

Institutional Rhythms: Opportunities for Energy and Mobility Demand Management

60% of the 25 million tonnes of carbon dioxide equivalent emitted by the NHS each year is associated with procurement, and a further 30% with travel and building energy use.¹ Whilst behaviour change initiatives and improvements in technological efficiency have resulted in reduced carbon emissions, if the NHS is to meet the target of an 80% reduction by 2050, and achieve its ambitious plan of a further 28% reduction by 2020,² more radical reductions are called for, and at a much faster pace.

This research project is part of an interdisciplinary research centre on the Dynamics of Energy Mobility and Demand ([DEMAND](#)), which is funded by the Engineering and Physical Sciences Research Council (EPSRC). It builds on the simple observation that energy is not used for its own sake, but in the course of accomplishing social practices at home, at work and in moving around.³ This focuses attention on the working practices that underpin demand for energy and travel. The [Institutional Rhythms](#) project is designed to learn more about how hospitals as institutions make and shape patterns of work, the patterns of energy demand and travel that follow, and how these patterns might be changed.

For example, how do shifts and working hours relate to flows of traffic into and out of hospitals? How does transport provision match shift patterns? How does the 24 hour opening of some sites impact working arrangements and therefore building energy use in others? How do working practices change so that they become increasingly dependent on air conditioning?⁴ How do patterns of delivery relate to peaks of energy demanding activity?

Issues of the timing, synchronisation and co-ordination of working practices are crucial for the scheduling of peak electricity demand and peak demand for travel, but they are also important for understanding how the totality of demand for energy use is constituted.

My project has two aims. The first is to map the synchronisation and co-ordination of ordinary working arrangements within the hospital and to understand how these arrangements are connected to wider patterns of travel, delivery and the movement of people and goods.

The second is to discover how the management of effective provision of health care impacts on the temporal rhythms of ordinary working and mobility practices. This will help identify opportunities for shifting ordinary working arrangements as a means of steering demand for energy and travel and improving cost savings to the NHS, without compromising on services.

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¹ Carbon Footprint Update for NHS in England 2012. Sustainable Development Unit.

² NHS, Public Health and Social Care. Carbon Footprint 2012.

³ Shove, E. and G. Walker (2014). "What is energy for? Social practice and energy demand." [Theory, Culture & Society](#)

⁴ Walker, G., Shove, E. and Brown, S. (2014). "How does air conditioning become 'needed'?" [Energy Research & Social Science](#)