Centre for Rural Health
The University of Aberdeen and the University of the Highlands & Islands working in partnership
Research and Policy

Evaluation of the Introduction of a Community First Responder Scheme in Rannoch and Tummel

Final Report

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Glossary

A&E - Accident and Emergency

AEDs - Automated External Defibrillators

ECCT - Extended Community Care Team

CFR - Community First Responder

CRH - Centre for Rural Health

GP - General Practitioner

NHS QIS - NHS Quality Improvement Scotland

SAS - Scottish Ambulance Service

OOH - Out of Hours

EXECUTIVE SUMMARY

Background

Community First Responders

Within Scotland's remote and rural geography there are communities which experience challenges in accessing local NHS healthcare services. Aspects of existing service provision can be exclusionary, especially within the delivery of emergency healthcare, where rapid access can be crucial to patient outcome. Community First Responders (CFRs) are volunteers who are trained to provide basic life saving treatment as first person on the scene for 999 calls, prior to the arrival of ambulance service. Community first responder schemes, although relatively new to Scotland, have been established in other countries including England, Canada and the United States for several years. The role of CFRs is, to date, unevaluated in the Scottish context.

Rannoch and Tummel First Responders Evaluation

Tayside Health Board approached the Centre for Rural Health to provide an independent evaluation of service developments in emergency health care in the Rannoch and Tummel area during 2009-2010. This report documents the evaluation of the introduction of a community first responder scheme in Rannoch and Tummel. The evaluation period was from March 2009 to December 2010. The evaluation does *not* aim to evaluate the safety and/or efficacy of the scheme itself, rather its focus is on the introduction of an additional method of service delivery to the Rannoch and Tummel community.

Methods

The research team at the Centre for Rural Health adopted a mixed methods approach to the evaluation. Methods included:

- interviews with key stakeholders,
- community questionnaires to gather the views of the wider community,
- focus group sessions with the CFR volunteers prior to the scheme commencing and repeated 12 months thereafter,
- a patient survey in the community of those who had been attended to by a first responder, and,
- the collection of activity data from the Scottish Ambulance Service data resources.

Findings

- During its first year the CFR scheme has become established as an additional element of emergency medical response in the area.
- According to the community questionnaire, support for a CFR scheme in Rannoch & Tummel at the time of its introduction was mixed. One year later support remained mixed, although it should be noted that response rates for the questionnaire dropped from 44% to 31% between the first and second survey. In the second survey, more people agreed that the scheme contributes to service delivery in the area, although the majority who responded still had concerns about the safety of the scheme.
- The majority of respondents to surveys in 2009 (73%) and 2010 (80%) believed GPs from the local medical practice should be available 24 hours a day, 7 days a week, in case there is a healthcare emergency.
- Rannoch and Tummel appears to be a resilient community (by measures used); the CFR scheme does not appear to have impacted on community resilience within the time period of study.
- The CFRs have given their own time to training (to intermediate level), and to delivering the service. Volunteers reported that they had joined the scheme in order to 'give something back' to their community.
- Some members of the wider community have been committed to opposing the introduction of the scheme and this should not be overlooked.
- CFRs were called upon to attend eight 999 calls between 1st October 2009 and 3^{1st} September 2010. The response time varied between 6 and 32 minutes, and this was in all cases quicker than the ambulance response.

Recommendations

- Clearer guidance about the specific role CFRs play in emergency care would be beneficial to the Rannoch and Tummel community.
- While the Scottish Ambulance Service have ongoing day-to-day responsibility for the running of the scheme, NHS Tayside and SAS should continue to work together to strengthen support for the community first responders and their place in the delivery of health services in the area.
- NHS Tayside, SAS and the community should aim to find new ways of communicating and working together if health service delivery issues are to be resolved.

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1 BACKGROUND

1.1 What are Community First Responders?

The Community First Responder (CFR) role is a relatively new role within health service provision in Scotland. Local adults (they are not CFR's yet) volunteer to be a part of the team who undertake training to provide local basic life saving treatment as first person on the scene for 999 calls, following the dispatch and prior to the arrival of the ambulance service. They are intended to provide support after an ambulance is called and before it arrives, especially for patients living in difficult to access areas. First Responders in Scotland are trained in the use of automatic external defibrillators, oxygen therapy and other emergency skills, including how to assist in life threatening situations such as heart or asthma attack.

1.2 Types of Community First Responder Schemes

CFR schemes have developed internationally and emerging evidence suggests that trained community response during a healthcare emergency can have an impact on patient survival rates. Particular evidence relates to the onset of cardiac arrests[1,2]. A systematic chain of events during the crucial few minutes of an emergency response including early access, early resuscitation, early defibrillation and early advanced life support has proven to be an essential factor in increasing an individual's chance of survival of cardiac arrest in the community[3]. Survival from defibrillation within three minutes of ventricular tachycardia/fibrillation (VT/VF) onset can be 70- 80%. In non-VT/VF arrest and VT/VF arrest without a defibrillator survival using CPR can be as low as 2-8%. This can increase to 20-30% in communities offering bystander CPR and rapid arrival of trained personnel[4]. Research shows that trained lay persons can use community based Automated External Defibrillators (AEDs) safely and effectively[5] and first responder schemes can be an effective strategy at contributing to the reduction of cardiac arrest deaths[6]. Figures such as these have prompted the development of first responder schemes.

In Australia it has become common for the emergency services to incorporate volunteers. Volunteer ambulance drivers finance their own training and communities

purchase ambulances and equipment when required, enabling remote and rural communities to enhance and sustain their urgent care systems[7]. Research conducted on these schemes identified that a *"mutual valuing"* between the community and local health practitioners developed, which in this case, engendered balance between service delivery and community needs[8]

In England, CFR schemes have been shown to be beneficial to their local communities, building links with the ambulance service and positively motivating people in the community regarding their health[9]. These CFR models differ in the type of call a CFR will attend, and the level of additional clinical training volunteers have received.

In Scotland there are now more than 93 active CFR schemes in place (see table 1 below) involving approximately one thousand volunteers[I]. The schemes have been established in a variety of settings including accessible rural areas, sparsely populated remote areas, urban locations, and static sites such as shopping centres. Most CFR schemes in Scotland are organised/funded by the Scottish Ambulance Service (SAS), but some are led or work in partnership with other agencies, for example, the Police Force, Fire Brigade Services and British Red Cross.

CFR schemes across Scotland are at different stages of development. Some schemes are newly established within their communities, while others are well-integrated into the community and service alike. Some schemes have had difficulties setting up for a variety of reasons, or have experienced opposition to the concept within their communities, due to the fear that such volunteer schemes are the 'thin end of a wedge' that will result in the eventual withdrawal of other services. Such volunteer schemes are encouraged by government policy, both in Scotland and the rest of the UK and, as such, it is important to look at how they are introduced within the communities they serve.

[I] Details provided by the Scottish Ambulance Service - July 2010.

Table 1. Active Community First Responder Schemes in Scotland[II]

Table 1 below details the CFR schemes which are active across Scotland

East Central			
Ardeonaig	*Carnoustie*	Comrie	Dunblane
East Neuk	Falkirk	Kinloch Rannoch	Laurencekirk
Overgate Shopping Centre, Dundee	*RAF Leuchars*	*Trossachs Search & Rescue Team*	*Tulliallan Police College*
North (East)			
Aberdeen	Aberdeen - Trinity Shopping Centre	*Grampian Fire & Rescue - Braemar*	*Grampian Fire & Rescue - Maud*
Huntly	Inverurie	Newmachar	Pitmedden
RAF Lossiemouth	Strathdon & Towie (Lonach)	Stonehaven	Tarland
Westhill			
North (Islands)			
Harris - Borve (Machair)	Harris - Geocrab	Harris - Leverburgh	Lewis - Bernera
Lewis - Breasclete	Lewis - Carloway	Lewis - Ness	Lewis - Shawbost
Lewis - South Lochs	Lewis - Uig	Orkney - Graemsay	Orkney - Stromness
North Uist - Bayhead	Shetland, North - Brae		
North (West)			
Achiltibue	Beauly	Cannich	Cromarty
Dounreay	Fort Augustus	Fort William	Helmsdale
Kinbrace	Kirkhill	Kyle of Lochalish	Muir of Ord
Newtonmore	Rosehall	Spean / Roy Bridge	Thurso
Torridon			
South East			
Ayton	Bathgate	Boness	Dunbar
Eyemouth	Linlithgow	Newcastleton*	North Berwick
Oldhamstocks	Penicuik	Port Seaton	Roslin
South Queensferry	St.Abbs	Stenton	West Linton
South West			
Carsphairn	Dalmally	Drummore	Garlieston & Sorbie
Isle of Luing	Isle of Whithorn	Largs	Lowther Hills
North Arran	Port William	Southerness	*Strathclyde Police - Dunoon*
Strathclyde Police - Rothesay	Troon - St Andrews First Aid		
West Central			
Glasgow - Central Railway Station	Glasgow - Parkhead Forge Shopping Centre	Glasgow - The Fort Shopping Centre	Lesmahagow
Milngalvie	Stonehouse	Lanarkshire/Glasgow Relief	

Notes
Co-responder schemes are highlighted in green italics

[II] Information on schemes provided by the Scottish Ambulance Service - July 2010

1.3 The Emergence of the Community First Responder Scheme in Rannoch and Tummel

Delivery of health services in the Rannoch & Tummel community has been the subject of debate within the community for a number of years. Discontent has centred around the decision to allow the local general practice to opt out of out-of-hours (OOH) service provision.

In August and September 2008, public consultation by NHS Tayside with the Rannoch & Tummel community highlighted a number of issues with the provision of emergency services in the area. Service providers were tasked to:

- Improve ease of access to local, responsive emergency services
- Reduce potential risks to patients awaiting emergency services response
- Complement safe and effective OOH services [10]

Four options for the Rannoch & Tummel area were presented at a public meeting, by NHS Tayside in October 2008:

Option 1: The status quo (response from SAS and out of hours service but no locally based GP at night)

Option 2: The provision of a GP out of hours service ensuring 24 hour, seven day provision located in Kinloch Rannoch.

Option 3: Provision of a community-based paramedic operating out of hours

Option 4: Support to establish a community first responder resource out of hours to provide an initial response to emergency situations whilst awaiting the arrival of the ambulance service.

The decision was taken by NHS Tayside in 2009 to adopt Option 4 although there was opposition to this decision from within the community. A local reference group was set up and the CFR Scheme commenced in Rannoch & Tummel in late summer of 2009.

During the course of the evaluation, The Scottish Government Health and Sport Committee undertook an inquiry into OOH healthcare provision in rural areas of Scotland. There were many submissions of evidence about the Rannoch and Tummel area and these illustrated differing perspectives on the issue of OOH and emergency service provision.

The inquiry report, published in April 2010, expressed concern that trust and confidence in OOH services had been lost. It recommended that OOH services should become more integrated. It also recommended that NHS boards conduct meaningful consultation and engagement with communities, and create arrangements so that OOH services meet the needs of these communities.

1.4 Aims and Objectives of the Evaluation

The aim of this study was to evaluate the introduction of a CFR scheme in the Rannoch and Tummel area, over the period March 2009 to December 2010. The study also investigated views on community engagement in the process, and measured community resilience before and after the launch of the CFR scheme. The evaluation did not aim to evaluate the safety and/or efficacy of the scheme itself, rather its focus is on the introduction of a new method of service delivery to the Rannoch and Tummel community.

Project Aims

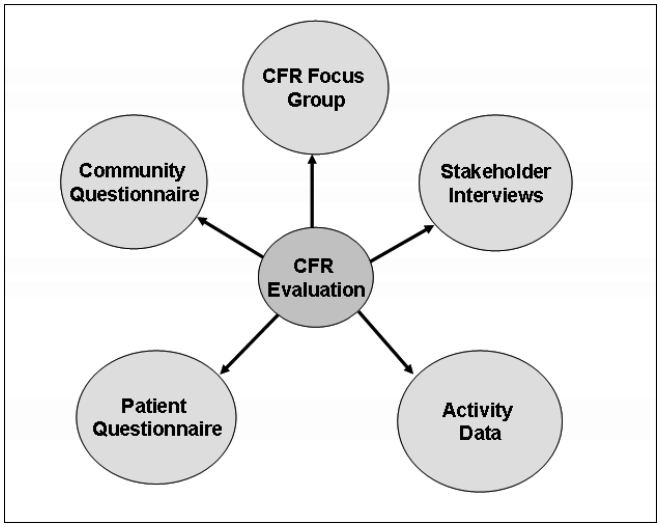
To answer the following research questions:

1. What support is there for a CFR scheme in Rannoch & Tummel, at the time of its introduction and one year on?
2. What are the views of CFRs themselves, at the time of its introduction and one year on?
3. What are the perceived benefits and limitations of the CFR scheme?
4. Is the CFR scheme impacting on community resilience?
5. Can the role of the CFRs in Rannoch & Tummel expand over time?
6. Does the existence of the CFR scheme lead to other community initiatives?

2 METHODS

This evaluation adopted mixed qualitative and quantitative methods to evaluate the introduction of the CFR scheme. This included key stakeholder interviews, questionnaires to gather the views of the wider Rannoch and Tummel community, patient questionnaires, focus group discussions with first responder volunteers and the collection of activity data from routine data sources within the Scottish Ambulance Service.

Table 2. Methods used in the Evaluation



2.1 Stakeholder Interviews:

A total of six confidential interviews were conducted with community members in January and February 2010. Interviews lasted 25-75 minutes and were recorded, with participant's consent and transcribed verbatim. Potential interviewees were identified using a number of pre-existing community groups. Questions focused on opinions and experiences of OOH cover in Rannoch & Tummel and opinions and experiences about aspects of the CFR scheme. The aim was to ascertain the history and context of service provision and community views.

2.2 Community Questionnaire

To gather views from the wider community the project team designed and administered an anonymous questionnaire. The sample included all adults on the

electoral register within the Rannoch and Tummel area. This questionnaire intended to capture community views about the introduction of the CFR scheme in Rannoch and Tummel, current service delivery and community resilience.

The questionnaire was specifically designed for the evaluation, including an adaptation of General Household Survey GHS – Social Capital Battery[III] which is designed to measure resilience and social capital. The research team also aimed to gauge how strongly the respondents agreed / disagreed with issues relating to the introduction of the first responder scheme. "Scenario" type questions were also included in the questionnaire, where the community was asked to state what action they would subsequently take in the face of a healthcare emergency, as well as questions that asked the community to what extent they agreed or disagreed with certain statements. Although the research team were not tasked with evaluating the provision of OOH services in Rannoch & Tummel, we did ask the community their feelings about this to gather an overall understanding of their views. This was included since initial research illustrated a strong overlap in OOH and emergency response issues for community members.

A total of 606 questionnaires were distributed to the community in June 2009. To ensure confidentiality the Centre for Rural Health posted sealed copies of the questionnaires to NHS Tayside, who then distributed them on behalf of the researchers, obtaining relevant contact addresses from the electoral register. There were no reminders sent, however, reminder posters were distributed around the community in July 2009.

A further questionnaire was then produced and distributed using the same procedure in October 2010 (once the CFR scheme had been in place and active for just over 12 months). The aim of this questionnaire was to attempt to compare the before and after views of the community, given the scheme had been running for more than 12 months. Again this was an anonymous questionnaire and no reminders were sent. A total of 606 questionnaires were distributed in 2010, as the electoral register remained unchanged over the period of study.

[III] http://www.statistics.gov.uk/ssd/surveys/general_household_survey.asp

2.3 Focus Groups

Early in the implementation phase of the CFR scheme (November 2009) researchers conducted a focus group with CFR volunteers to obtain their views about joining the Rannoch & Tummel CFR scheme, to discuss training and support and assess how prepared individuals felt about undertaking this voluntary role. This focus group was then repeated early November 2010, to discuss with first responders the developments of the scheme and their actual experience of volunteering and attending to patients.

2.4 Patient Questionnaire

A patient questionnaire was designed and distributed in December 2010, to ensure that as many patients could be surveyed as possible. Those who received the questionnaire were patients who had been attended to by a CFR during the scheme's time of operation. The aim of the questionnaire was to gain feedback about patients' experiences of being attended to by a CFR.

The questionnaire documented what happened during and after the call out, and ascertained the patient's (or their carer's) view of the appropriateness of the care received. Again, this questionnaire was completely anonymous as it was distributed by the local GP practice on behalf of the researchers. The Scottish Ambulance Service confirmed with researchers that during the yearly period (1st October 2009- 30th September 2010) only eight call outs were attended to by a CFR, hence the number of questionnaires distributed was small.

2.5 Activity Data

The research team collected routine activity data from the Scottish Ambulance Service, for the first year of the CFR scheme, in order to ascertain activity and case mix of contacts for the area. Each first responder contact was documented on Scottish Ambulance Service "Patient Care Record" which details information such as response time of call, initial assessment, and presenting complaint. This information was requested of the ambulance service in an anonymous format.

3 FINDINGS

3.1 Initial Survey 2009

Researchers have previously reported the findings of this initial survey which was conducted before the first responder scheme was established. These findings were presented in evidence to the Scottish Parliament inquiry, and have been shared with the community.

A total of 266 of 606 questionnaires were returned, achieving a response rate of 44% A large amount of free text responses were also gathered through the questionnaire.

Of those questionnaires returned[IV], 4% of respondents were 18-34 years old, 21% were 35-49, 34.5% were 50-64, and 40.5% were 65+. Of respondents, 73% had previously worked or currently work in the area, 49% were retired, and just over half (53%) have lived in Rannoch & Tummel more than 20 years. Over 40% of respondents had 10 or more close friends in the area.

Rannoch and Tummel Community

When asked, respondents reported positively about living in the Rannoch & Tummel area. 97% agreed that they enjoy living in the area, 82% agreed that they feel part of the community, and 69% felt supported in the community. When asked whether they could influence decisions that affect the community, feelings were mixed, 25% agreed, 27% disagreed and 48% were neutral.

Health and Health Service Activity

Overall, 69% of respondents rated their health as good (or very good), 8% rated it poor (or very poor) and 23% rated their health as average. 72% of respondents stated they had been seen or had been visited by a GP, 46% by a nurse and 15% had called NHS 24 in the last year. Nine respondents stated they had made a 999 emergency call in the last year.

[IV] Due to the small number of missing responses to individual questions, percentage figures are based on "valid percent" and therefore exclude any missing data.

Views about the CFR Scheme and Medical Emergencies

Of responses received, six respondents had volunteered to join the CFR scheme, and a further 27 indicated they may do so in future. Respondents were asked to agree or disagree to a number of statements and results are shown in the table below:

Table 3. Views of the CFR scheme and Emergency Medical Situations

	Disagree	Neutral	Agree
I think a CFR scheme would be good as an addition to the service	46%	18%	36%
In a life-threatening emergency, I would be satisfied to be seen by anyone who is appropriately trained and skilled	17%	15%	68%
I believe arrangements in place to deal with a healthcare emergency in the Rannoch & Tummel area are satisfactory	65%	11%	24%
I believe the provision of OOH cover for emergency healthcare situations is the most important problem the Rannoch & Tummel community have to deal with	8%	14%	78%
I feel that NHS Tayside listens to our community	56%	29%	15%
I have had the opportunity to influence the decision to have a community first responder scheme for R&T	50%	33%	17%
Currently, I have concerns about the safety of a community first responder scheme for R&T	17%	18%	65%
I believe GPs from the local GP practice should be available 24 hours a day, all week, in case there is a healthcare emergency in R&T	14%	13%	73%

Note: Data based on valid percentages (excludes missing responses)

In 2009, the 266 people in Rannoch and Tummel who responded to the survey provided a range of views about the scheme. For example, 36% of respondents agreed, 18% were neutral, and 46% disagreed that the scheme would be good *as an addition* to existing service. 65% of respondents had concerns about safety of the scheme, and 73% agreed that GPs from the local practice should be available 24 hours a day in case of emergency. Only 15% of respondents felt NHS Tayside listened to their views. This initial survey provided a baseline; the survey was then repeated a year later following the active start of the CFR Scheme.

3.2 Repeat Survey 2010

Results

A total of 189 of 606 community questionnaires were returned in 2010, achieving a response from just under a third of the community (31%). This response rate was a decrease of 13% on the previous year.

Rannoch and Tummel Community

Responses to questions relating to community resilience were similar in 2010 to that of 2009. Respondents reported positively about living in the Rannoch & Tummel area, 94% agreed that they enjoy living in the area,
81% agreed that they felt part of the community, and 63% felt supported in the community. When asked whether they could influence decisions that affect the community, feelings in 2010 remained mixed, 27% agreed, 28% disagreed and 45% were neutral. This illustrated that community resilience in the Rannoch & Tummel community remained high by these measures, but was relatively unaffected by the introduction of the CFR scheme in its first year.

Health and Health Service Activity

There was little change in how the community rated their overall health between 2009-2010, with 70% of respondents rating their health as good (or very good), only a 1% percentage increase from 2009, 8% rated it poor or very poor (the same as 2009) and 22% rated their health as average (1% decrease from 2009).

Respondents were asked what they would do in the face of a medical emergency both during the day and at night, when experiencing either chest pain or a broken leg. On a week day just over half (53%) of respondents stated they would call their GP with a suspected broken leg and 56% would call if experiencing chest pain. Only 12% would call 999 during the day with a suspected broken leg with 29% calling 999 with chest pain. In the evening the majority of respondents (73%) would call 999 if experiencing chest pain, but respondents reported mixed views about how they would act with a suspected broken leg: 48% calling 999, 21% phoning NHS 24 and 24% going to A&E, 4% calling a family friend or neighbour and 3% (don't know / other).

Seventy per cent of respondents reported that they had seen or had been visited by a GP in the last year, 34% by a nurse, 10% had called NHS 24. A total of 39% reported being an out-patient in hospital in 2010, the same as 2009, and 16% an in-patient in 2010, 19% in 2009. Contact with the emergency services remained low; with 6 respondents reporting that they had made a 999 emergency call in the last year.

Views of the CFR Scheme and Medical Emergencies

Of responses received in 2010, three respondents had volunteered to join the CFR scheme, and a further 13 indicated they may do so in the future.

Respondents were again asked to agree or disagree to a number of statements in 2010 and results are shown in the table below:

	Disagree	Neutral	Agree
I think a CFR scheme would be good as an addition to the service	38%	22%	40%
In a life-threatening emergency, I would be satisfied to be seen by anyone who is appropriately trained and skilled	14%	11%	74%
I believe arrangements in place to deal with a healthcare emergency in the Rannoch & Tummel area are satisfactory	60%	16%	24%
I believe the provision of OOH cover for emergency healthcare situations is the most important problem the Rannoch & Tummel community have to deal with	12%	13%	75%
I feel that NHS Tayside listens to our community	54%	31%	15%
Currently, I have concerns about the safety of a community first responder scheme for R&T	9%	28%	63%
I believe GPs from the local GP practice should be available 24 hours a day, all week, in case there is a healthcare emergency in R&T	14%	6%	80%

Change 2009-10

	Disagree	Neutral	Agree
I think a CFR scheme would be good as an addition to the service	-8%	+4%	+4%
In a life-threatening emergency, I would be satisfied to be seen by anyone who is appropriately trained and skilled	-3%	-4%	+6%
I believe arrangements in place to deal with a healthcare emergency in the Rannoch & Tummel area are satisfactory	-5%	+5%	0%
I believe the provision of OOH cover for emergency healthcare situations is the most important problem the Rannoch & Tummel community have to deal with	+4%	-1%	-3%
I feel that NHS Tayside listens to our community	-2%	+2%	0%
Currently, I have concerns about the safety of a community first responder scheme for R&T	-8%	+10%	-2%
I believe GPs from the local GP practice should be available 24 hours a day, all week, in case there is a healthcare emergency in R&T	0%	-7%	+7%

There was a small difference in whether the community felt the first responder scheme was a good addition to the service, with a 4% increase in those agreeing it was a good addition to the service (40%), 22% being neutral (4% increase) and an 8% decrease in those disagreeing (38%). A higher percentage of respondents (74%) agreed that they would be happy to see anyone who was appropriately skilled or trained in a medical emergency.

There were also differences detected in how the community felt about the safety of a first responder scheme, with 10% more (28%) of 2010 respondents having neutral views about this issue, 9% disagreeing that they have concerns and 63% agreeing. Eighty per cent of respondents in 2010 felt that the local GP Practice should be

available 24 hours a day, 7 days a week, in case there is a healthcare emergency in the area.

3.3 Focus Groups

In November 2009, researchers from the project team held a focus group discussion with the Rannoch & Tummel CFR volunteers. The aim of the focus group was to obtain views about volunteering and the experience of being part of the scheme so far, to discuss the training provided, early implementation issues and perceptions of support received from the community, NHS Tayside and the Scottish Ambulance Service. Researchers also discussed with the first responder volunteers how prepared they felt about undertaking their new role. The focus group session was then repeated late in 2010, in order to document the experience of the volunteers one year later.

All Rannoch & Tummel CFRs were invited to the focus group sessions, held in Kinloch Rannoch Medical Practice. Two researchers conducted each of the focus group discussions and written consent was obtained from all participants. The focus group discussions were digitally recorded for analysis purposes. Below is a summary of the key topics discussed during both focus group sessions in 2009 and 2010.

Motivation for Joining the CFR Scheme

In 2009 the CFR volunteers expressed their drive and enthusiasm in undertaking the voluntary role within the community, with their commonly stated motivation for joining the scheme being to bridge the gap between health professionals and the community, and provide support whilst awaiting ambulance arrival. The CFRs stated they were committed to learning about their new role and had undertaken additional learning, over and above their formal training. This included shadowing paramedics in the Rannoch & Tummel area and shadowing postal deliveries to memorise local postcodes. In 2010 all CFRs involved in the focus group discussion described remaining committed to the role. Ten people had been trained to basic level, and nine had gone onto intermediate training. One volunteer has left the scheme more recently. There have been no new volunteers joining the scheme.

Early implementation Issues

A few early implementation issues were expressed during the focus group of 2009. Challenges with individuals "logging in" to the SAS system as being on call were discussed, but respondents felt these early challenges could be addressed by further discussion with the ambulance service. By 2010, it was reported back to the research team that the early implementation issues have been "99% resolved".

Formal Training & Support

During the first focus group session in 2009, the volunteers reported that a change in ambulance service training personnel had a knock on effect on the fluidity and cohesiveness of the CFR training. At the time of the first focus group several of the volunteers were at different stages of training and certification.

Induction training of first responders was delivered at different times throughout 2009. Although the feedback about the content of the training was positive, the volunteers described their initial overall experience as *"fragmented"*. Volunteers reported that they would have appreciated more consistent support and encouragement during these early stages of implementation.

New training personnel were then appointed and intermediate training was scheduled for January 2010. The CFRs agreed they thought each new training session would give them more confidence. Some expressed a lack of confidence in particular areas of their role, but they thought that, at this early stage, this was to be expected. The CFRs said they would feel more confident if training had been better organised and supported.

Although better communication with the SAS training officer, coupled with structured ongoing monthly updates was welcomed by the CFR volunteers, the organisation of ongoing training remained an issue in 2010. By late 2010 all first responders described having received the "intermediate level" training sessions, but by this point the volunteers were liaising with a third different trainer. They described having to take the initiative themselves to request additional types of training, being guided by the First Person on the Scene (FPOS) training manual. The volunteers have however

had informal support from a retired local health professional in the community, and this was described as being invaluable.

Confidence in attending a call was also discussed with the group. The volunteers agreed that the Rannoch & Tummel scheme does not experience the volume of calls necessary to gain confidence through call-outs alone, but still felt confident in their role due to their training. The volunteers meet once a month for ongoing training. This was described as an active decision taken by the group and not by NHS Tayside or the Scottish Ambulance Service.

Support on a practical level from the Scottish Ambulance Service paramedics was also discussed in 2010. First responders described their relationship with paramedics / ambulance technicians as being excellent and very positive. As one first responder described when dispatched to an emergency call:

> *"I wasn't wasted space (when the ambulance arrived) I was used to help the ambulance staff, getting equipment and things from the ambulance…talking to the next of kin…we worked as a good team."*(FG2 First Responder)

The volunteers also felt that there was opportunity for first responders to shadow paramedics during their working shift if they felt the need to do so. Hence, overall paramedic support was described very positively.

Information in the Community

In 2009, during the establishment of the CFR scheme, volunteers were asked to discuss the information available in the Rannoch & Tummel area about the role of first responders. At that time they thought the majority of the local community members were relatively supportive of the volunteers. However, they thought the general community had been left to *"interpret the CFR role"* and this resulted in confusion about the actual purpose of first responders. For example the group thought it was unfortunate there was no information available about the fact the scheme is not unique to the Rannoch & Tummel area and there are other CFR schemes active across Scotland.

All volunteers thought that clearer information describing the specific role of the CFR and *"the point that the ambulance is on its way"* would help the community to understand their reasons for volunteering and may have an impact on the acceptance of their role. Volunteers thought some community members did not realise that CFRs only respond once an ambulance has been dispatched. Volunteers felt that there was confusion in the community about the reasons for the scheme's introduction; it was seen by many as a replacement service for the previous OOH service provision.

> *"I've said to people, even if you do at the end of the day get a 24 hour doctor we first responders will still be here…and they go "what?" so I say we are nothing to do with the doctor we are here for the ambulance service. They still think if we get a doctor we will be disbanded"* (FG2 Participant)

The volunteers were disappointed that NHS Tayside, having encouraged the development of the scheme, had taken little responsibility for supporting or publicising first responders. (it should be noted that NHS Tayside distributed newsletters to every household in the community at regular intervals throughout the year including one which showed the pathway to care in emergency situations).

By 2010 accessible public information in the community for potential volunteers was still described as lacking; and first responders thought that a year on the general community did not have a clearer understanding of the CFR role. The volunteers remained enthusiastic about trying to inform the public of their role and maintain visibility in the community, describing to the research team, for example, that they attended the local Highland Games to raise awareness. However, they thought that some public appearances had not been positive, for example they reported that information given at local community council meetings was inaccurate about the role of the volunteers and some described negative experiences as first responders when attending community council meetings.

Attending to Patients

The first responders informed the researchers that they had attended few calls in the first year of the scheme's existence, therefore it was difficult to have an in-depth

discussion about the views of patients. The volunteers informed the researchers that, of the calls they have attended, patients have been grateful to see them arrive on scene.

Development of the CFR Scheme

In regard to the future development of the CFR scheme in Rannoch & Tummel, the volunteers who attended the focus group discussions were keen to continue as volunteers with ongoing professional support, although they felt that the scheme would not develop further if the levels of current support were not increased and this may, in turn, affect the enthusiasm of other volunteers.

Publicity in the community about the CFRs was discussed as important to the understanding and acceptability of their role and the group discussed the benefits of informing the local hotels about the CFR role, given that the Rannoch & Tummel area has a high number of tourists in the summer months. The group also suggested that increased and ongoing support and interaction from the SAS and NHS Tayside would be beneficial.

Encouraging ongoing enrolment in the CFR scheme was also highlighted as important to its future success. The group mentioned being disappointed that at that point there had been little active, ongoing encouragement for community members to volunteer to join the scheme.

3.4 Stakeholder Interviews

Six confidential interviews were conducted with community members in January and February 2010. These lasted approximately 25-75 minutes and were recorded, with permission, and transcribed verbatim. Interview questions covered opinions and experiences of the OOH service provision and other aspects of the CFR scheme.

Following meetings with existing community groups, volunteers for interview were requested to notify the research team. All were provided with an envelope and a form on which they could agree or decline to being interviewed. Those who were willing were also asked to leave their contact details. This enabled the researchers to identify

a group of people willing to be interviewed and a sample of four of these were randomly selected. The final two interviewees were identified through a local community action group that had a strong interest in health service provision in the area.

Most interviewees were dissatisfied with current arrangements for OOH provision, and were anxious about approaching services and about getting an appropriate response, in the OOH period. All interviewees described situations where they, or others in the community, constructed arrangements in the case of an emergency that were not *'those advised'* by the NHS - either because they thought it would take too long to receive help under stipulated arrangements or because they were unsure what to do.

Some interviewees described good experiences of using NHS 24, although some were sceptical about this service. Most interviewees felt insecure in the case of an OOH emergency in the community, under current arrangements.

Interviewees were able to describe details of the first responder role, although it should be noted that, as interviewees were self-selecting, it is possible that there was a bias towards interviewees with a high level of interest in health provision. While interviewees thought those who had volunteered to be first responders were *'noble'* and wanted to help their community, most stated that these first responders were only trained to deal with a very limited range of emergency situations and this was insufficient to allow community members to feel secure. Most interviewees were able to discriminate between the types of healthcare situations for which they are expected to call NHS 24 and those where they should call 999. Existing arrangements in the community were described that help to keep elderly and vulnerable people living in the community; for example, there are current health and social care workers that respond with advice and support OOH (even though this is not technically part of their job).

Respondents agreed that rapid, locally available, reliable emergency response that triages and treats is required. Some respondents noted this did not necessarily have to come from a GP, but it had to be from someone appropriately trained and experienced

to accurately treat and triage. Some interviewees mentioned that there are several health professionals living in the community whom they felt could be called upon to form a rota of 24/7 emergency coverage. Most interviewees thought NHS Tayside had handled the service change in the community badly.

Some interviewees thought that there had been a decline in a range of services in the area over recent years and loss of local OOH response is symptomatic of wider change and decline. Maintaining local health services was considered, by some, to be important to the sustainability of a remote and rural community such as Rannoch & Tummel.

3.5 Patient Questionnaire

A total of eight questionnaires were distributed anonymously via the Scottish Ambulance Service to all patients who had contact with the CFR service in Rannoch & Tummel in the first year. However, within the four month period of the survey, none of these were returned to the project team.

3.6 Ambulance Service Activity Data

The data (detailed below) is limited due to the small number of calls experienced during the first year of the scheme. There were a total of eight 999 telephone calls in which a CFR was dispatched to the scene during their first year of operation. This is out of a total number of 51 incidents in the area over the time (this includes daytime incidents, which would involve the GP, incidents not appropriate for first responders to attend such as road traffic accidents, and incidents that are stood down). Three of the eight were category A 999 calls (most serious category) and 5 were category B 999 calls (two of which were transfers from NHS 24, and two of which were changed from Cat A to Cat B once assessed). Patients were between the age of 52 and 79 (mean age 68). There were three cases where the presenting complaint was chest pains/possible acute heart problems and two cases of convulsions/fitting.

In six out of eight incidents in the Rannoch & Tummel area the ambulance resource came from the Pitlochry base, with two responding from Perth (one of which also included a Paramedic Response Unit from Pitlochry). In all cases the ambulance was activated first, and the first responder activated between 2-4 minutes thereafter. First

responder times to arrival varied between 6 and 32 minutes (although they always arrived in advance of the ambulance); ambulance response varied between 20 minutes and 51 minutes. CFRs were typically an hour to 90 minutes on scene, ambulance was between 23 and 51 minutes on scene. Five patients were taken to Perth Royal Infirmary (this took around one hour to reach), and one patient was taken to Pitlochry, which took 30 minutes.

Table 4. Rannoch & Tummel Yearly Activity Data

Call out	Call Category	Method of call	Time call started	Final call category	Resource Type	Response time	Time to hospital
1	Cat A Call	999	09:10:52	Cat B Call	First Responder	12:09	n/a
					Ambulance	20:23	00:58:39
2	Cat B Call	NHS24	09:35:15	Cat C Call	First Responder	22:37	n/a
					Ambulance	22:42	01:06:16
3	Cat B Call	NHS24	20:19:07	Unknown	First Responder	Not available	n/a
					Ambulance	20:09	01:20:00
4	Cat B Call	999	12:01:30	Cat C Call	First Responder	32:24:00	n/a
					Ambulance	45:25:00	00:29:12
5	Cat A Call	999	22:06:32	n/a	First Responder	n/a	n/a
					Ambulance	n/a	n/a
6	Cat B Call	999	21:46:08	Cat B Call	First Responder	05:58	n/a
					Paramedic Response Unit	27:22:00	n/a
					Ambulance	50:54:00	01:03:25
7	Cat A Call	999	03:45:08	Cat B Call	First Responder	12:56	n/a
					Ambulance	25:56:00	n/a
8	Cat B Call	999	01:02:35	Cat B Call	First Responder	06:14	n/a
					Ambulance	24:54:00	01:02:02

4 DISCUSSION AND CONCLUSIONS

While there are now over 90 CFR schemes in Scotland, including many in remote and rural communities, the Rannoch & Tummel scheme was introduced in unusual circumstances which made its initial implementation challenging. There was general consensus among research participants that the CFR scheme should not and cannot be a replacement for OOH general medical services. Despite this, community members' understanding of the CFR role is varied. Throughout the process, information provided to the community, through various sources including NHS Tayside, SAS, and local community groups about the role of first responders has been described as conflicting and confusing. The issue has been intertwined with the OOH service provision changes in the area. Although CFRs are only activated for 999 calls or calls transferred from NHS 24 after the ambulance has been dispatched, this is still not clearly understood within the Rannoch & Tummel community.

What support is there for the CFR scheme in the community?

Community views changed little between the two surveys conducted in 2009 and 2010. Views about the scheme itself were marginally more positive in 2010, but views about the importance of the issue to the community, and attitudes towards NHS Tayside and the OOH service remained unchanged. It is also worth noting that the response rate in the second survey dropped to 30%, which may impact on the reliability of findings. This decrease in response may have been due in part to fatigue in the community to ongoing questions. However, it may have also been due to fatigue about the issue itself, and the ongoing debate about it.

Is the CFR scheme impacting on community resilience?

The community appears to be resilient (according to measures used), and self-reports as healthy, given the older age structure. Results in 2009 and 2010 were similar which may imply CFRs have not made a significant impact on the community's perception of its own health and resilience. This would not be surprising given the short period the scheme has been in operation or the small number of callouts CFRs have attended thus far. It may well take some time for the true impact of the CFR scheme to become apparent within this remote and rural community.

What are the views of the CFRs themselves?

The CFRs have given their own time to training (to intermediate level), and to delivering the service. However, they have found misunderstanding of their role in the community frustrating. Support for the scheme during the first year has been variable in nature, and co-ordination and communication has been inflexible. The CFRs however, do not report feeling that this has compromised their ability to deliver the service. It is also important to recognise that other community members have opposed the introduction of the scheme, and their concerns should not be overlooked.

What are the perceived benefits and limitations of the CFR scheme?

Perceived benefits of the scheme included the creation of the additional local resource of volunteers trained in basic life support skills who were able to respond more quickly than the ambulance to local emergencies. The data also showed that some respondents felt the scheme provided an outlet for volunteers to 'give back' to their community. Perceived limitations of the scheme included the level of training received by the first responders, a lack of co-ordinated support from NHS Tayside and the Scottish Ambulance service to allow the scheme to flourish, and a strong association among some respondents between the CFR scheme and the unpopular withdrawal of OOH GP services.

Does the introduction of the CFR scheme lead to the introduction of other initiatives?

No new initiatives were found during the first year of the scheme; it is possible that these may emerge in time.

Can the CFR scheme expand over time?

Participants in the focus group felt that, for the scheme to expand over time, additional support would be required from the Scottish Ambulance Service as well as NHS Tayside, not only in terms of support for the CFRs themselves, but also in terms of help to inform the community about the scheme and help with recruiting new volunteers.

Conclusion

Despite the challenging context of their introduction, within the first year of their introduction CFRs have become established as an additional resource within the Rannoch & Tummel area, as one layer of a wider emergency care response. This is despite the relatively small number of calls (eight) CFRs were asked to attend within their first year of operation. While many residents still express concern over the introduction of the CFR scheme and the delivery of OOH services, there has been a slight shift towards acceptance of the scheme.

In summary,

- During its first year the CFR scheme has become established as an additional element of emergency medical response in the area.
- According to the community questionnaire, support for a CFR scheme in Rannoch & Tummel at the time of its introduction was mixed. One year later it remained mixed, although it should be noted that response rates for the questionnaire dropped from 44% to 31% between the first and second survey. In the second survey, more people agreed that the scheme contributed to service delivery in the area, although the majority who responded still had concerns about the safety of the scheme.
- The majority of respondents to surveys in 2009 (73%) and 2010 (80%) believed GPs from the local GP practice should be available 24 hours a day, all week, in case there is a healthcare emergency.
- Rannoch & Tummel appears to be a resilient community (by measures used); the CFR scheme does not appear to have impacted on community resilience within the time period of study.
- The CFRs have given their own time to training (to intermediate level), and to delivering the service. Volunteers reported that they had joined the scheme in order to 'give something back' to their community.
- Some members of the wider community have been committed to opposing the introduction of the scheme and this should not be overlooked.

- CFRs were called upon to attend eight 999 calls between 1st October 2009 and 31st September 2010. The response time varied between 6 and 32 minutes, and this was in all cases quicker than the ambulance response.

It should be noted that the evaluation team are conducting a larger study of first responders across six different sites in Scotland (funded by the Chief Scientist Office). The evaluation is due to be completed by September 2011, and it will be possible to compare results with this study.

5 RECOMMENDATIONS

- Clearer guidance to the Rannoch & Tummel community about the specific role CFRs play in emergency care would be beneficial to the Rannoch & Tummel community

- While the Scottish Ambulance Service has ongoing day-to-day responsibility for the running of the scheme, NHS Tayside and SAS should continue to work together to strengthen support for the CFRs and their place in the delivery of health services in the area.

- NHS Tayside, the Scottish Ambulance Service, and the community should aim to find new ways of communicating and working together if health service delivery issues are to be resolved.

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Appendix 1 – Initial Questionnaire

Link to file here

Appendix 2 – Repeat Questionnaire 2010

Link to file here

Appendix 3 – Patient Questionnaire

Link to file here