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Remote Clinical Decision Making: A Clinicians Definition: Short Report.

Introduction

More commonly known as telephone triage and/or hear and treat, Remote Clinical Decision Making (RCDM) is a term now being used to describe the involvement a clinician has in patient care which is not face-to-face (Brady 2016). This remote interaction is typically undertaken via telephone or a visual-audio format by various clinicians ranging from Paramedics, Nurses, Doctors, Pharmacists, amongst others. Organisations such as NHS 111, NHS Direct, and NHS 24 utilise this type of patient interaction almost entirely however organisations that offer face-to-face services also utilise it; such as GP surgeries, Midwifery clinics, and emergency ambulance services.

This method of clinical contact has been in practice for many decades in countries with vast geographies inhabited with rural hard to reach communities, such as Australia (Knight et al 2010). It is now well established within western healthcare and various studies have demonstrated high degrees of patient safety (Meer et al 2010, Huibers et al 2011). However, most this research has focussed on non-urgent and or non-life threatened patient groups. There remains paucity of studies investigating the safety of patients in the emergency care setting; such as those who call 999 services.

As emergency ambulance services in the UK move more towards new clinically based operating models there has been an increase in the proportion of incidents managed over the telephone by a range of health care professionals from 5.9% in 2013/2014 to 10.2% in 2015/16, thereby avoiding 391,163 ambulance attendances that would have occurred had the rate remained at 5.9% (Association of Ambulance Service Chief Executives 2016).

This non-face-to-face method of patient assessment is a key strategy for managing the rising demand in a range of financially and resource constrained public health services (Murdoch et al 2015) and within the UK ambulance services it is referred to as Telephone Triage or Hear & Treat; as opposed to the traditional framework of See & Treat. Neither the title of Telephone Triage or Hear & Treat however adequately reflect the diverse roles of health care professionals within 999 ambulance service clinical hubs.

Hear & Treat which forms part of the UK Ambulance Services Quality Indicators, only shows the amount of calls that were resolved by providing telephone advice and or onward referral; that is, where advice and or referral has been given and/or made with no face-to-face resource being dispatched (NHS England 2016). A brief example of this kind of process can be seen in **Figure 1**. Such statistics also include some calls that have been 'resolved' by non-clinicians using Computer Aided Triage Tools before (if needed) being validated by clinicians. Health care professionals within the 999 clinical hubs however have a range of responsibilities as can be seen in **Table 1** which do not appear to be fully taken into consideration by the Ambulance Quality Indicators.

The common definitions of Hear and Treat, **(Table 2)**, refer most often to the closure of calls not considered to be life threatening or serious without face-to-face clinical assessment,

and therefore do not fully address the other roles undertaken by health care professionals in 999 clinical hubs (such as providing enhanced clinical pre arrival advice to callers). In comparison, the common definitions of Telephone Triage **(Table 3)** do consider the other elements of health care professionals role in 999 clinical hubs (such as providing senior clinical advice to operational colleagues) but speak more about the estimation, ranking, or organisation of cases and less about resolving or closing them without any response needed.

Neither Telephone Triage nor Hear and treat perfectly describe the role of health care professionals in 999 clinical hubs, **(summarised in Table 1)**, and neither speak specifically about high acuity life threatened cases to which they provide increased pre-arrival medical advice. It might be argued that the term Remote Clinical Decision Making may provide an improving overarching definition and provide more inclusive role recognition within updated national quality indicators and or targets, given its increasing use.

This role definition is not an arbitrary concept but one which is considered important to both personal and organisational efficacy. Kauppila (2014) suggests that the absence of role clarity can possibly lead to employees who are unlikely to fully identify with their organisation and its goals and behaviours. Furthermore, employees may not be aligned with the organisational strategy which can negatively affect performance and job satisfaction. This may be the case within 999 clinical hubs given that Hear and treat is an ambulance quality indicator but does not fully recognise the varying roles undertaken by health care professionals in 999 clinical hubs; although more research is needed to support this assertion. Knight et al (2010, 2014) suggests also that where there is role ambiguity or a lack of understanding there may also be gaps in policy development, clinical governance, and support for staff. Without better understanding or recognition of a role research may also focus too heavily on only one element of practice to the detriment of others; although again more research is required to determine if his is the case in UK settings with Hear & Treat.

It is however possible that the existing definition of Hear & Treat may require elaboration, given that it is currently an Ambulance Quality Indicator but arguably does not adequately encompass and measure all the possible roles of health care professionals working in 999 clinical hubs. Given the use of the term RCDM as a title for a higher educational module and its use as a point of reference, the aim of this study was to determine how clinicians themselves defined it and thus if it more fully encompassed their role.

Methods

This study forms part of a larger piece of mixed methodological work undertaken to evaluate the efficacy of a new RCDM module at higher education (Brady 2016) and any factors effecting its efficacy. Participants (n=43) on both the first (n=13) and second (n=30) cohort, which included nurses and paramedics were invited to take part in telephone or face-to-face semi structured interviews to discuss their experience of the module. Interviews were recorded, transcribed, and analysed for themes in line with Braun and Clarke (2006) framework.

The first question in the interview was:

"How would you define Remote Clinical Decision Making in your own words"?

Ethics

Ethical approval was obtained from the University West of England Faculty Research Ethics Committee, Faculty of Health and Applied Sciences (UWE REC REF no: HAS/15/11/037).

Sample

Despite considerable efforts to enrol participants, including adverts and the use of gate keepers, only three participants agreed to interview (Table 4).

Table 4

Participant	Age	Sex	Profession	Employer
1	50-54	Male	Paramedic	999
2	45-49	Female	Paramedic	999
3	40-44	Male	Paramedic	999

Results

The definitions provided by the participants are as follows:

[Participant 1]

As it says it is the remote or detached triage of a patient who specifically to the ambulance service has called in for medical advice or support. From the perspective of a qualified or competent clinician, to discuss their medical issues and give appropriate support and medical advice related to their condition and to make that safe and educated decision to whether a medical resource should be deployed to them or at least signpost them direct them to the relevant care pathways.

[Participant 2]

The safe, effective and timely management of getting patients the right care.

[Participant 3]

Forming a full thorough assessment of the patient remotely so it would be by phone or by another means to make sure you get the right clinical outcome for the patient that takes into account everything that you assessed.

Discussion

As would be expected two participants made mention of the need to triage or assess the patient which forms the main (but not sole responsibility) of many telephone remote clinicians; no matter the final disposition. This may suggest that participants themselves align their definition with the Ambulance Quality Indicator definition rather than with the

various roles they also carry out (**See Table 1**). It could be argued that this itself represents a level of role ambiguity and that more specific research is required in this area.

Interestingly however none of the participants made specific mention of the need to close or resolve a case but rather each referred to the need to get the right or relevant care or pathway for the patient. This indicated less emphasis being placed on as specific an outcome as call closure, as defined by 'Hear & Treat', but rather what is most appropriate for the patient at the time.

Participant 1 balanced the consideration of whether a medical resource should be deployed or not against the need to signpost or refer the patient directly to the most relevant care pathways. This showed that the participant was not automatically considering a resource response or a call closure, but again rather considering what is most appropriate for the patient at the time.

Participants mentioned the need for effective and timely assessments and outcomes, which again placed no emphasis on the closure of the call but rather the actual efficacy of the processes and outcomes themselves. Such outcomes may have reaffirmed the need for an urgent or emergency ambulance response and/or a call closure. In a similar vein, participants made mention of the need to be safe, thorough, and form educated decisions, without making specific mention to what that decision or outcome may be.

Participants did not mention all the various roles they undertake **(Table 1)** within their definition of RCDM, and tended to focus far more on the efficacy of the processes and outcomes rather than just the outcome itself, with words such as safe, effective, educated, thorough, appropriate, and right being used. Given the lack of mention of closing or resolving calls however it might still be suggested that health care professionals in 999 clinical hubs do not consider it to be their main role despite this being the definition of the ambulance quality indicator Hear & Treat. Participants definitions appear to have more of an affinity with the telephone triage definition rather than Hear & Treat, for which ambulance services are assessed against, and may need to be reconsidered; although it is recognised may often change.

Limitations

The main limitation of this study was the sample size of 3, and that we were only able to interview 999 paramedics and not 999 nurses, who are integral to the clinical hub environment. Thus whilst these limited findings are enlightening when compared to current definitions they are not generalizable and conclusions cannot be used to influence practice. More research is required with larger and more diverse participant groups.

Conclusion

There is not a current definition which perfectly describes and explains the role of health care professionals in 999 clinical hubs and it was not the specific aim of this short study to determine a best possible definition. The need for role clarity is important both for employees and organisations and thus raises questions about the current Hear & Treat

definition used by NHS England as an Ambulance Quality Indicator which does not appear to fully represent the various roles health care professionals in 999 clinical hubs undertake. It is suggested that Remote Clinical Decision Making may be a more inclusive term but also recognised that other terms may also be more suitable.

This study suggests that clinicians themselves do not refer to all of their varied roles within a 999 clinical hub when asked to define Remote Clinical Decision Making, however, they also do not focus on a specific outcome when defining their role but rather the efficacy of the process used to reach the outcome and how appropriate and relevant that outcome is to the patients' needs.

More research should be undertaken to consider the definition of RCDM in all its forms and which definitions are used as a point of reference by which quality is measured in UK ambulance services.

Figure 1

Flowchart showing 999 call intake to Hear & Treat disposition

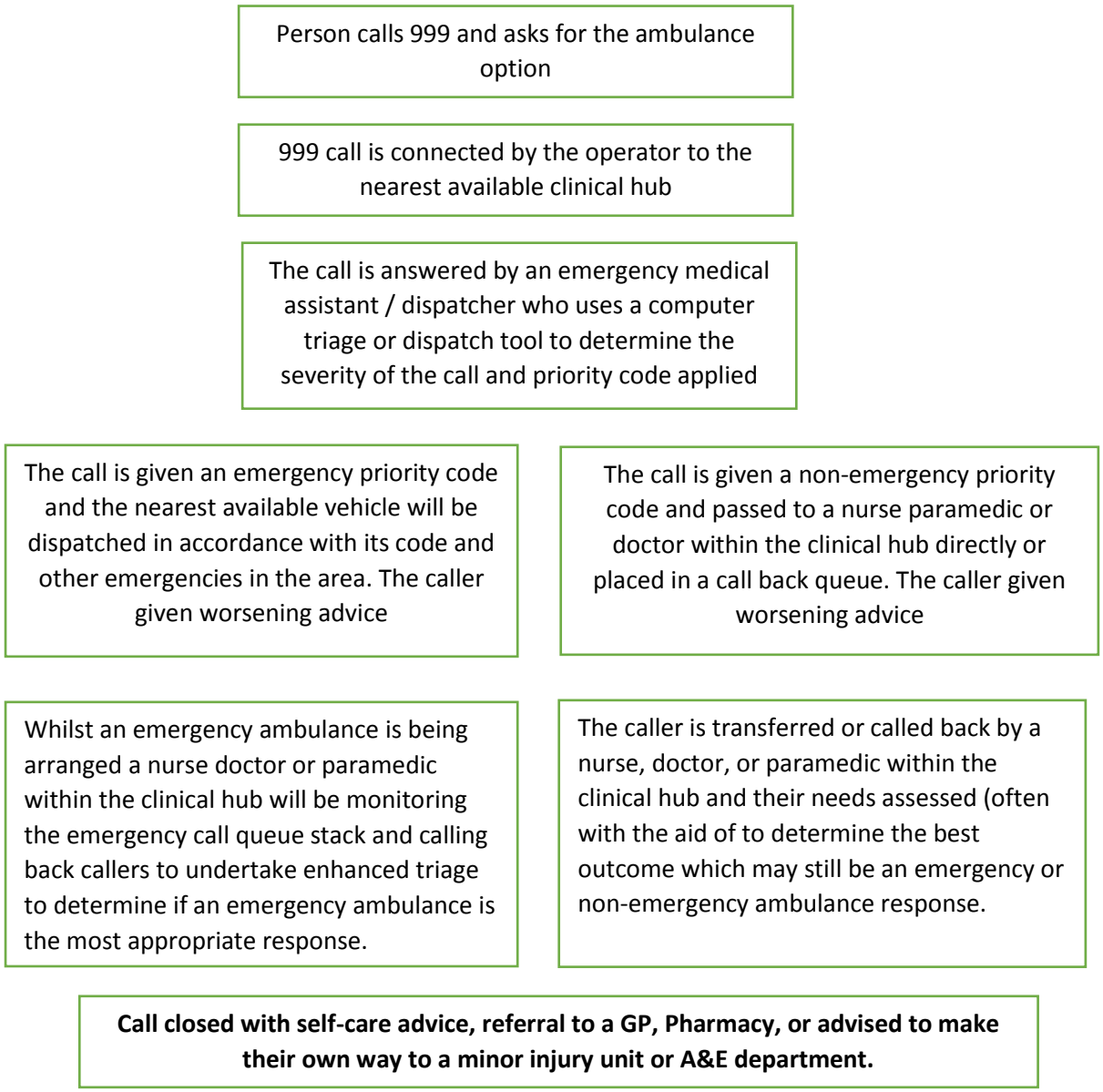

Table 1

Role of a telephone / remote clinician in a 999 clinical hub (Adapted from Brady 2016)
Having been preliminarily determined as low acuity or non-life-threatening, undertake an assessment of service users' medical, social, and psychological needs, provide advice and or triage the urgency of any need for a face-to-face assessment or referral.
Undertake enhanced assessment and triage of service users whose cases have been preliminarily determined as high acuity and life threatening by computer aided dispatch / triage tools, in order to ensure the correct type of resource is dispatched depending on the type of acute medical need (trauma, resuscitative, medical).
Undertake enhanced assessment and triage of service users whose cases have been preliminarily determined as high acuity and life threatening by computer aided dispatch / triage tools, in order to ensure more complex clinically specific advice can be given to the patients and carers prior to arrival of emergency services which falls outside of the scope of practice of non-clinician call handlers (pharmacological / positioning / equipment).
Work alongside ambulance dispatchers and computer aided dispatch tools to determine the priority of similarly coded emergency cases.
Provide advice and guidance to non-clinicians within 999 hubs in their computer aided triage & management of patients preliminarily determined to be both high acuity & life threatened and low acuity or non-life-threatened.
Actively monitor and if needed undertake remote enhanced re-triage / assessment of non-emergency / urgent Health Care Professional referred cases awaiting conveyance to hospital to determine if their condition has medically deteriorated and if so to what extent.
Provide senior clinical advice and supervision remotely to Paramedics & Nurses working face-to-face in practice with urgent & emergency cases (medication / cessation of resuscitation / safeguarding).
Undertake live and retrospective call audits of both peers and non-clinically qualified emergency medical assistants / dispatchers and provide effective and timely feedback and action plan if required.
Identify and manage frequent callers to the 999 services using care plans. Liaise with primary care if a caller has been identified as frequent but there is no care plan in place.

Table 2

Hear & Treat Definitions	Source
Hear and treat refers to emergency calls that have been resolved by providing telephone advice; that is, where advice has been given with any appropriate action agreed with the patient, with no face-to-face resource.	NHS England (2016)
Hear and treat describes the scenario when 999 calls are successfully completed ("closed") without despatching an ambulance vehicle response. This may include advice, self-care or a referral to other urgent care services.	Urgent and Emergency Care Review Programme Team (2015)
Hear and Treat is the telephone advice that callers who do not have serious or life threatening conditions receive from an ambulance service after calling 999. They may receive advice on how to care for themselves or where they might go to receive assistance.	Care Quality Commission (2015)

Table 3

Telephone Triage Definition	Source
Telephone triage was defined as a telephone contact in which the caregiver asked questions to estimate urgency and necessary care level, in order to give advice or refer the patient.	Huibers et al (2011)
Telephone triage is a systematic process in which a nurse screens a caller's symptoms for urgency and advises the caller when to seek medical attention, based on the severity of the problem described.	Briggs (2007)
Telephone triage is the assessment of a request for medical intervention for the purpose of ranking the level of medical intervention needed.	Lafferty & Baird (2001)
Telephone triage involves ranking clients' health problems according to their urgency, educating and advising clients, and making safe, effective, and appropriate dispositions – all by telephone.	Wheeler (1993)

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