Institution: Edge Hill University	
Unit of Assessment: C-17 Business and Management Studies	
Title of case study: Improving performance management and staff wellbeing in NHS Ambulance Services	
Period when the underpinning research was undertaken: 2014- 2020	
Details of staff conducting the underpinning research from the submitting unit:	

Name(s): Professor Paresh Wankhade	Role(s) (e.g. job title): Professor of Leadership and Management	Period(s) employed by submitting HEI: Sept 2014 - present

Period when the claimed impact occurred: 2015-2020	
Is this case study continued from a case study submitted in 2014? N	

1. Summary of the impact

Ambulance services play an essential clinical role in delivering pre-hospital care in the English NHS; however, they are under-researched in management studies. They are subject to stringent response time performance targets as the primary measure of success, but this lacks robust clinical evidence and is attained at the expense of staff wellbeing and resilience. Research undertaken by Wankhade since 2014 has been unique in underlining the need to move away from a myopic and dysfunctional dominance of response-time targets on organisational service delivery and to place greater focus on staff welfare. Consequently, there has been a discernible shift in the new **Ambulance Response Programme** (ARP) implemented since 2017 towards a more balanced and meaningful analysis of the performance metrics, allowing greater staff involvement. The research also informed key recommendations within the **Welsh Government's Review of 'Amber' category of calls** (serious but not life threatening) resulting in the 'non-imposition' of a new target for these categories of calls. The research also contributed towards **West Midlands Ambulance Service** (WMAS) becoming the top performing Ambulance Trust in the country, with lowest sickness absence rates in the UK. Additionally, a focus on **co-production of knowledge** with ambulance and emergency services practitioners and professionals has resulted in an expansion of the professional research capacity and an evidence-based approach to policy and practice across the sector.

2. Underpinning research

Wankhade has been at the forefront of work examining the dysfunctional consequences of the ambulance performance management regime; its impact on staff welfare and engagement; on organisational culture(s) and supporting innovation and professionalisation. This included work co-produced with professionals and practitioners. It demonstrated the inadequacy of the current ambulance performance management regime based upon response time targets and its negative impact on staff engagement and organisational productivity. He identified the perverse incentives inherent in using single dimension performance measures in the ambulance services and stressed clinical contribution rather than simply the urgent transportation of patients to hospital **[R1].** He adopted the concept of '*edgework*' to explore the complexities involved in how ambulance workers negotiate the rewards and risks associated with multidimensional work intensity. This research identified four distinct but interrelated dimensions of intensity: temporal, physical, emotional, and organisational. He found that as work continues to intensify, issues over staff dignity, staff retention, and the meaning of work become ever more challenging **[R2].**

Wankhade and colleagues then developed an innovative framework of '*organisational ambidexterity*' **[R3]** to illustrate the underlying dynamics of the tension between 'extremes' in macro contexts (e.g. linked to major incidents) and micro-extreme experiences in localised, individually focused settings with which to consider how individuals are subjected to rapid transitions between everyday 'mundane-extreme' and 'intense-extreme' and how they cope with the resulting organisational and emotional pressures to meet the 999 response targets.

Paramedic shortages and staff sickness have become key management objectives for NHS ambulance trusts. Wankhade **[R4]** studied specific stressors and the health-related issues and found an average absence rate (6.32 per cent) to be the highest amongst the entire NHS workforce (average 4.2 per cent). This research highlighted high sickness levels arising due to 'ambulance work patterns and lack of management and policy attention'**[R4].** As a result, even before COVID-19, staff sickness and well-being were becoming key organisational priorities and top of the workforce development agenda for all ambulance services in the UK.

Wankhade then explored the empirical relationship between organisational performance and ambulance culture(s) together with change management to understand the process of '*cultural perpetuation'* **[R5].** The role and identity of ambulance personnel, the conflict between professional culture and managerial objectives and the role of performance measurement were important issues which promoted resistance to enforced change and impeded planned management action, suggesting that a lack of progress could be misunderstood for the resistance to change rather than the way in which perpetuation of cultural characterises manifest in the ambulance services.

Additionally, working with the former Medical Director of the North West Ambulance Service (NWAS), Wankhade has been leading the drive to build a research culture and an evidence-based practice approach within the ambulance services. Springer commissioned Wankhade and the Medical Director of NWAS to produce what is now the leading reference source **[R6].** Co-authored by academics and with contributions from two serving ambulance chief executives and medical directors, the book has proven an essential tool for senior ambulance leaders and service chiefs to reflect on their own practice and implement new ideas, leading to improved service delivery and leadership development within their organisations.

3. References to the research

1. Heath, G., Radcliffe, J. and Wankhade, P. (2018). Performance Management in the Public Sector: The Case of the English Ambulance Service. In: Harris, Elaine (eds). *The Routledge Companion to Performance Management and Control*. Routledge: London:417-438. ISBN 9781138913547.
2. Granter, E., Wankhade, P., McCann, L., Hassard, J. and Hyde, P. (2019). Multiple Dimensions of Work Intensity: Ambulance as Edgework. *Work, Employment and Society*, 33 (2): 280-297. https://doi.org/10.1177/0950017018759207
3. Wankhade, P., Stokes, P., Rodgers, P. and Tarba, S. (2019). Work intensification and Ambidexterity - the Notions of Extreme and 'Everyday' Experiences in Emergency Contexts: Surfacing Dynamics in the Ambulance Service. *Public Management Review,* 22(1): 48-74. https://doi.org/10.1080/14719037.2019.1642377
4. Wankhade, P. (2016) Staff perceptions and changing role of pre-hospital profession in the UK ambulance services: an exploratory study. *International Journal of Emergency Services*, 5 (2): 126-144. https://doi.org/10.1108/IJES-02-2016-0004
5. Wankhade, P., Heath, G. and Radcliffe, J. (2018). Culture change and perpetuation in organisations: evidence from an English ambulance service. *Public Management Review*, 20(6): 934-948. https://doi.org/10.1080/14719037.2017.1382278
6. Wankhade, P. and Mackway-Jones, K. eds. (2015). *Ambulance Services: Leadership and Management Perspectives.* Springer: New York. ISBN 978-3-319-18641-2.

References 2-5 are published in peer reviewed journals of international standing. Reference 1 is a peer reviewed book chapter and Reference 6 is a book containing original research with a recognised international publisher.

4. Details of the impact
Context

Ten ambulance services in England and one each in Wales, Northern Ireland and Scotland provide NHS pre-hospital care support in the UK, dealing with over 12 million 999 calls every year. These organisations are structured regionally, each covering a sizeable geographical area, with over 33,000 full time staff. All 13 services are members of AACE, the College of Paramedics (National Professional Body) and the National Ambulance Resilience Unit (NARU) for building resilience capacity. AACE is the lead network of ambulance leaders providing ambulance services with a central organisation that supports, coordinates and implements nationally agreed policy and also provides other stakeholders with a central resource of information about NHS ambulance services. Wankhade's research reaches across this small but influential ambulance leadership group and is regarded as an integral part of their transformational programme to create an equitable performance regime and an evidence-based approach to practice across the UK. This research has directly enhanced the awareness for an agenda of culture change to focus on staff wellbeing and welfare. There are four major areas of impact:

a) Shaping the 2017 Ambulance Response Programme (ARP). Wankhade's work has been acknowledged by ambulance professionals and leaders as "one of the important empirical

investigations" in the ambulance services **[Other Source OS1].** Wankhade's research has long argued for the refinement of ambulance performance management metrics. In doing so this has raised the debate amongst service leaders highlighting the limitations of the former target regimes based upon simplistic notions of time, which have been used by NHS ambulance services since 1974. These targets persisted despite a lack of robust evidence that they actually lead to good clinical care and the potential dysfunctional effects on staff wellbeing. The old system was also susceptible to manipulation and gaming since Trusts often dispatched a rapid response vehicle (car) to try to meet the headline target of 8-minute response (from a 999 call to arriving at the scene) while the patient waited for an ambulance to be taken to the hospital. This resulted in hidden delays to some patients, inefficient use of ambulance resources whilst negatively affecting the emotional and physical wellbeing of patients and staff, especially due to ever increasing 999 demand. The Chair of College of Paramedics (2010-2017) contends that Wankhade's research expertly 'dissected the damage' which can be caused to ambulance organisations and more importantly to service users and ambulance staff, 'when poorly conceived and poorly executed target driven approaches are implemented without due thought or reference to the emerging evidence' **[Factual Statement FS1].**

The resultant ARP, rolled out nationally in 2017, gave ambulance staff more time to assess 999 calls so that patients can get the right response care first time. It also updated and changed response time categories; that aligned clinical and resource allocation requirements and response options for 999 dispatch codes. This means that Trusts no longer need to rush multiple resources to one 999 call to meet the 8-minute target but can take longer in the control room to assess the caller before sending the most appropriate response and also giving more time to frontline crews to drive safely and respond appropriately. The lead of the evaluation team appointed to review the ARP believes this research 'undoubtedly made a significant contribution' to the evidence base that provided the impetus to initiate what became a very significant policy change for ambulance services since 2017 [**FS2**]. In particular, Wankhade's …research into the workforce effects of response time performance pressures and the negative impact on staff wellbeing 'explored an overlooked feature of service delivery' **[FS2].** A former National Director of Urgent and Emergency Care states, the new framework of improvement, proposed in the ARP, recognises the need to end the culture of 'hitting the target but missing the point…. and is based on the twin principles of moving away from …response time-based performance regimes and developing sustainable organisational culture based on staff involvement and participation …a hallmark of Wankhade's research and publications' **[FS3]**.

 b) Informing the Welsh Amber Review and Outcomes. The Welsh Ambulance Services responds to all 999 calls in Wales. Each call is placed in one of three categories: 'Red' (immediately life-threatening), 'Amber' (serious but not immediately life-threatening) or 'Green' (not serious or life-threatening). This way of categorising calls and dispatching the correct resource is known as the 'clinical response model'. There was a concern that the Amber group is too large and is not sufficiently robust in terms of prioritising patients with high acuity illness, and that for some calls this is resulting in unacceptably long waits. This led to significant interest across the political and public spectrum in the quality and safety of the ambulance response, particularly for patients whose condition places them within the 'Amber' category. The Welsh Government responded to these concerns by requesting a clinically led review of the ambulance service response to patients categorised as 'Amber'. This resulted in the commissioning of the independent 'Amber Review' in May 2018. As a result of his published research expertise in the area, Wankhade was the only academic invited to join the Expert Reference group of the review team, but his role expanded to that of adviser and peer reviewer alongside provision of analysis contribution to the recommendations in the final report.

The report published in November 2018 **[OS2]** looked at the evidence from the clinical response model being used in Wales. Unlike in England, in Wales, categories outside of 'Red' (8-minute response), such as 'Amber', don't have a response time target, but callers receive an appropriate response, either face-to-face or telephone assessment, based on their clinical needs. The review found that the prioritisation of 'Amber' calls is complex since there is a range of different responses depending on the patient's condition. However, receiving a quick ambulance response but ensuring this is the right response for their condition is equally important to the public. It also contended that measures of quality are as important as response times and such measures should be refined to reflect the whole patient journey. The Secretary

of State while laying the report in The National Assembly for Wales **[OS3]** applauded the Review's key recommendations, especially the ones relating to the recommendation against the imposition of any new targets for responding to these categories of calls; a direct recommendation from Wankhade's research **[FS4]**.

The Amber Review has become a ground-breaking report in the ongoing development of the Ambulance Service in Wales and...'is a bold step forward in setting the agenda for dealing with such calls in other countries in the UK'[**FS4**]. It has also driven the implementation of a pan-Wales emergency ambulance demand and capacity review and has led to the 'establishment of a ministerial taskforce on ambulance availability that aims to address the wider health system impact on ambulance service provision', rather than one based upon new targets [**FS4**]. Wankhade's research (**Ref.1-3**) and expertise on the limitations of a simplistic time-based performance measures directly fed into two of the key recommendations of the report, mainly that (i) the ambulance service must ensure that planned resources are sufficient to meet expected demand and (ii) measures of quality and response time should continue to be published, although they need to reflect the patient's whole episode of care **[OS2, p. 95]**. The lead of the evaluation team appointed to review the ARP, who was also involved in the earlier evaluation of potential issues in managing the large volume of calls allocated to the 'Amber' category, argues that work by Wankhade in the review, was a 'necessary and important next step to ensure patient safety' **[FS2]**. The work resulted in implementation of the Amber Review recommendations by the Welsh Ambulance Service and, more significantly, did not result in imposition of any new targets for this category of calls.

c) Working with West Midlands Ambulance Service to enhance performance and improve staff wellbeing has involved three primary areas of impact, informing the organisation's approach on key aspects of their work. First, his research on the dysfunctional effect of targets and the work intensity which often results in organisational and staffing pressures of meeting the emergency 999 response targets (**Ref. 1,2,3,5**), helped the Trust to maximise efficiencies through data driven decisions using high quality reporting and analysis measures and performance mapping tools to forecast demand and match ambulance crews. 'Altering its performance management and mapping has helped WMAS become the top performing ambulance trust in the UK' **[FS5].**

The second area of impact centres around his research on empowering staff to exercise leadership with increasing confidence and build a knowledge and evidence base within the service (**Ref. 6**). WMAS identified and funded one middle level manager to pursue a professional doctorate in research with Wankhade at Edge Hill University in 2017 (first PhD to be fully funded by an ambulance trust on this new and unique research programme in the UK). This PhD will contribute to new knowledge on variance between organisations for non-conveyance of patients and will lead to new efficiency savings for the wider NHS ambulance sector.

The third area of impact resulted from Wankhade's research on sickness absence **(Ref.4)** in ambulance services which was also adopted by WMAS through 'alignment of workforce planning with the integrated business plans.… an approach which Wankhade argues in his work' **[FS5].** WMAS is an exemplar with the lowest sickness absence rates compared to all the UK ambulance trusts. As a result of this success, Wankhade was invited by WMAS Chief Executive (also the AACE Chair) to disseminate his research on the importance of placing workforce health and wellbeing at the centre of any modernisation programme, which is still a neglected management priority, at the Ambulance Leadership Forum (ALF) event organised by AACE in 2017. This strand of his research **(Ref.4)** has prompted AACE to conduct a national ambulance sickness absence study, in which Wankhade is a collaborator. This aspect of Wankhade's work has substantially contributed to the 'growing recognition of the importance of staff welfare and wellbeing' ….'within a culture that has paid little heed to this relationship' and ….one which will generate further impact 'as the consequences of the COVID-19 pandemic on staff become apparent' **[FS2].**

d) Co-production and collaborative working to drive cultural change
Wankhade's efforts in co-production of knowledge with ambulance professionals and leaders has made a broader contribution in effecting a culture 'shift' towards an evidence-based approach to practice, in a sector which is typically lagging behind in research in comparison to other healthcare disciplines. This has involved not only 'addressing the theory-practice gap in a purely academic sense', but also 'engaging with others in the wider emergency services

landscape' such as the police and fire services **[FS1].** His Springer book **[Ref.6]** is the first credible publication to explore organisational and management challenges in the UK NHS Ambulance Service. It is co-produced with ambulance service leaders who lead, influence or manage these services, informing the policy and guiding the practice and is now 'widely used by management trainees and leaders alike with the ambulance service' **[FS3].** The value of this work has been acknowledged as 'generating new methods of both researching the field and of translating the results of the new knowledge into practice' **[FS6].** This is also evidenced by the fact that AACE and senior leaders also support this drive for evidence-based management training. As a result, they have welcomed the innovative professional doctorate in emergency management at Edge Hill University, developed and led by Wankhade **[FS1, FS5].** Launched in 2017, the programme has seven candidates working across different ambulance/emergency services and the first two candidates from an ambulance service background are likely to complete their PhDs in 2022 and will make significant contributions to the development of pre-hospital research and evidence based practice. Pre-hospital and ambulance-based research was for many years a "Cinderella" area with little activity and recognition, given how important this safety net is to the public **[FS2].** This programme has provided a … welcome pathway to support clinicians 'who wish to pursue academic endeavour without having to relinquish their clinical work' **[FS2].**

   Wankhade's work has also influenced the collaborative working agenda in a broader sense across the other emergency services, such as the police and fire services. These services face similar pressures of increased demand to match resources, the primacy of performance targets and increasing pressures on the mental health and wellbeing of their workforce **[FS7]**. The Wellbeing Lead at the College of Policing contends that Wankhade's understanding of the wider context of workforce issues in settings such as police and fire and rescue services, are 'equally valuable in an otherwise fragmented emergency services sector landscape' **[FS7]**. In the opinion of a former Chief Fire Officer, this aspect of Wankhade's research is quite 'unique' in …space of 'integrated blue light service management and leadership' **[FS8]** and is contributing towards building an evidence led approach in the under-researched domain of emergency management.

5. Sources to corroborate the impact
Factual Statements [FS]: The following testimonials have been provided by key ambulance professionals and leaders:
1. Former Chair, College of Paramedics, (2010-2017). (impact a, b, d)
2. Lead Evaluator of Ambulance Response Programme (ARP), University of Sheffield. (impact a, c, d)
3. Former National Director of Urgent and Emergency Care, Department of Health (impact a,b).
4. Chief Ambulance Service Commissioner of Wales commissioning the Amber Review (impact a, b)
5. Chief Executive, West Midlands Ambulance Service NHS Foundation Trust (impact c, d)
6. Former Medical Director, North West Ambulance Service NHS Trust (impact d)
7. Wellbeing Lead, College of Policing (impact d).
8. Former Chief Fire Officer, Lancashire Fire and Rescue Service (impact d)

Other Sources (OS)
1. Fisher, J.D., Freeman, K., Clarke, A., et al., (2015), Patient safety in ambulance services: a scoping review. *Health Service and Delivery Research*, 2(21): 1-287. http://dx.doi.org/10.3310/hsdr03210 (impact a)
2. Amber Review (2018). *A Review of Calls to the Welsh Ambulance Service Categorised as Amber.* Emergency Ambulance Services Committee, NHS Wales: Cardiff. (impact b) http://www.wales.nhs.uk/sitesplus/documents/1134/NHS-Amber-Report-ENG-LR.PDF (impact b)
3. National Assembly for Wales (2018)- Statement from the Cabinet Secretary followed by Q & A session with other Assembly Members on discussion of Amber Review (Item 3, para 125-para 183).(impact b)