachelor's degree and registered as a paramedic.

## Education requirements to practice as a community paramedic

No higher education requirement for entry. Clinicians must be registered with their professional body. Training is provided for specific skills if not within the existing scope of practice of the individual.

## Clinical governance of community paramedicine

Clinical governance is provided by the clinical lead (a GP). However, there is an escalation for clinicians to access clinical team leads. As well as the clinical governance within the management team, peer groups of practitioners are formed across different teams and disciplines to provide feedback.

## Clinical supervision of community paramedicine

Day-to-day practice is autonomous. As such, each member of staff has a supervision meeting with a clinical supervisor every 6 weeks. Direct clinical supervision is available at the request of the paramedic, or when a need has been identified due to complaints/concerns regarding practice.

## Barriers and facilitators experienced

Barriers:

- The ongoing covid-19 pandemic has contributed to staff shortages in the programme.
- The team is scheduled to adopt a national strategy to expand the team and extend the hours of operation. This is likely to make the role less attractive.

- It is very important to make sure that the paramedic is supported. Working in a team predominantly organised by Nurses has meant that paramedics need to develop many skills. There is not a lot of information nationally available to understand what is within scope for paramedics in this role, and what can be safely developed through training without the need for further education.

#### Facilitators

- The clinical governance structure is safe and effective for patient care and has enabled the service to be in a position to develop and adopt the national strategy.
- The team have developed good relationships with the GPs and the referral rate to the CIS has increased

## England- London Ambulance Service

### Background information

London Ambulance Service NHS Trust (LAS) is the only pan-London healthcare provider delivering urgent and emergency care to the 8.9 million people that call the UK's capital city home. The LAS clinical strategy emphasises the need to provide responsive urgent care services to patients, as an alternative to conveyance to the hospital. Crucial to this is the development of the skills within the clinical workforce to deliver safe and effective urgent care to patients in the community. In support of this goal for the LAS and in line with this guidance, in 2017 the Trust secured funding from Health Education England to pilot the role of Advanced Paramedic Practitioners in Urgent Care (APP-UC) for twelve months. Starting in one area of London (Croydon) with eight staff, the pilot demonstrated that APPs-UC were significantly more likely than a standard ambulance response to treat patients in the community as opposed to conveying to the emergency department. Importantly, the re-contact rate where a patient is discharged at the scene remains low, suggesting that these decisions are safe as well as effective. Since this pilot, the role has been integrated into the Trust's operational model as business as usual.

### Community paramedicine programme

The APP-UC provides one-two cars (on an early and late shift) across five sites within London, plus our APP-UC within the EOC who, as well as undertaking the targeted clinician-led dispatch, provides 'hear & treat' and clinical support functions within the Emergency Operations Centre (EOC).

Since inception, the aims have remained the same:

The assessment and management of:

- Unscheduled or emergency presentations
- Minor Illness and Injury
- Complex medical patients who may benefit from care outside the hospital
- To reduce unnecessary hospital admissions

And this has three key components:

- Advanced Paramedics work on solo-response vehicles where they have a targeted dispatch to specific patient groups
- This links to the second clinical component, which is the Advanced paramedic working in our emergency operations centre. Clinician-led dispatch is a vital component of the programme in ensuring that the advanced paramedics are targeted to the right calls, maximising their contribution to safe non-conveyance.
- Lastly, Advanced paramedics undertake rotational placements in primary and urgent care settings during their master's degree. This is for the fulfilment of the clinical components of the master's degree, including independent prescribing.

## Scope of practice

The detail of the scope of practice is contained within *Table 2 - Scope of practice*. Further detail specific to the role is below.

When in the ambulance service, they can administer additional medicines under Patient Group Direction (PGD) including analgesics, antibiotics, and symptom management at the end of life. All medicines are prescribed by a GP in primary care until the APP-UC completes the Independent Prescribing course.

The APP-UC adopted a specialist tasking model, with two advanced paramedics located in the Emergency Operations Centre (EOC) – one covering the early shift and the other covering the late shift. Their main role is undertaking targeted clinician-led dispatch to patients with lower acuity, but often high complexity presentations, that can potentially be resolved on the scene or in the community.

Whilst working in the EOC, APP-UC are also trained to undertake clinical ring-backs for calls from 999 and 111. This has been exceptionally important over the last year with the high volume of calls the ambulance service has received during the covid-19 pandemic. Their additional education, and experience in primary and urgent care settings, enable the advanced paramedics to undertake a robust remote consultation, which may also include video consultation, to ensure the patient receives the best treatment on the pathway that's right to them, and that can treat them in a timely way.

## Entry requirements to community paramedic education

To enter the programme, individuals must be paramedics who are 5 years post-registration with a BSc(Hons).

## Education requirements to practice as a community paramedic

All APP-UC must complete a Master's Degree in Advanced Clinical Practice. As well as the Master's Degree, APPs-UC will undertake the College of Paramedics Diploma in Primary and Urgent Care – as a standardised and external assessment of their knowledge.

## Clinical governance of community paramedicine

Supporting the programme is a robust clinical governance model, consisting of standard operating procedures and advanced clinical operating procedures. These are supported by dedicated Clinical Practice Development Managers and Clinical Supervisors. As well as this, before the APPs-UC enter a new placement setting, the setting (such as a GP practice) needs to agree to these standards – which sets out the responsibilities of clinical supervision for the clinical setting, for the employer – which is us as the London Ambulance Service – and for the individual APP. All APP-UC also have to agree to these standards on entry to the programme.

## Clinical supervision of community paramedicine

Supporting the programme is a robust clinical supervision framework that all clinical settings the APP-UC work in sign up to. This is drawn from Health Education England's policy documents on workplace supervision and coincides with the APP-UC gathering a portfolio of evidence to demonstrate their clinical development which follows a similar format to that within the Royal College of General Practitioners. This runs complimentary to the ACP Master's Degree the Advanced paramedics undertake.

Each component of clinical supervision uses a different scale set against the Core Capability Framework for paramedics working in primary care. The supervision model has three components: core supervision, charting experiences and demonstrating knowledge. The outputs of the supervision make up the individual Advanced Paramedic practice development portfolio, which is part of the evidence they build to show their work at an advanced practice standard. Supervision includes direct supervision by a clinical supervisor – and a report, which has feedback and point for development. It also includes peer review, self-assessment and reflection.

Charting experiences is about capturing the breadth of the work the advanced paramedics undertake. Clinical and non-clinical multisource feedback is used primarily in other clinical settings – because the main part of supervision is carried out within the LAS - and patient satisfactions questionnaires are used across all clinical settings. Clinical Observation Tools and Clinical Skills Assessments function as a



separated or expanded Clinical Evaluation Exercise or CEX. In line with LAS policy, all clinicians working in EOC need to be trained and validated to work there, which is where the EOC competency document fits in. As education is one pillar of advanced practice, the teaching competency document is a tool for APP undertaking teaching roles to gain evidence and feedback – to support their development. Lastly, each month, members of the programme meet where individuals present and discuss cases they've attended, and case base discussion is the final tool that is used within the supervision model. All of this is recorded for the APPs-UC on an ePortfolio.

## Barriers and facilitators experienced

Barriers:

- Ensuring all clinical supervisors across all settings subscribe to the model of clinical supervision can be challenging – especially with patient pressures across all clinical settings.
- Adoption of clinical governance and supervision across the programme, by APPs-UC who were already established and in-post before its introduction.
- Educational abstraction for staff to undertake the additional education causes service delivery issues for the ambulance service.
- Inability to undertake independent prescribing within the ambulance service.

Facilitators and advice to others:

- Implementation of a 'placement contract' that all new clinical settings subscribed to before the APP-UC enters placement.

## England – Northwest Ambulance Service

### Background information

Northwest Ambulance Service NHS Trusts covers a geographical area of 5,400 square miles, including the counties of Cheshire, Merseyside, Greater Manchester, Lancashire, and Cumbria. This area has a population of approximately 7 million people from diverse communities: from extremely rural communities which are only accessible by helicopter or prolonged road transfers, to dense urban cities. There are also areas of older people with multiple comorbidities and areas of high deprivation.

### Community paramedicine programme

Community Specialist Paramedics (CSPs) are placed within areas of high deprivation across the region, where there is also a high increase of specific health issues such as older people. The programme is a reactive model to 999 calls, intending to improve health outcomes directly through advanced practice and through service development of an alternative to transporting pathways. Previously, CSPs worked

with GPs practices to engage in proactive work, however, due to service demand during the covid-19 pandemic this has stopped in the vast majority of areas to focus upon reactive work. Calls are picked by the CSP from the waiting 999 call stack for suitability and they self-allocate. CSPs work on response cars solo.

## Scope of practice

The detail of the scope of practice is contained within *Table 2 - Scope of practice*.

Further detail specific to the role is below:

When in the ambulance service, they can administer additional medicines under Patient Group Direction (PGD) including analgesics and antibiotics. All medicines are prescribed by a GP in primary care. There is a strong emphasis on the management of chronic conditions across older patient groups.

## Entry requirements to community paramedic education

To enter the programme, individuals must be paramedics who are 5 years post-registration with a BSc (Hons).

## Education requirements to practice as a community paramedic

All CSPs must complete a master's degree in Advanced Clinical Practice.

## Clinical governance of community paramedicine

No additional clinical governance other than that provided within the Trust.

## Clinical supervision of community paramedicine

CSPs engage in weekly case discussions with peers in their team. A clinical lead within the programme conducts a supervised contact shift once a quarter. There is ongoing monitoring of individuals conveyance and attendance rates.

## Barriers and facilitators experienced

Barriers:

- Too few staff in the programme (n=10) to be able to conduct a worthwhile analysis of the impact of the role.
- Spread out across a wide area, interacting with many different hospital trusts, community services and CCGs leads to difficulty ensuring consistency.

- Unable to share information to and from primary care or other services.
- No medical input or support from the Trust, therefore, limited extended care in terms of rotation into primary care or development of extended skills.
- No cover for when they are in university, therefore abstracted from role 33% of their time.

#### Facilitators

- Building relationships with other services, seeking agreements for alternatives to transport pathways to other services in primary and secondary care.

## Northern Ireland – Northern Ireland Ambulance Service

### Background information

The Northern Ireland Ambulance Service (NIAS) exists to improve the health and well-being of the people of Northern Ireland. NIAS provides high-quality emergency, urgent and primary care services throughout the whole of Northern Ireland. It is the only pan-Northern Ireland health service.

### Community paramedicine programme

The community paramedicine programme was originally set up to service rural populations along the Northern Ireland/Ireland border, which is an area with a strong history of social deprivation and long transfer times to the nearest hospital. It was hoped that these transfer times could be reduced by providing care for patients in this area in their homes.

There is a proactive model of service with a rotational model of working between the ambulance service and primary care. There is a three-week rota comprising of one week working for ambulance service then alternating weeks in two GP practices. Based in rural GP practice working alongside GP's and other Allied Health Professionals doing home visits, base assessments, and quality outcome framework (QOF) reviews. They also may respond as a 999 response when required with other options to manage care, where appropriate.

### Scope of practice

The detail of the scope of practice is contained within *Table 2 - Scope of practice*.

## Entry requirements to community paramedic education

The programme recognises any prior learning, ranging from paramedic training courses to undergraduate degrees. All paramedics must have a minimum of five years post-registration experience.

## Education requirements to practice as a community paramedic

All community paramedics must complete a master's degree in Advanced Paramedic Practice.

## Clinical governance of community paramedicine

Clinical governance is provided on a case-by-case basis and consists of reviewing assessment and treatment given by community paramedics.

## Clinical supervision of community paramedicine

Clinical supervision is provided in primary care, where community paramedics have access to a full-time GP mentor at all times. During their development community paramedics also have exposure to the acute care at home team, minor injuries unit, and emergency department over the 3-year training period.

## Barriers and facilitators experienced

### Barriers:

- The role of community paramedics based in primary care doing low acuity calls combined with acute 999 calls in the same community does not lend itself particularly well to overall service provision in each area.
- Funding was initially provided by an external body, however, this has not continued during the COVID-19 pandemic.

### Facilitators

- A fundamental benefit of this programme is relationship building between the ambulance service and primary care and breaking down barriers that could exist between the two.
- Dedication and passion to support as it is a programme that takes time to establish and see benefits. Experienced clinicians with good interpersonal skills and communication abilities are paramount. Interested and available mentors are crucial in the communities to be serviced.

## Scotland – Scottish Ambulance Service

### Background information

Scottish Ambulance Service NHS Trust provides urgent and emergency care to a population of 5 million people in Scotland, with approximately 3.5 million in urban concentrations. Geography includes urban, remote, rural and island locations. There are areas of significant deprivation in larger urban centres. This is the only Scotland-wide health service provider.

### Community paramedicine programme

The Advanced Practitioner programme runs across the Trust and includes paramedics and nurses working to an advanced level of practice. The programme is a proactive model of service, built on collaborative working with a rotation of community paramedics through general practice, out of hours clinics, and the ambulance service. Across each setting, community paramedics aim to assess and treat people in the community. As well as being dispatched to patients who have phoned 999, whilst working in the ambulance service, Advanced Practitioners may accept referrals from ambulance crews at the scene with a patient who they feel may benefit from an Advanced Practitioner consultation. Advanced Practitioners may also provide remote consultation by phone/video call for a predetermined code set of patients calling 999, to offer a 'hear and treat' service.

In Lothian, Grampian, Tayside, Borders, Orkney, Western Isles, integrated working between the ambulance service and primary care providers is undertaken. This work consists of home visits as well as unscheduled care appointments in clinics. This model is due to expand to Greater Glasgow and Lanarkshire by end of January 2022.

### Scope of practice

The detail of the scope of practice is contained within *Table 2 - Scope of practice*.

### Entry requirements to community paramedic education

To enter the programme, individuals must be paramedics or nurses who have a minimum of 3 years post-registration with a BSc (Hons).

### Education requirements to practice as a community paramedic

Advanced Practitioners undertake a postgraduate certificate in higher education.

## Clinical governance of community paramedicine

There are specific clinical leads for East, North and West of Scotland who have oversight of the clinical governance of the programme.

## Clinical supervision of community paramedicine

Each clinical skill requires sign-off/verification by a clinical mentor. These clinical skills make up an individuals' competency framework. This is reviewed annually in a clinical appraisal with a member of the management team.

## Barriers and facilitators experienced

### Barriers

- Length of time to train Advanced Practitioners
- Potential for a high attrition rate of qualified staff leaving to work elsewhere in the NHS.
- Navigation of data between services remains challenging: A "joined-up" longitudinal review of care is still not simple to report
- Educational abstraction for staff to undertake the additional education causes service delivery issues.
- Challenges around the split of rotational model and introduction of remote consultation in response to COVID.

### Facilitators

- COVID has been the main driver for change over the past 2 years
- Engage with staff at every opportunity. Allow regular feedback and input into developing the role.

## Wales – Welsh Ambulance Service

### Background information

Wales is bordered by England to the east, the Irish Sea to the north and west, and the Bristol Channel to the south. It has a population of 3.3 million and has a total area of 20,779 km<sup>2</sup> (¼ the size of Ireland). The Welsh Ambulance Services NHS Trust is the only pan-Wales healthcare provider, responding to more than 1800 emergency calls a day across the country.

## Community paramedicine programme

Following the completion of an 18-month pilot scheme in the Betsi Cadwaladr University Health Board area, the Welsh Ambulance Services NHS Trust recognised the strategic benefits of significantly expanding the numbers of Advanced Paramedic Practitioner (APPs). APPs are specialised and autonomous clinicians working for the Welsh Ambulance Services NHS Trust in emergency, urgent and unscheduled care settings. This programme is a rotational model where APPs work within settings such as in and out of hours primary care where activity flows from the primary care providers.

APPs provide advanced clinical assessment skills, diagnosis, treatment and referral of patients using a medical/management model of care. The primary benefits include reducing the impact of patients accessing the 999 system and proportionate conveyance to secondary care as well as supporting Primary Care and the Out of Hours capacity to help mitigate the pressure on the wider Unscheduled Care System.

## Scope of practice

The detail of the scope of practice is contained within *Table 2 - Scope of practice*. In addition, many APPs have also now qualified as Independent Prescribers which enables them to provide additional treatment options in line with current best practice and requires fewer referrals back to GPs both in primary care and when responding to patients accessing the 999 system.

## Entry requirements to community paramedic education

To enter the programme, individuals must be paramedics who are 2-3 years post-registration with a BSc (Hons).

## Education requirements to practice as a community paramedic

All APP complete a master's degree in Advanced Clinical Practice, with independent prescribing.

## Clinical governance of community paramedicine

Governance is within the existing structures of the Welsh Ambulance Service NHS Trust but is growing to accommodate these new ways of working within the programme.

## Clinical supervision of community paramedicine

Trainee Advanced Practitioners are supported within General Practice with clinical supervision by General Practitioners. The supervision provided includes direct and indirect supervision, as well as weekly education days that enable case-based discussion. This model of supervision was developed collaboratively with Health Board Partners across Wales. Within the programme, there are now APPs

with sufficient experience in a range of clinical settings to provide a mentor role for developing and trainee APPs - crucial to expand the APP scheme further across Wales.

## Barriers and facilitators experienced

### Barriers:

- Insufficient staff educated to the correct level to allow for enrolment onto the programme.
- Despite a compelling argument for system and patient benefit, funding has been inconsistent.
- Gaining sufficient political traction to support funding and thus programme development.

### Facilitators:

- System pressure creates a challenge of sufficient profile to create increased momentum to change.
- Liaison with stakeholders from the outset and understand thoroughly what they would need to see from the programme for them to regard this as something they wish to support.



## United States of America

Eight responses were received from several community paramedicine programmes in Colorado, Florida, the Gulf of Mexico (offshore/remote in Alabama, Mississippi, Texas and Louisiana), North Carolina, South Carolina, and Texas. These responses were supplemented with details from a number of publications on community paramedicine programme implementation in the USA.

## Colorado

### Background information

Delta County is located in one of the poorest, rural areas of Colorado, on the western edge of the state. The service area has a large population of persons living at or below the poverty level, a large population of persons of Hispanic descent, especially from Mexico. Some of these individuals reside in the area legally, while many are staying illegally, often deterring them from accessing the traditional healthcare system. The community paramedicine programme focuses on elderly populations, which are also a prevalent demographic in the area but also engages with any person in the community who requires access to healthcare outside of traditional mechanisms. The county population is approximately 28,000 which makes the demand for service high.

### Community paramedicine programme(s)

The community paramedicine programme in Delta County is delivered via both proactive and reactive approaches. It is partnered with the health department, the area agency on aging, the PACE programme (senior care for persons classified as living in poverty), and area hospitals. The programme accepts referrals from hospitals for post-discharge follow-up, clinics for ER admission avoidance, and any other community partner to intervene when possible, preventing the further need for more advanced intervention. In addition, the programme partners with the health department to facilitate home vaccination programmes and receives referrals from the 911 system to intervene with frequent utilizers of the 911 system and connect them with more appropriate resources.

### Scope of practice

The detail of the scope of practice is contained within *Table 2 - Scope of practice*.

### Entry requirements to community paramedic education

The minimum entry requirement to undertake community paramedicine education in Delta County, CO is current registration as a paramedic or Registered Nurse. Applicants have usually experienced

Paramedics or RN's, with a preference for at least 10 years' experience in 911 and/or ER settings prior to coming onto the community paramedicine team.

## Education requirements to practice as a community paramedic

To practice as a community paramedic in Delta County, CO applicants must complete community paramedicine education which may range from 24 hours to 1 semester in length. There are varying requirements for clinical internships, and applicants are required to pass the IBSC Community Paramedic Exam.

## Clinical governance of community paramedicine

Clinical governance is similar to the 911 system; however, service providers require a Community Integrated Healthcare Service license from the state which technically falls under Home Health.

## Clinical supervision of community paramedicine

Physician oversight, similar to the 911 system. There is more autonomy, but no prescribing ability and more advanced medications require an order. Typical 911 medications are still delivered via standing order.

## Integration with primary care

Currently developing relationships with primary care, primarily to reduce ER utilization. The current paradigm is for primary care to refer patients they cannot see promptly to the community paramedicine programme rather than sending them to the ER. The community paramedic then determines if an ER visit is required and reports back to the primary care provider regarding recommendations for the next steps, or to schedule a visit.

## Barriers and facilitators experienced

Barriers:

- Difficulties in finding qualified personnel. Hard to find personnel who are interested in the job - many in the USA consider community paramedicine to be the "Tactical CNA" which is a very inaccurate understanding.
- Getting the payer groups to reimburse for community paramedicine services is challenging.
- Several instances of "stick to driving the ambulance and leave the medicine to people who know what they are doing" - attribute to a lack of education about what teams are capable of and failure to understand the training and education that community paramedicine teams possess.

- Trying to get any effective movement out of the legislature at any level in the USA is challenging. EMS is not an essential service, and the federal government has traditionally seen EMS as a supplier of transportation and not as a clinical benefit. This is changing and there is significant movement in recognizing EMS as clinicians rather than ambulance drivers.
- Education standards need to be increased. Community paramedics possess a much higher level of education in the Delta County programme than what the State of Colorado mandates.
- Lack of standardisation causes challenges for research in that comparisons between programmes can be difficult.

#### Facilitators:

- Staff often develop ways to innovate, sometimes solving problems that we had not previously known to exist.
- Payment is a challenge. There are grant programmes, but grants do not last forever, so the programme was designed from the beginning upon the premise of being self-supporting.
- Opportunities to innovate in the community and improve access to healthcare. Oftentimes, these community partnerships have opened up new revenue streams, new lines of access to patients, but most of all highlighted areas where we can make an impact in the community.

#### Advice to others:

- Decide where the community is best served, design the programme geared towards that with plenty of room for flexibility and/or growth.

## Florida- City of Sanford

### Background information

The city of Sanford has a population of 60,000 residents spread out over 28 square miles. The city has a historic downtown district covering several square miles with suburban areas outside that. The population is approximately 52% African American, 40% Caucasian, and 8% mixed Spanish and Asian

### Community paramedicine programme(s)

The program has both kinds reactive and proactive models of service delivery.

In the proactive model the program will take direct requests from patients within the city, whether that be after the initial emergency crew hands them an informational flyer after a 911 call, or they simply request help before an issue arises. The program also has an agreement with the local hospital for

them to refer patients that they deem to be a higher risk for re-admission for their medical condition (commonly for Diabetes, COPD and CHF patients).

In the reactive model emergency crews can flag a patient for enrolment after an EMS call if they suspect the patient may need help or assistance. This is usually identified after multiple EMS calls and that the patient may be trending toward frequent EMS calls.

The program also takes referrals from outside agencies as well, such as surrounding fire departments, police departments and emergency management agencies.

## Scope of practice

The detail of the scope of practice is contained within *Table 2 - Scope of practice*. In addition to this in-home Monoclonal Antibody treatments for Covid positive patients as well as Covid vaccines in patients' home has been added to the scope of practice.

## Entry requirements to community paramedic education

The minimum entry requirement to undertake community paramedicine education in these settings is 1 year of experience as a paramedic and be either registered with the state of Florida or a nationally registered paramedic.

## Education requirements to practice as a community paramedic

To practice as a community paramedic in the programme there is a 10 to 20 hours of precepting before being able to work in the role.

## Clinical governance of community paramedicine

Community paramedics have an elevated scope of practice from state-mandated roles since care is provided outside state authority limits.

## Clinical supervision of community paramedicine

The programme utilises the medical director that already supervises the whole of the EMS system to also supervise the community paramedics within the programme.

## Integration with primary care

The programme is integrated with primary care physicians to supplement patient treatment plans.

## Barriers and facilitators experienced

Advice to others:

- Don't limit your scope to only certain kinds of patients.
- Don't wait for someone else's money to come through to get out there and do something. The funding has expanded quickly after we were able to have case studies available for those interested.
- Be ready to do things alone for a while until the results start to get out to the public, as long as you have administrative support to try.

## Gulf of Mexico (offshore/remote)

### Background information

These programmes serve small communities of 30-200+ persons who are isolated for employment for periods ranging from days to approximately 1 month. Mixed diversity, mostly male, and mostly rural backgrounds, but with technical or professional education (trades/crafts/engineers) and are very isolated from medical support (remote on land, or offshore settings).

### Community paramedicine programme(s)

These community paramedic programmes are delivered in a mainly proactive approach. Patients self-refer for most presentations. Occasionally they are referred by a physician or other health provider. Much of the work is occupational or preventative in nature, e.g., immunization/vaccination, audiometric testing, general wellness exams. As the only healthcare provider for these remote areas, paramedics provide all health-related services both emergency and non-emergency in nature.

### Scope of practice

The detail of the scope of practice is contained within *Table 2 - Scope of practice*.

### Entry requirements to community paramedic education

The minimum entry requirement to undertake community paramedicine education in these settings is 3-5 years of experience as a paramedic, with most to be competitive having more than 10 or more years.

## Education requirements to practice as a community paramedic

To practice as a community paramedic in these settings, providers generally complete a community paramedicine curriculum, with many completing a degree programme.

## Clinical governance of community paramedicine

Community paramedics have an elevated scope of practice from state-mandated roles since care is provided outside state authority limits.

## Clinical supervision of community paramedicine

Online and telephone consultation is usually available for community paramedics. Protocols are provided for full skill set implementation in the event communication is unavailable. The programme does not utilise a rotational staffing model.

## Integration with primary care

The programmes are integrated with physicians and advanced practice providers within the organisation.

## Barriers and facilitators experienced

Barriers:

- Limited interest among qualified paramedics to undertake the role, and contract roles can be difficult to hire and retain.
- Information sharing is a significant barrier

Advice to others:

- Start small and focus on specific healthcare gaps/needs in your community.
- Don't be afraid to say no.
- Do not underestimate the amount of administrative support you will need.
- Undertake action research - always reflect on current practices and make needed adjustments along the way.
- Ask for help - research to find best practices.

## North Carolina - Fayetteville

### Background information

The service serves a county of 340,000 people. Economically, the county is positioned by a large military base, with the majority of the workforce in the healthcare and social assistance sectors.

### Community paramedicine programme(s)

The community paramedicine programme is hospital-based, targeted at those aged 65 or older to avoid readmittance into the hospital as well as working with behavioural health and substance use disorder population. The programme is delivered proactively, monitoring patients after hospital discharge, educating them on disease-specific issues and reducing readmissions to the hospital. Reactively, the programme also provides coverage for low acuity mental health calls (if requested by 911 crews), with the ability to have direct admission to a facility or to liaise with suspected overdose presentations to provide resources and/or treatment.

### Scope of practice

The detail of the scope of practice is contained within *Table 2 - Scope of practice*.

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### Entry requirements to community paramedic education

The minimum entry requirement to undertake community paramedicine education in Fayetteville, NC is a state-certified paramedic (Associates Degree preferred), and 3 years experience with the service or 5 years with a different service.

### Education requirements to practice as a community paramedic

To practice as a community paramedic in Fayetteville, NC, applicants must gain the IBSC Certified Community Paramedic certification within 1 year of hire.

### Clinical governance of community paramedicine

The programme and the EMS service is hospital/county-based, and guidelines follow State/EMS/hospital guidelines.

### Clinical supervision of community paramedicine

Follow up patient surveys, chart audits. The programme does not utilise a rotational staffing model.

## Integration with primary care

Primary care providers are a vital tool for the success of the patients. It provides better continuity of care for the patient overall.

## Barriers and facilitators experienced

Barriers:

- The hiring of paramedics is challenging due to a shortage and increased demand
- The programme does not generate revenue but saves revenue on the backside. Having funding is largely the only way to expand a programme.

Facilitators:

- Dedicated community paramedics who want and do make a difference in the community.
- Access to the health system medical records and ability to chart directly in the health system software.
- The programme has created trust in the medical community and the patients love that it is free of charge.

Advice to others:

- Continue to look and think about how to continue to expand the programme to meet the community's needs

## North Carolina - Wilmington

### Background information

This programme is delivered by a hospital-based EMS system with community paramedics that serve patients located within seven counties, comprising both rural and urban settings.

### Community paramedicine programme(s)

Patients are referred for hospital readmission reduction, reduction in emergency department visits, reduction in EMS visits, acute care visits to avoid ED visits, elective orthopedic surgery preoperative evaluation, social disparities, assist with chronic care management, patient education, behavioural health, and substance abuse. The majority of referrals are proactive and received from inpatient and ambulatory providers (e.g., physicians, social workers, case managers). The programme also responds reactively via referrals from EMS providers and/or Fire Department following a visit through the 911



system. Community Paramedics may also respond to low acuity 911 requests to avoid sending a frontline unit.

## Scope of practice

The detail of the scope of practice is contained within *Table 2 - Scope of practice*.

## Entry requirements to community paramedic education

The minimum entry requirement to undertake community paramedicine education in Wilmington, NC is current paramedic certification

## Education requirements to practice as a community paramedic

To practice as a community paramedic in Wilmington, NC, paramedics must have at least 5 years of paramedic experience, complete an approved Community Paramedic Programme, and maintain all other certifications required by the EMS system.

## Clinical governance of community paramedicine

Clinical governance is provided by the North Carolina State Office of EMS, local policies and protocols approved by the NC Office of EMS, medical director oversight, CAAS Accreditation, the Performance Improvement Department, and hospital policies, procedures, and accreditation standards.

## Clinical supervision of community paramedicine

Clinical supervision is provided by the medical director, service managers, and coordinators. A hybrid non-rotational staffing model is employed whereby community paramedics work full time in the role but have the option to work overtime shifts in the 911 system if desired.

## Integration with primary care

Primary care providers or specialist physicians can refer directly to the Community Paramedics. Community Paramedics receive verbal and/or written orders for medical interventions directly from patients primary care or specialist physicians. Community Paramedics document in the shared electronic medical record and communicate directly with the patient's medical team.

## Barriers and facilitators experienced

Barriers:

- The preference in this system is to hire paramedics within the EMS system and then train them

for a community paramedic role. It is difficult to hire quality paramedics decreased interest in a paramedic position since the COVID-19 pandemic.

- Unable to bill patients' health insurance for the majority of services. Required to contract directly with the patient's insurance company, seek grants, or fund from an organizational utilization reduction perspective.
- Legislation needed to allow EMS to bill for services without the need to transport.
- The state has defined community paramedicine but does not issue a specific certification/license for the level.
- Lack of an appropriate national curriculum that meets the needs.

#### Facilitators:

- Consistently make adjustments based on current community healthcare gaps or organisational needs. For example, discontinued some of our services to provide COVID monoclonal antibody therapy infusions.

#### Advice to others:

- Build community partnerships. Community paramedicine programmes cannot exist in isolation. Have a funding plan outside of grants and identify revenue streams early on.
- Be prepared for rapid growth.
- Be prepared for neighbouring jurisdictions to ask for your personnel to respond and become engaged in their community.
- Be prepared to do a lot of education for the public and community partners.

## South Carolina - Lexington County

### Background information

Lexington County is approx. 758 sq miles with a population of approx. 300,000. The central, northern, and eastern areas have a higher population density and are more urban and suburban. Compared to the rest of SC, Lexington County has a higher average annual household income as well as more individuals with higher education. The main social issues noted are a lack of mental health care, substance use disorder, and lack of widespread public transportation in the county.

### Community paramedicine programme(s)

For the community paramedic programme, the targeted populations are geriatrics, vulnerable adults, individuals with mental health needs, individuals experiencing SUDs, and high utilizers of emergency

services. The programme operates proactively, and takes referrals from EMS field personnel, fire service personnel, law enforcement personnel, Richland County EMS Mobile Integrated Healthcare, SC Dept. of Social Services, SC Dept. of Mental Health, Lexington Medical Center, Prisma Health and other allied agencies.

## Scope of practice

The detail of the scope of practice is contained within *Table 2 - Scope of practice*.

## Entry requirements to community paramedic education

The minimum entry requirement to undertake community paramedicine education in Lexington, SC is paramedic certification with 3 years or more functioning as a lead paramedic in a high volume 911 EMS service.

## Education requirements to practice as a community paramedic

To practice as a community paramedic in Lexington, SC, applicants must complete an approved community paramedic or mobile integrated healthcare training and possess an associate's degree or higher in a related field e.g., public health, emergency medicine, social work, psychology. Applicants must also complete a service-specific mentoring process and scenario testing.

## Clinical governance of community paramedicine

Community paramedics are governed by the same clinical standing orders as 911 system paramedics within the service. Due to the majority of the work being referrals to various resources as well as an investigation into barriers to care no standing orders exist for those activities as they are not deemed to be clinical. In terms of organizational support, the community paramedic programme operates with a high degree of autonomy from the rest of the service.

## Clinical supervision of community paramedicine

A medical control physician who serves dual roles as the service and community paramedic programme medical control. The programme does not utilise a rotational staffing model.

## Integration with primary care

No formal integration with primary care in the programme, merely referrals to known primary care resources.

## South Carolina - Marlboro County

### Background information

Marlboro County is a rural agricultural community of approximately 21,000 people and covers an area of approximately 485 square miles (approximately 780 km<sup>2</sup>).

### Community paramedicine programme(s)

The programme is delivered via a proactive approach to assess and analyse what resources a patient needs and assist with meeting those for frequent users of 911 or patients referred from their primary care provider.

### Scope of practice

The detail of the scope of practice is contained within *Table 2 - Scope of practice*.

### Entry requirements to community paramedic education

The minimum entry requirement to undertake community paramedicine education in Marlboro County, SC are paramedic certification with 2 years of 911 experience.

### Education requirements to practice as a community paramedic

To practice as a community paramedic in Marlboro County, SC, applicants must complete certification education in community paramedicine, plus a recommendation from the medical director.

### Clinical governance of community paramedicine

Separate protocols are in place for 911 operations and community paramedicine.

### Clinical supervision of community paramedicine

100% quality assurance directly over the programme and all patient encounters by overseeing community paramedics and medical director. The programme does not utilise a rotational staffing model.

### Integration with primary care

Partnership with a local primary care practice exists.

## Barriers and facilitators experienced

### Barriers:

- Community paramedics have been requested on multiple occasions to augment staffing shortages in the operations bureau within the last year.
- Funding is limited and primarily obtained through grants and or other budgetary surpluses.
- The community paramedic programme does not currently have access to patient EMRs for any of the hospital systems in our area.
- Legislation, as well as state oversight, is very limited in supporting community paramedicine initiatives in the state.
- Obtaining education as a community paramedic is difficult as there is only one functioning community paramedic education programme in the state

### Facilitators:

- Increased data gathering has occurred to justify funding.
- Improvements in the singular community paramedic education programme are underway and the programme is being tailored to broader issues noted within the state.

### Advice to others:

- The best advice is to perform a community health needs assessment to best understand the needs as well as resources within the given community. This will serve as a guide for the building of the programme.
- Further understanding what resources are available to you as well as learning the ins and outs of a budgetary process can be very helpful.
- Lastly, data gathering and management are essential for not just justification of budget items but overall support both from the service and other community leaders, but even to the state levels or even insurers.

## Texas - MedStar

### Background information

MedStar Mobile Healthcare is the exclusive emergency and non-emergency ambulance service for Fort Worth and 14 surrounding North Texas communities. The majority of the service area lies in Tarrant County, however, there is an overlap between Wise County, Parker County, and Johnson County.

MedStar Mobile Healthcare serves a population of greater than 1 million residents in a service area of 436 square miles. Fort Worth, Texas is the largest city served by MedStar Mobile Healthcare - it is the 5th most populated city in Texas. Referrals for service are received from a variety of sources, including home health agencies, hospice agencies, palliative care agencies, hospitals, physician groups, managed Medicare payers, and care management groups. The median age for patients is 67, and 58% of the patients are female. The programmes target patients with limited access to care, limited health literacy, and limited access to community resources to maintain their health.

### Community paramedicine programme(s)

Programmes are delivered via both proactive and reactive approaches. Readmission Avoidance and High Utilization Group programmes consist of proactive home visits to aid in improving health literacy, access to care, and community resource referral. These referrals primarily come from the hospitals in the service area, managed Medicare payers, care management groups, and physician groups. Reactively, the programme partners with various home health, hospice, palliative care, and other health-promoting agencies centre on episodic care coordination. Teams respond to 911 calls for assistance and unscheduled home visit requests to address the symptoms/concerns and provide on-scene care in coordination with the referring agency.

### Scope of practice

The detail of the scope of practice is contained within *Table 2 - Scope of practice*.

### Entry requirements to community paramedic education

The minimum entry requirement to undertake community paramedicine education in MedStar TX is paramedic certification, with 2 years of experience as an Advanced Paramedic preferred.

### Education requirements to practice as a community paramedic

To practice as a community paramedic in MedStar Texas paramedic certification with completion of certificate education in community paramedicine is required. In addition, applicants must complete field training shifts, and complete an interview with the medical director.

### Clinical governance of community paramedicine

MedStar has an expanded set of protocols that are used to treat chronic diseases.

## Clinical supervision of community paramedicine

There is a dedicated liaison to the Office of the Medical Director that is responsible for quality improvement, quality assurance, training, and education specific to the community paramedicine programme.

## Integration with primary care

Each patient receiving proactive home visits is linked to a patient-centred medical home. If they do not have a primary care provider, the programme will work to get one assigned to them. If they have a primary care provider, the goal is to get them an appointment before being discharged from the programme. The programme has engaged primary care physicians to aid in drafting chronic disease management and strategy protocols and works closely with several patient-centred medical homes in the area.

## Barriers and facilitators experienced

Barriers:

- Inconsistency of referrals from external sources made staffing a challenge.
- Traditional documentation tools are not designed for patient management, but encounter management. We use an external database to track all encounters and outcomes.
- During implementation, inconsistent funding sources were a challenge.
- Initially, we did not have access to the referring sources' documentation.

Facilitators:

- Agreements with the hospitals and agencies to have full access to their EMRs. This is essential in providing the best care for the patient. All documentation made by community paramedics is uploaded to the referring sources' EMR.
- Up until recently, there was no formalized community paramedicine education. Created own curriculum internally.

Advice to others:

- Executive buy-in is necessary for addition to developing a community paramedicine programme that aligns with the needs of the community.
- All stakeholders must be brought to the table to aid in the development and implementation of any community paramedic programme.

- Once implemented, training the right providers to deliver the programme is necessary – years of experience isn't always paramount.
- Successful providers must have the right personality to build and foster relationships with patients, internal stakeholders, and external stakeholders.
- Define success (and start measuring it) from the beginning. Ongoing evaluation of the community paramedicine programme is mandatory to assess its success and to highlight opportunities for improvement.



### Abbreviations

#### Australia and New Zealand

ECP- Extended Care Paramedic

ICP- Intensive Care Paramedic

LARU- Local-area Assessment and Referral Unit

PCSC- Paramedic Community Support Coordinator

QAS- Queensland Ambulance Service

SAAS- South Australian Ambulance Service

#### Canada

AB - Alberta

ACP - Advanced Care Paramedic

ADL - Activities of daily living

AHS EMS - Alberta Health Service Emergency Medical Services

BC - British Columbia

BCEHS - British Columbia Emergency Health Services

CHF - Congestive Heart Failure

COPD - Chronic Obstructive Pulmonary Disease

CSU - Community Support Unit

ED - Emergency Department

MB - Manitoba

NL - Newfoundland and Labrador

ON - Ontario

PCP - Primary Care Paramedic

PCP-IV - Primary Care Paramedic with intravenous access certification

PEI - Prince Edward Island

PSO - Paramedic Service Operator

SK – Saskatchewan

## Ireland

AP - Advanced Paramedic

DFB - Dublin Fire Brigade

ED - Emergency Department

GP - General practitioner (family physician)

NAS - National Ambulance Service

## UK

UK- United Kingdom

CIS- Community Independence Service

GP- General Practitioner

LAS- London Ambulance Service

APP-UC- Advanced Paramedic Practitioners in Urgent Care

EOC- Emergency Operations Centre

NWAS- North West Ambulance Service

CSP- Community Specialist Paramedic

PGD- Patient Group Direction

NIAS- Northern Ireland Ambulance Service

APP- Advanced Paramedic Practitioner

## USA

AL - Alabama

CAAS - Commission on Accreditation of Ambulance Services

CNA - Certified Nursing Assistant

CO - Colorado

EMS - Emergency Medical Services

ER - Emergency Room

IBSC - International Board for Specialty Certification

NC - North Carolina

MS - Mississippi

RN - Registered Nurse

SC - South Carolina

TX - Texas

### Appendix- Survey questions:

Q1 - What county/state/service, country (jurisdiction) this survey relates to. (Please be as specific as possible e.g., country/state/county/service)

Q2 - Please outline the population characteristics related to the jurisdiction that this community paramedicine programme serves (e.g., density, social issues, geography)

Q3 - Please outline the model of service delivery used (e.g., proactive, reactive).

Q4 - Please outline the scope of role (scope of practice) undertaken by community paramedics in your setting (4):

Enhanced physical examination and history	Phlebotomy	Arterial or venous blood gas sampling	Urinalysis	Peak flow
Spirometry	Wound care and wound closure	Local and regional anaesthesia	Urinary Catheterisation	Splinting and plastering
Dislocation assessment/management	Multiple system assessments including home assessments	Administer medications (beyond non-specialist role)	Assisting hospital staff at particular times	Providing health cover
Chronic disease management	Health promotion activities	Health monitoring	Referrals to other specialties	Carry out and interpret diagnostic tests
Refer patients to social care services	Directly admit to specialist units	Investigate factors underlying the excessive use of acute care	Interface with primary care	Palliative care management
Radiology interpretation	Sonography	Otoscopy	Ear Nose and Throat (ENT) foreign body removal	Medication Prescribing

Q5 - Please outline:

*-Minimum education requirements required to enter a community paramedic programme*

*-Minimum experience required to enter community paramedic role (if relevant)*

*-Minimum education requirements to commence practice as a community paramedic*

Q6 - Please outline what clinical supervision requirements are in place for the community paramedicine role.

Q7 - Please outline the clinical governance and other relevant structural or organizational supports put in place around the community paramedicine role

Q8 - Please outline whether there is integration with primary care in your programme and to what extent:

Q9 - Please outline if the community paramedics in the programme undertake a rotational\* staffing model: *\*Rotational means do your community paramedics routinely rotate in and out of the community paramedic programme role, e.g. rotate through time in community paramedic role, then time in traditional emergency response role, then perhaps time in dispatch or communications in a consistent rotational manner)*

Q10 - What barriers have the programme faced across implementation and delivery?

Q11 - What have been the key drivers for change in your programme?

Q12 - If available please outline outcome data gathered on the community paramedicine role. These can be internal reports freely available, links to relevant published literature or expert knowledge. If there are any freely available internal reports, links to relevant published literature, or conference pieces that relate to your programme please provide links below or alternatively request a member of the research team to get in contact in order to obtain.

Q13. For an organisation looking to introduce a community paramedicine programme do you have any important points from your experience they should consider? Please feel free to also outline any further comments that you feel may be relevant to this exercise

Table 1- Jurisdiction and programme summary

Programme Contact	Jurisdiction- Programme
<b>Australia</b>	
<b>Jason Bendall</b>	New South Wales- NSW Ambulance Service
<b>Alex Thompson</b>	Queensland - Queensland Ambulance Service
<b>Angela Martin</b>	South Australia- South Australia Ambulance Service
<b>Andrew Noble</b>	South Australia- South Australia Ambulance Service- Adelaide Extended Care Programme (ECP)
<b>David Jaensch</b>	South Australia- South Australia Ambulance Service- Community Paramedic Programme
<b>Anthony Carnicelli</b>	Tasmania- Ambulance Tasmania
<b>Ross Salathiel</b>	Victoria- Ambulance Victoria
<b>Canada</b>	
<b>Ryan Kozicky</b>	Alberta
<b>Jennie Helmer</b>	British Columbia- BCEHS
<b>Jodi Possia</b>	Manitoba
<b>Megan Carey</b>	Newfoundland and Labrador
<b>Barb Tierney</b>	Ontario, County of Renfrew Paramedic Service
<b>Jeremy Measham</b>	Prince Edward Island, Island EMS
<b>Sherri Jule</b>	Saskatchewan
<b>Finland</b>	
<b>Tuija Rasku</b>	Finland
<b>Joonas Hänninen</b>	Southwest Finland
<b>Ireland</b>	
<b>Ann McDermott</b>	Ireland, Dublin and surrounding counties
<b>New Zealand</b>	
<b>Jacinta Rangi</b>	New Zealand- St Johns Ambulance Service
<b>UK</b>	
<b>Robert Whelan</b>	Cheshire, Merseyside, Greater Manchester, Lancashire and Cumbria- North West Ambulance Service
<b>Ajay Bhatt</b>	London
<b>Helen King</b>	London, Kensington and Chelsea- Rapid Response Team, Community Independence Service
<b>Caroline French</b>	Northern Ireland



<b>Callum Johnston</b>	Scotland
<b>Andy Swinburn</b>	Wales
<b>USA</b>	
<b>Reuben Farnsworth</b>	Colorado/Delta County/Delta County Ambulance District
<b>Aaron Hinson</b>	Florida- Seminole County City of Sanford EMS
<b>John Riggs</b>	Gulf of Mexico (AL/MS/LA/TX)- Off-shore / Remote services.
<b>Sarah Rivenbark</b>	North Carolina- Wilmington
<b>Alinda Bailey</b>	North Carolina/Fayetteville- Cumberland County EMS
<b>Calvin Cassidy</b>	South Carolina- Marlboro County EMS
<b>Austin Pace</b>	South Carolina- Lexington County EMS
<b>Brandon Pate</b>	Texas- MedStar Mobile Healthcare

Table 2- Scope of practice

Jurisdiction	Enhanced physical examination and history	Plebotomy	Arterial or venous blood gas sampling	Urinalysis	Peak flow	Spirometry	Wound care and wound closure	Local and regional anaesthesia	Urinary Catheterisation	Splinting and plastering	Dislocation assessment/management	Multiple system assessments including	Administer medications (beyond non specialist)	Assisting hospital staff at particular times	Providing health cover	Chronic disease management	Health promotion activities	Health monitoring	Referrals to other specialties	Carry out and interpret diagnostic tests	Refer patients to social care services	Directly admit to specialist units	Investigate factors underlying the excessive	Interface with primary care	Palliative care management	Radiology interpretation	Sonography	Otoscopy	Ear Nose and Throat (ENT) foreign body	Medication Prescribing
New South Wales- NSW Ambulance Service	✓ Yes	✗ No	✗ No	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✗ No	✗ No	✗ No	✓ Yes	✗ No	✓ Yes	✓ Yes	✗ No	✗ No	✓ Yes	✓ Yes	✗ No	✗ No	✓ Yes	✗ No	✗ No	✗ No
Queensland - Queensland Ambulance Service	✓ Yes	✗ No	✗ No	✗ No	✗ No	✗ No	✓ Yes	✓ Yes	✗ No	✗ No	✓ Yes	✓ Yes	✗ No	✗ No	✗ No	✓ Yes	✗ No	✗ No	✓ Yes	✗ No	✓ Yes	✗ No	✗ No	✗ No	✓ Yes	✗ No	✗ No	✗ No	✗ No	✗ No
South Australia- Extended Care Program (ECP)	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✗ No	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✗ No	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✗ No	✓ Yes	✓ Yes	✓ Yes	✗ No	✓ Yes	✗ No	✓ Yes	✗ No	✓ Yes	✓ Yes	✓ Yes	✗ No
South Australia- Community Paramedic Program	✓ Yes	✓ Yes	✗ No	✗ No	✗ No	✗ No	✓ Yes	✗ No	✗ No	✗ No	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✗ No	✓ Yes	✓ Yes	✓ Yes	✗ No	✓ Yes	✗ No	✓ Yes	✓ Yes	✓ Yes	✗ No	✗ No	✗ No	✗ No	✗ No
Tasmania- Ambulance Tasmania	✓ Yes	✗ No	✗ No	✓ Yes	✓ Yes	✗ No	✓ Yes	✓ Yes	✓ Yes	✗ No	✓ Yes	✓ Yes	✓ Yes	✗ No	✗ No	✗ No	✗ No	✗ No	✓ Yes	✗ No	✓ Yes	✗ No	✗ No	✓ Yes	✓ Yes	✗ No	✗ No	✓ Yes	✓ Yes	✗ No
Victoria- Ambulance Victoria	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✓ Yes	✗ No	✓ Yes	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No
Alberta	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✗ No	✓ Yes	✓ Yes	✓ Yes	✗ No	✗ No	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✗ No	✓ Yes	✓ Yes	✓ Yes	✗ No	✗ No	✓ Yes	✓ Yes	✗ No
British Columbia- BCEHS	✓ Yes	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✓ Yes	✗ No	✓ Yes	✗ No	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✗ No	✗ No	✗ No	✗ No	✓ Yes	✓ Yes	✗ No	✗ No	✗ No	✗ No	✗ No
Manitoba	✗ No	✓ Yes	✗ No	✓ Yes	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✓ Yes	✓ Yes	✓ Yes	✗ No	✗ No	✗ No	✓ Yes	✗ No	✓ Yes	✗ No	✓ Yes	✓ Yes	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No
Newfoundland and Labrador	✓ Yes	✓ Yes	✗ No	✓ Yes	✗ No	✗ No	✗ No	✗ No	✓ Yes	✗ No	✗ No	✓ Yes	✓ Yes	✓ Yes	✗ No	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✗ No	✗ No	✓ Yes	✓ Yes	✗ No	✗ No	✗ No	✗ No	✗ No
Ontario, County of Renfrew Paramedic Service	✗ No	✓ Yes	✗ No	✓ Yes	✗ No	✗ No	✗ No	✗ No	✓ Yes	✗ No	✗ No	✓ Yes	✓ Yes	✓ Yes	✗ No	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✗ No	✗ No	✓ Yes	✓ Yes	✗ No	✗ No	✗ No	✗ No	✗ No
Prince Edward Island, Island EMS	✗ No	✓ Yes	✗ No	✓ Yes	✗ No	✓ Yes	✓ Yes	✗ No	✗ No	✗ No	✗ No	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✗ No	✓ Yes	✓ Yes	✓ Yes	✗ No	✗ No	✓ Yes	✗ No	✗ No
Saskatchewan	✓ Yes	✓ Yes	✗ No	✓ Yes	✗ No	✗ No	✓ Yes	✗ No	✓ Yes	✗ No	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✗ No	✓ Yes	✓ Yes	✓ Yes	✗ No	✗ No	✗ No	✗ No	✗ No
Finland	✓ Yes	✗ No	✗ No	✓ Yes	✗ No	✗ No	✓ Yes	✗ No	✓ Yes	✗ No	✗ No	✓ Yes	✓ Yes	✓ Yes	✗ No	✓ Yes	✓ Yes	✗ No	✓ Yes	✗ No	✓ Yes	✗ No	✗ No	✓ Yes	✗ No	✓ Yes	✗ No	✗ No	✓ Yes	✗ No
Southwest Finland	✗ No	✓ Yes	✓ Yes	✓ Yes	✗ No	✗ No	✓ Yes	✓ Yes	✓ Yes	✗ No	✓ Yes	✓ Yes	✓ Yes	✗ No	✗ No	✗ No	✓ Yes	✗ No	✓ Yes	✗ No	✓ Yes	✗ No	✓ Yes	✓ Yes	✓ Yes	✗ No	✗ No	✗ No	✗ No	✗ No
Ireland, Dublin and surrounding counties	✓ Yes	✓ Yes	✗ No	✓ Yes	✓ Yes	✗ No	✓ Yes	✓ Yes	✓ Yes	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No
New Zealand- St Johns Ambulance	✓ Yes	✓ Yes	✗ No	✓ Yes	✓ Yes	✗ No	✓ Yes	✓ Yes	✓ Yes	✗ No	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✗ No	✓ Yes	✗ No	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✗ No	✓ Yes	✓ Yes	✗ No	✓ Yes	✓ Yes	✓ Yes	✗ No
North West Ambulance Service	✓ Yes	✗ No	✗ No	✗ No	✓ Yes	✗ No	✓ Yes	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✓ Yes	✗ No	✓ Yes	✓ Yes	✓ Yes	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No
London	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✗ No	✓ Yes	✓ Yes	✗ No	✗ No	✗ No	✓ Yes	✓ Yes	✓ Yes	✗ No	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✗ No	✓ Yes	✗ No	✗ No	✓ Yes	✓ Yes	✓ Yes	✓ Yes
London, Community Independence Service	✓ Yes	✓ Yes	✗ No	✓ Yes	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✓ Yes	✗ No	✓ Yes	✗ No	✗ No	✗ No	✗ No	✗ No	✓ Yes	✓ Yes	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No
Northern Ireland	✓ Yes	✓ Yes	✗ No	✓ Yes	✓ Yes	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✓ Yes	✓ Yes	✗ No	✗ No	✓ Yes	✗ No	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✓ Yes	✗ No	✗ No
Scotland	✓ Yes	✓ Yes	✗ No	✓ Yes	✓ Yes	✗ No	✓ Yes	✓ Yes	✗ No	✗ No	✗ No	✓ Yes	✓ Yes	✓ Yes	✗ No	✗ No	✓ Yes	✗ No	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✗ No	✗ No	✗ No	✓ Yes	✓ Yes	✗ No
Wales	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✗ No	✗ No	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✗ No	✓ Yes	✓ Yes	✗ No	✗ No	✓ Yes	✓ Yes	✓ Yes
Colorado/Delta County/Delta County Ambulance District	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✗ No	✓ Yes	✗ No	✗ No	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✗ No	✓ Yes	✓ Yes	✗ No	✗ No	✗ No	✓ Yes	✗ No	✗ No
Florida- Seminole County City of Sanford EMS	✓ Yes	✗ No	✗ No	✗ No	✗ No	✗ No	✓ Yes	✗ No	✗ No	✗ No	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✗ No	✗ No	✗ No	✓ Yes	✓ Yes	✓ Yes	✗ No	✗ No	✗ No	✗ No	✗ No
Gulf of Mexico (AL/MS/LA/TX)- Off-shore / Remote services.	✓ Yes	✗ No	✗ No	✓ Yes	✗ No	✗ No	✓ Yes	✓ Yes	✗ No	✗ No	✗ No	✗ No	✓ Yes	✓ Yes	✓ Yes	✗ No	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✓ Yes	✗ No	✗ No
North Carolina- Wilmington	✓ Yes	✓ Yes	✗ No	✓ Yes	✗ No	✓ Yes	✓ Yes	✗ No	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✗ No	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✗ No	✓ Yes	✓ Yes	✗ No	✗ No	✗ No	✓ Yes	✗ No	✗ No
North Carolina/Fayetteville- Cumberland County EMS	✓ Yes	✓ Yes	✓ Yes	✗ No	✗ No	✓ Yes	✗ No	✗ No	✗ No	✗ No	✗ No	✓ Yes	✓ Yes	✓ Yes	✗ No	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✗ No	✗ No	✗ No	✗ No	✗ No
South Carolina- Marlboro County EMS	✓ Yes	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✓ Yes	✗ No	✓ Yes	✗ No	✓ Yes	✓ Yes	✗ No	✗ No	✗ No	✓ Yes	✗ No	✗ No	✗ No	✗ No	✗ No	✓ Yes	✗ No	✗ No	
South Carolina- Lexington County EMS	✓ Yes	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No	✓ Yes	✗ No	✗ No	✓ Yes	✗ No	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✗ No	✗ No	✗ No	✗ No	✗ No	✗ No
Texas- MedStar Mobile Healthcare	✓ Yes	✓ Yes	✗ No	✓ Yes	✗ No	✗ No	✓ Yes	✗ No	✓ Yes	✗ No	✗ No	✓ Yes	✓ Yes	✗ No	✗ No	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✓ Yes	✗ No	✓ Yes	✓ Yes	✓ Yes	✗ No	✗ No	✗ No	✗ No	✗ No

Table 3- Model of service delivery

Jurisdiction	Model of service delivery used
<b>Australia</b>	
New South Wales- NSW Ambulance Service	Reactive
Queensland - Queensland Ambulance Service	Reactive
South Australia- South Australia Ambulance Service- Adelaide Extended Care Programme (ECP)	Reactive
South Australia- South Australia Ambulance Service- Community Paramedic Programme	Proactive
Tasmania- Ambulance Tasmania	Reactive
Victoria- Ambulance Victoria	Proactive
<b>Canada</b>	
Alberta	Proactive
British Columbia- BCEHS	Proactive
Manitoba	Proactive
Newfoundland and Labrador	Proactive
Ontario, County of Renfrew Paramedic Service	Proactive
Prince Edward Island, Island EMS	Proactive
Saskatchewan	Proactive
<b>Finland</b>	
Finland	Proactive
Southwest Finland	Reactive
<b>Ireland</b>	
Ireland, Dublin and surrounding counties	Reactive
<b>New Zealand</b>	
New Zealand- St Johns Ambulance Service	Reactive
<b>UK</b>	
Cheshire, Merseyside, Greater Manchester, Lancashire and Cumbria- North West Ambulance Service	Reactive
London	Reactive
London, Kensington and Chelsea- Rapid Response Team, Community Independence Service	Proactive



Northern Ireland	Proactive
Scotland	Proactive
Wales	Proactive
<b>USA</b>	
Colorado/Delta County/Delta County Ambulance District	Proactive
Florida- Seminole County City of Sanford EMS	Both
Gulf of Mexico (AL/MS/LA/TX)- Off-shore / Remote services.	Proactive
North Carolina- Wilmington	Proactive
North Carolina/Fayetteville- Cumberland County EMS	Proactive
South Carolina- Marlboro County EMS	Proactive
South Carolina- Lexington County EMS	Proactive
Texas- MedStar Mobile Healthcare	Proactive

Table 4- Education requirements

Jurisdiction	Minimum education requirements required to enter a community paramedic programme	Experience required to enter community paramedic role	Minimum education requirements to commence practice as a community paramedic
<b>Australia</b>			
<b>New South Wales- NSW Ambulance Service</b>	Bachelor degree in Paramedicine Programme	2 years	In-service training
<b>Queensland - Queensland Ambulance Service</b>	Bachelor degree in Paramedicine Programme	2 years to be competitive	Postgraduate certificate
<b>South Australia- South Australia Ambulance Service- Adelaide Extended Care Programme (ECP)</b>	Bachelor of Paramedicine Postgraduate diploma- Intensive care	2 years post qualification as ICP	In-service training
<b>South Australia- South Australia Ambulance Service- Community Paramedic Programme</b>	Bachelor of Paramedicine Postgraduate diploma- Intensive care	10 years experience to be competitive	In-service training

<b>Tasmania- Ambulance Tasmania</b>	Bachelor of Paramedicine Postgraduate diploma- Intensive care	2 years post qualification as ICP	In-service training
<b>Victoria- Ambulance Victoria</b>	Bachelor degree in Paramedicine Programme	5+ years Paramedic Experience	None
<b>Canada</b>			
<b>Alberta</b>	Advanced Care Paramedic certification	None	In-service training
<b>British Columbia- BCEHS</b>	PCP-IV level	None	PCP-IV and successful completion of CP programme
<b>Manitoba</b>	Primary Care Paramedic	2 years of ACP experience	Advanced Care Paramedic (ACP)
<b>Newfoundland and Labrador</b>	Primary care or advanced care paramedic	2 years experience	In-service training
<b>Ontario, County of Renfrew Paramedic Service</b>	Advanced Care Paramedic	None	None
<b>Prince Edward Island, Island EMS</b>	Advanced Care Paramedic certification	None	Certificate in CP
<b>Saskatchewan</b>	Primary Care Paramedic (PCP)	None	None
<b>Finland</b>			
<b>Finland</b>	Bachelor of prehospital care, emergency care, registered nurse	5 years of experience in EDs or ambulance units	None
<b>Southwest Finland</b>	Finnish nurse-paramedic bachelor's degree (4 years university education/240 credits)	No strict experience requirements.	1-week training course.
<b>Ireland</b>			
<b>Ireland, Dublin and surrounding counties</b>	Qualified Paramedic/advanced	5 years	PGDip
<b>New Zealand</b>			
<b>New Zealand- St Johns Ambulance Service</b>	Bachelor's degree in paramedicine and registered	None	Internal course
<b>United Kingdom</b>			
<b>North West Ambulance Service</b>	Bachelor of Science	5 years experience	BSc

<b>London- APP-UC</b>	Bachelor's degree and a registered as a paramedic.	5 years experience	MSc Advanced Clinical Practice + Independent Prescribing
<b>London, Community Independence Service</b>	Bachelor's degree and a registered as a paramedic.	None	None
<b>Northern Ireland</b>	Recognition of prior learning. Paramedic training course in my case.	Minimum of 5 years post Paramedic training.	Enrolled in an advanced practice course. MSc in advanced Paramedic practice
<b>Scotland</b>	Bachelor of Science	3 years post-registration experience as a Paramedic/nurse	Post Grad Cert
<b>Wales</b>	Level 6	2-3 years post-registration	PGDip on a pathway to MSc and prescribing
<b>USA</b>			
<b>Colorado/Delta County/Delta County Ambulance District</b>	Current Paramedic or Registered Nurse credential	10 years' experience in 911 or an ER setting prior is preferred	Complete a class which may range from 24 hrs - to 1 semester in Community Paramedicine Pass the IBSC Community Paramedic Exam.
<b>Florida- Seminole County City of Sanford EMS</b>	Current Paramedic Qualification	Minimum 1 years' experience as certified paramedic	10–20-hour preceptor supervision
<b>Gulf of Mexico (AL/MS/LA/TX)- Off-shore / Remote services.</b>	Generally, completion of an approved curriculum but most providers have at least a technical degree.	Minimum of 3-5 years of experience with most to be competitive having in excess of 10 or more years	None
<b>North Carolina- Wilmington</b>	Current Paramedic Qualification	5 years	Must complete an approved Community Paramedic Programme.
<b>North Carolina/Fayetteville- Cumberland County EMS</b>	State certified paramedic through an Associate's degree preferred, certified Community Paramedic certification within 1 year of hire	3 years with current service or 5 years with outside service	State certified paramedic through an Associate's degree preferred, certified Community Paramedic certification within 1 year of hire
<b>South Carolina- Marlboro County EMS</b>	Certification in CP	2 years 911 experience as a paramedic	Above listed requirements plus a recommendation from the medical director
<b>South Carolina- Lexington County EMS</b>	Completion of paramedic education programme	3 years or more functioning as a lead paramedic in a high volume 911 EMS service.	Completion of approved community paramedic or mobile integrated healthcare training Associates degree or higher in a related field
<b>Texas- MedStar Mobile Healthcare</b>	Paramedic certification.	Preferred 2 years experience as an advanced paramedic.	Paramedic certification. MIH course completion certificate. Field training shifts, Successful completion of a medical director interview.

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