

New report on hospital doctor numbers out-of-hours informed by innovative sat nav research

July 13 2018, by Emma Lowry



Credit: University of Nottingham

University of Nottingham research into the out-of-hours workloads of UK hospital doctors has informed a new safe staffing report, released today (Friday 13 July) by the Royal College of Physicians.

Doctors on out-of-hours shifts work in stressful environments, performing complex tasks which are difficult to prioritise. They are often required to navigate large and unfamiliar sites to find wards, patients, other staff and equipment—all of which affects time spent on frontline care.

Out-of-hours hospital doctor care is poorly-documented despite the negative impact it is believed to have on quality of life for staff, its link to absenteeism, over-reliance on locums and associated costs.

By studying where [doctors](#) carry out tasks and how they prioritise conflicting demands, WayWard—a project from the University of Nottingham-based, Horizon Digital Economy Institute—aims to inform rota design to make shifts less stressful and safer for patients. WayWard is also contributing insights from real shifts into the training of junior doctors about to embark on out-of-hours shifts.

Alongside interviews, observations and data from task management systems employed by hospitals, WayWard researchers have employed new geospatial technologies—such as positioning and tracking boxes worn by participating staff—to build up a picture of out-of-hours work.

"WayWard uses an indoor navigation system, developed at Horizon, to allow us to study the movement of doctors within wards," explains Dr. Dominick Shaw (MB ChB, FRCP, MD), School of Medicine at the University of Nottingham.

"The potential implications of using these new technologies to improve service delivery within the NHS are very exciting and have the ability to shape the way we provide future hospital care."

Royal College of Physicians report on safe staffing

WayWard's innovative research, which is informed by clinical science, engineering, mathematics and computer science—has now been incorporated into the latest report from the RCP: Guidance on safe medical staffing.

From the Faculty of Engineering and Horizon Digital Economy Research at the University of Nottingham, Dr. James Pinchin is a WayWard co-investigator. An expert in measuring human behaviour with positioning technology, he is behind the new methods used to track doctors on shift and studied how this data informs current workplace

practices.

Dr. Pinchin said: "For the RCP report we developed a mathematical method to measure the location of the doctors and combined that knowledge with task logs to estimate the most likely ordering and timing of the tasks they completed.

WayWard findings

"Our findings showed that task versus demand on doctors working out-of-hours is predictable, measurable and increasing. Most of the work being dealt with by out-of-hours doctors consists of 'legacy' tasks left over from under-resourced day shifts. Sometimes this is necessary, due to drug scheduling, for example, but much of the time it isn't."

The RCP report intends to help NHS trusts understand how many staff they need to care for patients safely. It estimates the number of hours that clinicians need to be present in a given situation and the examples of staff needed to work these hours.

The report also recommends the number of posts needed to ensure that clinicians initially assessing patients and medical registrars can be available constantly.

The workforce numbers they suggest take account of periods of leave and therefore avoid predictable rota gaps and absences from the ward or admission teams. The report also indicates that the out-of-hours workload of the medical registrar on-call is often inappropriately "onerous," with implications for patient safety.

"The RCP [report](#) is a first attempt to indicate how many medical clinicians are needed in the out-of-hours system. This will be refined, validated and iterated in the future but the hope is that in the future

mandated staffing levels will deliver safer care and allow more careful use of staff through type of evidence we provided," Dr. Pinchin adds.

Future research projects for WayWard team to may include developing support tools to ease the managerial workload of out-of-hours teams to allow them to focus on clinical tasks.

Provided by University of Nottingham

Citation: New report on hospital doctor numbers out-of-hours informed by innovative sat nav research (2018, July 13) retrieved 6 May 2024 from

<https://medicalxpress.com/news/2018-07-hospital-doctor-out-of-hours-sat-nav.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.