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Journal of Paramedic Practice

“Just Ring for an Ambulance?” – Local Survey Reveals the Behavioural Norms of Staff from Organisations Responding to Patient Falls in the Independent Residential Care Sector

--Manuscript Draft--

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Abstract:	<p>Abstract</p> <p>Aim: To review the first line response to patient falls that is operational in the independent care sector in a specific geographical region of North East England.</p> <p>Design: Questionnaire survey implemented online via 'Survey Monkey' software package.</p> <p>Sample: A convenience sample of 24 of 32 independent care sector homes from South Tyneside, UK participated in the study, representing a 75% response rate.</p> <p>Results: Policies and guidelines for falls in the independent care sector homes were investigated, as understood by care home managers. The findings highlight the disparate responses to falls in the care home settings. Despite 96% of homes having a policy on falls, only 80% of these included an assessment of possible injury or harm to residents and 13% included no direct guidance for care staff in instances where residents fall and are on the floor. For those policies that did include direct guidance, there was a great disparity in available information, especially between domiciliary and residential care home settings. The most common recommended action was to ring emergency services in order to move patients, even in the absence of evidence of physical injury. In the context of residential care home settings there was a high degree of ambiguity around the assessment of sustained injuries and whose responsibility this was. This was particularly evident in relation to falls where potentially non-visible injuries which were subsequently not immediately identifiable. There was also reported ambiguity in relation to the management of falls, where there was overlap between accident policies and falls policies.</p> <p>Conclusions: Our research highlights the need for standardisation of policies and procedures in relation to falls of those living under the care of the independent care sector. At present, there is a disparate set of approaches evident in the contexts of care, which are largely determined by locally devised and implemented policies, which prioritise legalistic and bureaucratic concerns over clinical decision making. Our study highlights the potential fiscal impact on emergency ambulance services in instances where it is commonplace for contacting emergency services to be the first line response to a patient falling to the floor regardless of whether an injury has occurred.</p>
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Sample: A convenience sample of 24 of 32 independent care sector homes from South Tyneside, UK participated in the study, representing a 75% response rate.

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Keywords

Independent Care Sector; Falls; Emergency Ambulance Services; Domiciliary Care; Residential Care; Education

Introduction

The disproportionate use of emergency ambulance services in relation to falls of patients in the UK independent care sector is at an unprecedented level (Jennings and Matheson-Monnet, 2017; Pope et al, 2017). The extant literature provides an insight into how the higher likelihood of the inappropriate and frequent utilisation of unnecessary ambulance services can be demographically predicted. Patterns of this are characterised by an incidence of lower socioeconomic status, chronic disease status and low perceptions of healthcare accessibility in practice (Hudon, Sanche and Haggerty, 2016; Scapinello, 2016). Within this literature there is, notably, minimal mention of the accountability of the independent care sector workforce in requesting emergency services and the situational contexts in which this may happen, but which may subsequently be attributed to people in these groups.

Our recent research into the operationalisation of policy in response to falls in South Tyneside North East England reveals the behavioural norms of staff in the independent care sector. In some instances, this practice forms an integral part of independent care sector policy around what staff are expected to do in the instance of patients falling to the ground and being unable to remobilise. In many cases the reason for requesting emergency ambulances is attributed either due to instances of minor injury, which could be best treated in the context of basic first aid in the home, in primary care settings or even helping patients to manoeuvre into a position of being able to effectively and safely remobilise themselves.

Raising awareness of the implications of the unnecessary use of emergency services is pivotal if the situations outlined above are to be prevented. If organisations are to realise the fiscal expense and potential human cost of wasted time for paramedics in practice then a mechanism of public education is warranted. This paper provides descriptive statistics to illustrate this issue. Our findings reveal that calling emergency services has become the norm when people are found on the floor and are unable to independently mobilise

Aims of the Research: To provide an illustration of the first line response to patient falls that is operational in the independent care sector in a specific geographical region of North East England. This was conducted specifically in nursing, domiciliary and residential contexts, which is largely representative of the scope and practice of organisations in the independent care sector.

Design: The study used a basic survey questionnaire, which was undertaken via Survey Monkey over a specific two month period in 2016.

Sample: A convenience sample of 32 (100%) independent care sector organisation care home managers in South Tyneside, UK was targeted, with a total of 24 (75%) agreeing to take part in the study.

Results

Response rate of the 32 organisations surveyed was 75% (24 organisations). This mirrored the same completion rate and the non-response rate was 25% (8 organisations). These responses were constituted of 8 returns from nursing organisations, 3 from domiciliary care settings and 13 from residential care home settings.

1. Policy in Relation to Falls

When questioned if they had a policy in relation to the management of falls that occur within their establishment, yes was the unanimous answer, with a response rate of 96%, representing a total survey response count of 23 organisations; 4% reported that they had no policy in relation to the management of falls.

2. Ensuring Staff Awareness of Falls Policy and Resultant Appropriate Action

Further questioning probed how organisations ensured that staff were aware of the policy and acted on it appropriately. 75% of the organisations responded (24). 87% reported that their policy had specific guidance for staff on what to do if a resident falls and is on the floor, whilst 13% had no direct guidance for their staff. As an adjunct to this question, the 87% organisations of organisations with a positive response to this question were asked to provide information on the information that staff were given. This revealed a diverse array of responses with common themes, when subjected to basic qualitative framework analysis (Ritchie and Spencer, 2004). The five most salient themes were

- a) Induction training
- b) Making staff accountable for reading the falls policy
- c) In house training via staff development
- d) Adjunct association with organisational lifting and handling policies
- e) Recording and documenting falls correctly and auditing their occurrence.

3. Whether there are policy requirements of staff in the incidence of a fall, where a resident cannot get up unaided

This question had a response of 75% of organisations (24). The commonest response to this was that staff were required to ring for an ambulance and in these homes there was an institutional policy that staff were not to move clients, if they had fallen to the floor. A minority of organisations reported that their staff were expected to use hoists to move patients from the floor. In instances where patients lived in their own homes there was no policy and decision making was left to the discernment of the carer, regardless of the circumstances. Some organisations reported having an individualised care plan for each patient and that carers had to use this in instances where patients fell, regardless of the circumstances. Registered General Nurses (RGNs) were used to check for head injuries and broken bones in some organisations and some reported only causing an ambulance if there were signs of 'visual injuries'. It was further reported that where it was suspected that a patient had a spinal or hip injury that an ambulance must be called in one organisation. One organisation reported that there was nothing in the policy about what to do in the instance that a client had a fall. Exact responses from each responding organisation are outlined below:

'After someone has fallen it is suggested that a Post Falls Assessment is carried out, this will then be specific to the individual within the home.' (Organisation 1)

'Ring for wardens/ambulance.' (Organisation 2)

'No policy in place due to clients living in their own homes.' (Organisation 3)

'if appropriate use hoist.' (Organisation 4)

'They phone an ambulance and make no attempt at all to move the service user.'
(Organisation 5)

'Staff follow each residents moving and handling document this is in each residents care plan.' (Organisation 6)

'All customers are assessed by our mobility co, we must follow the correct procedure in plan. Provided there are no injuries.' (Organisation 7)

'Call for medical help.' (Organisation 8)

'Always hoisted. RGN to check for immediate signs of injury, accident form, report, 12hr, 24hr and 36 hr check. Head injuries 111 or 999.' (Organisation 9)

'Registered nurse completes a full body assessment to assess for any broken bones.' (Organisation 10)

'To check for any visual injuries to contact emergency services if resident is complaining of any pain or unable to get up of the floor and to look at the capacity of the resident if they're able to state in pain.' (Organisation 11)

'Not in policy.' (Organisation 12)

'Carry out a full body check to identify for injuries, if no injuries are identified and the person is unable to say we would contact healthcare professional for advice. And carry out observation for any side effects or more discomfort.' (Organisation 13)

'Use hoist.' (Organisation 14)

'Would contact healthcare professional, if unable to get up, unaided, if fall was not witnessed, and no visible injuries identified and person was unable to say how they were on the floor.' (Organisation 15)

'We have an accident policy and the staff have falls training, however, the policy does not state what to do in the event service user falling. The reporting of accident policy has guidelines on how to manage and report injury and accidents.' (Organisation 16)

'Check for injuries. If concerned contact emergency services and if no injuries support resident or use hoist depending on their needs.' (Organisation 17)

'Hoist.' (Organisation 18)

'Call 999.' (Organisation 19)

'To assess and utilise the appropriate equipment if injuries are not evident.' (Organisation 20)

'If injuries are evident we are to make them comfortable and await emergency services.' (Organisation 21)

'Check the resident for any injuries, and they are suspecting any fracture hip or spine - contact emergency ambulance services for further support.' (Organisation 22)

Press emergency buzzer for more senior staff to attend and assess situation. (Organisation 23)

All falls by Service Users no matter how trivial are immediately recorded in Care. Plan daily records also in Accident book, Nurses inform falls team for assessment. (Organisation 24)

4. Whether there is a policy inclusion of assessment of sustained injury or harm to residents

This survey question received a positive response, with 79% of organisations reporting that they did have an inclusion in their falls policy of assessments that clients ought to be subject to assess sustained injury or harm as a consequence of a fall. 21% of organisations had no specific recommendations in their falls policy of how staff ought to assess the condition of the client who had fallen.

5. Whether clear guidelines exist in those organisations who stated they had a policy inclusion of assessment of sustained injury or harm to residents

As with the previous question, this part of the survey revealed that 79% of organisations reported having an inclusion in their falls policy of assessments that clients ought to be subject to assessment to ascertain whether they had sustained injury or harm as a consequence of a fall. 21% of organisations had no specific recommendations in their falls policy of how staff ought to assess the condition of the client who had fallen.

6. Whether clear guidelines exist in those organisations who stated they had a policy inclusion of assessment of sustained injury or harm to residents

79% of those organisations who reported having an inclusive policy of assessment of sustained injury or harm to residents responded that clear guidelines were available to follow in instances of there being no harm or injury apparent, and 21% reported clear guidelines for instances where there was concern that harm or injury had occurred. 2 of the organisations omitted to answer this question.

7. The circumstances under which the home would ring an ambulance

There were 23 organisations who responded to this survey question. 1 organisation omitted to enter a response. Specific responses are detailed below:

'If the individual is unable to mobilise normally, if they are expressing pain, if the individual is unconscious.' (Organisation 1)

'If the service users in hurt or in pain' (Organisation 2)

'Due to each client being in their own home, we would contact an ambulance if they were to sustain an injury. Otherwise we would contact GP/DN for advice.' (Organisation 3)

'Suspicion of serious injury.' (Organisation 4)

'With falls we ring ambulance immediately' (Organisation 5)

'If the resident has a suspected injury fracture or bleeding, nasty bump' (Organisation 6)

'If head injury or suspected fracture.' (Organisation 7)

'Head injury, fractures, resident shows clear signs of severe pain in limbs.' (Organisation 8)

'From the assessment if there were any signs of broken bones or lacerations that won't stop bleeding.' (Organisation 9)

'If service user has sustained injury if a service users is unable to move limbs, head injury, bleeding and if a resident is unable to state in pain due to capacity.' (Organisation 10)

'Head injury, obvious injury.' (Organisation 11)

'When injuries are identified or any distress.' (Organisation 12)

'Serious Injury - Fractures – Cuts.' (Organisation 14)

'If person was unable to get up themselves, if person has any identified injuries or signs of any discomfort or pain.' (Organisation 15)

'If the person was none responsive, hurt or injured and was unable to get up.' (Organisation 16)

'If the client could not move, depending on the type of injury. Assess the situation at the time.' (Organisation 17)

'Suspected /actual injury, any loss of consciousness, and evidence of sudden onset illness.' (Organisation 18)

'Head Injury suspected fracture.' (Organisation 19)

'If injury was evident or head injury suspected.' (Organisation 20)

'any suspected fracture or head injury, heavy bleeding , large soft tissue or tendon injuries.' (Organisation 21)

'Head Injuries, Broken bones, Unconsciousness if the injury is causing pain or discomfort in any limbs ,back or hip area or a severe head wound or blow to the head is present/suspected, then an ambulance must be called. Also, for any cut that is more than superficial to any area. If the service user has abnormal bruising to or is on blood thinning medication.' (Organisation 22)

'Yes.' (Organisation 23)

8. Whether there is any guidance to follow for staff if a resident is on the floor, and an ambulance has been called but is delayed in responding due to high levels of activity?

50% of organisations responded affirming the availability of guidance for staff if a resident is on the floor, and an ambulance has been called but is delayed in responding due to high levels of activity. The remaining 50% of respondents said they had no availability of guidance in these circumstances.

9. Whether there is guidance to follow for staff if a resident is on the floor, and an ambulance has been called but is delayed in responding due to high levels of activity?

The survey response revealed that 50% of organisations had specific guidance to follow for staff if a resident is on the floor, and an ambulance has been called but is delayed in responding due to high levels of activity. The remaining 50% did not.

10. Whether respondents and their employees had accessed any falls training?

Staff reported having accessed staff development sessions, which was clearly divided into 'in house training' and e-learning packages.

Discussion

This study examined policies and guidelines for falls in the independent care sector homes from 24 independent sector care homes. The survey findings highlight the disparate responses to falls in the care home settings; despite 96% of homes having a policy on falls, only 80% of these included an assessment of possible injury or harm to residents and 13% included no direct guidance for care staff in instances where residents fall and are on the floor. For policies that did include direct guidance, there was a great disparity in available information, especially between domiciliary and residential care home settings. The most commonly recommended and ambivalent action, was to call emergency services in order to move patients, even in the absence of physical injury. Findings were consistent with those outlined in the extant literature, which also highlighted the inappropriate use of Accident and Emergency (A&E) services (Chalk, Black and Pitt, 2016). Whilst our research indicated the common use of ambulances as a common policy, the literature indicates that patterns may also exist where there is a correlation between minimal staffing in the independent care sector and inappropriate ambulance use, for example during night shifts where often skeleton staffing is used to cover significant numbers of patients (Bruni, Mammi and Ugolini, 2016).

It is relatively easy to be critical of 4% of the independent care sector having no policy on falls but if we account for the impossibility of standardising this in the context of domiciliary care provision and also the overlap between accident policies then this could account for them being covered at a policy level there instead. It is also arguable that by not having overlapping policies and by choosing to implement only an accident policy, that this permits a less legalistic approach to falls and encourages proactive informed decision-making about individual patients.

These statistics can also be used to raise awareness of the potential to reduce the potential for mind-sets of ambivalence around falls by independent care sector staff. This is especially apparent in the management of elderly patients, for whom polypharmacy, limited ambulation and an increased predisposition to fall due to the pathophysiological processes of senescence, which gradually limit proprioception, mobility and the visual senses (Zia, Kamaruzzaman and Tan, 2017). For these physically vulnerable patients, annual screening is needed as an integral part of a comprehensive care package which can provide a means of recognising the need for healthcare interventions which minimise the risk of falls. Such screening can potentially serve as a prognostic indicator of the likelihood of vulnerable patients necessitating hospitalisation or emergency admission (McCusker et al, 2012). The need to highlight organisational predictors of frequent and inappropriate use of emergency ambulance services also impacts significantly in terms of how genuine patients can potentially be perceived by paramedic staff (Chapman and Turnbull, 2016).

From an educational perspective, it is notable that the results show a lack of parity between residential, nursing and domiciliary care in relation to how independent care sector staff are directed and made accountable for how they deal with falls. Almost always it involves a focus on legalism, with staff signing to say they have gained an insight into falls and that they are aware of how to deal with them. There is minimum evidence to suggest a robust and transferrable training and development programme for all independent care sector workers in

the context of our research, despite several being established in recent years (McKenzie et al, 2017; Richardson et al, 2015).

The notion of choice in relation to the use of emergency services reveals similar behavioural norms in relation to levels of discernment regarding their need (Coster et al, 2017). In instances of general emergency care, where patients have genuinely sustained injuries warranting hospital attention, the assessment of a qualified paramedic is invaluable (Halter, Humphreys et al, 2017; Snooks et al, 2017). However, inappropriate use of emergency services also causes a degree of dissonance and frustration in relation to the perceptions that paramedic practitioners hold of those they potentially need to assess, diagnose and manage in the context of an emergency response (Dejean et al, 2016) whether this is related to ambulance use or treatment in hospital (Cardona-Morrell et al, 2017; Franchi et al, 2017; Dawoud et al, 2016). In the context of residential care home settings there was a high degree of ambiguity around the assessment of sustained injuries and whose responsibility this was, particularly in relation to falls where potentially non-visible injuries which were subsequently not immediately identifiable, where patients were moved via hoists. There was also reported ambiguity in relation to the management of falls, where there was overlap between accident policies and falls policies.

Acknowledged Limitations of this Research

In the context of both settings of patients we describe, it is worthy of note that we do not distinguish the qualifications of staff working with patients. For example in a domiciliary settings it is worthy of note that patients have formal carers attending to them in their own homes, who are usually NVQ trained. Similarly, nursing homes usually have the presence of a Registered Nurse, over residential care homes where it is the norm for social care officers to be present rather than a registered nurse. This distinction is important as the person who has fallen may not in the first place be assessed by a Registered Nurse. We therefore do not seek to make a generalisability about which professions can best assess injurious falls correctly but to provide an insight into the evidence of outcomes for patients who fall in the context of everyday healthcare provision.

We also acknowledge that this survey does not ascertain whether a GP was contacted first to assess the need to call ambulance or the implications of this in current policies and practice. We recommend the need for an adjunct piece of research examining whether delays in patients being assessed by GP's could also potentially be creating a behavioural response towards calling an ambulance.

Whilst it is not the scope or context of this article to explore the extent to which educational curricula for staff caring for patients at risk of injurious falls is fit for purpose, this is another possible avenue for exploration which may further reveal that which further compounds what maybe risk adverse behaviour and ringing an ambulance.

Conclusion

This research reveals the variation and the potential for relative ambivalence around the awareness, staff development and accountability that staff in the independent care sector have in relation to falls in their everyday practice. This is characterised by the majority of the sector acknowledging the need for institutional policies but then treating their implementation as a legalistic process rather than being focused on the individual care needs of clients. Many of these clients have very specific needs in relation to their capacity for mobilisation following a fall. In the majority of falls, the overall organisational response in

the independent care sector we surveyed is to call emergency services via 999 for an ambulance, regardless of the injury or harm a patient has sustained as a consequence of falling. Our research also reveals a paucity of available information for those staff working in the context of domiciliary care, where policy implementation is not always adopted. Perhaps of greatest concern, is that 21% of organisations in our research reported having no specific recommendations in their falls policy of how staff ought to assess the condition of the client who has fallen.

Aside from the fiscal implications and physical burden in relation to the deployment of human resources in the paramedic workforce, there is a wider concern in relation to how much the wider population is being impacted upon by this inappropriate use of emergency resources.

There is a clear need for the provision of definitive training of care staff in emergency first aid. The re-mobilisation of clients and most significantly the circumstances in which it is wholly appropriate for them to request emergency care provision from paramedic practice. This raises issues of discernment and critical reflection for the paramedic workforce in order to establish how and where best they might contribute to a potentially wholesale change in first line response to falls in the everyday practice in the context of residential care settings.

It illuminates the potential for interventions with education and training packages and highlights the evident need for representation by representatives of the paramedic profession at committees where responses to care in the independent sector are being formalised and sanctioned for operationalisation in practice.

Ethical Approval

Formal ethical approval for this study was granted by South Tyneside NHS Foundation Trust and the University of Sunderland.

References

Blank, J. D., Hulst, B. J., & Yalchmanis, V. G. (2016). Concentrating Emergency Rooms: Penny-Wise and Pound-Foolish? An Empirical Research on Scale Economies and Churn Economies in Emergency Rooms in Dutch Hospitals. *Health economics*.

Bruni, M. L., Mammi, I., & Ugolini, C. (2016). Does the extension of primary care practice opening hours reduce the use of emergency services? *Journal of health economics*, 50, 144-155.

Cardona-Morrell, M., Kim, J. C., Brabrand, M., Gallego-Luxan, B., & Hillman, K. (2017). What is inappropriate hospital use for elderly people near the end of life? A systematic review. *European Journal of Internal Medicine*.

Chalk, D., Black, S., & Pitt, M. (2016). Which factors most influence demand for ambulances in South West England? *Journal of Paramedic Practice*, 8(7), 356-367.

Chapman, B., & Turnbull, T. (2016). Health professionals' perceptions of inappropriate use of A&E services. *British Journal of Nursing*, 25(9).

Coster, J. E., Turner, J. K., Bradbury, D., & Cantrell, A. (2017). Why do people choose Emergency and Urgent care services? A rapid review utilizing a systematic literature search and narrative synthesis. *Academic Emergency Medicine*.

Dawoud, S. O., Ahmad, A. M. K., Alsharqi, O. Z., & Al-Raddadi, R. M. (2016). Utilization of the Emergency department and predicting factors associated with its use at the Saudi Ministry of Health General Hospitals. *Global journal of health science*, 8(1), 90.

Dejean, D., Giacomini, M., Welsford, M., Schwartz, L., & Decicca, P. (2016). Inappropriate Ambulance Use: A Qualitative Study of Paramedics' Views. *Healthcare policy= Politiques de sante*, 11(3), 67-79.

Franchi, C., Cartabia, M., Santalucia, P., Baviera, M., Mannucci, P. M., Fortino, I., ... & Roncaglioni, M. C. (2017). Emergency department visits in older people: pattern of use, contributing factors, geographical differences and outcomes. *Aging clinical and experimental research*, 29(2), 319-326.

Halter, M., Humphreys, I., Koniotou, M., Logan, P., Lyons, R. A., Mason, S., ... & Siriwardena, A. N. (2017). Paramedic Assessment of Older Adults After Falls, Including Community Care Referral Pathway: Cluster Randomized Trial.

Hudon, C., Sanche, S., & Haggerty, J. L. (2016). Personal characteristics and experience of primary care predicting frequent use of emergency department: a prospective cohort study. *PLoS one*, 11(6), e0157489.

- Jennings, P., & Matheson-Monnet, C. (2017). Multi-agency mentoring pilot intervention for high intensity service users of emergency public services: The Isle of Wight Integrated Recovery Programme. *Journal of Criminological Research, Policy and Practice*, 3(2).
- McCusker, J., Tousignant, P., Da Silva, R. B., Ciampi, A., Lévesque, J. F., Vadeboncoeur, A., & Sanche, S. (2012). Factors predicting patient use of the emergency department: a retrospective cohort study. *Canadian Medical Association Journal*, 184(6), E307-E316.
- McKenzie, G., Lasater, K., Delander, G. E., Neal, M. B., Morgove, M., & Eckstrom, E. (2017). Falls prevention education: Interprofessional training to enhance collaborative practice. *Gerontology & geriatrics education*, 38(2), 232-243.
- Richardson, D. A., Bhagwat, A., Forster, K., Hibbert, R., Robertson, L., Whitelaw, P., ... & Thompson, E. (2015). The Royal College of Physicians' Fallsafe care bundles applied trustwide: the Northumbria experience 2013. *Clinical Medicine*, 15(6), 530-535.
- Pope, C., Turnbull, J., Jones, J., Prichard, J., Rowsell, A., & Halford, S. (2017). Has the NHS 111 urgent care telephone service been a success? Case study and secondary data analysis in England. *BMJ open*, 7(5), e014815.
- Ritchie, J., Spencer, L., Bryman, A., & Burgess, R. G. (1994). Analysing qualitative data. pp 173-194
- Scapinello, M. P., Posocco, A., De Ronch, I., Castrogiovanni, F., Lollo, G., Sergi, G., & Zambianco, V. (2016). Predictors of emergency department referral in patients using out-of-hours primary care services. *Health Policy*, 120(9), 1001-1007.
- Snooks, H. A., Anthony, R., Chatters, R., Dale, J., Fothergill, R. T., Gaze, S., ... & Lyons, R. A. (2017). Paramedic assessment of older adults after falls, including community care referral pathway: cluster randomized trial. *Annals of emergency medicine*.