

CIR Visit to the Hospital at Night Project London, England January 31 – February 3, 2006

*Report by
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Imagine reviewing patient needs, workflow, and existing staffing levels in a hospital over the course of a 24-hour period, asking questions, and then objectively re-configuring assignments and responsibilities based on patient needs and work hour mandates – not on traditions or turf. CIR's Barbie Gatton and Sandy Shea went to London to see how it was being attempted there.

Background to our Visit

At the November 2006 International Resident Work Hours conference in New Zealand, one of the most compelling speakers was Dr. Elisabeth Paice, head of the London Deanery, which oversees medical training for some 8,000 doctors in training in and around London. She described a pilot project called Hospital at Night (HaN), which aimed to reduce resident work hours so that they complied with strict European work hours limits, while at the same time re-engineering how the work gets done and improving patient care. We plied her with questions and she directed us to the HaN website, but the more we read, the more questions we had. In order to determine if this was a 'best practice' that might be applicable here in the States, we felt we had to see the project in operation. We went to London for four days: January 31st through February 3rd, 2006.

Overview of the Trip

We first spent time talking with Dr. Wendy Reid, who oversees the HaN project at the London Deanery. She's also a practicing Ob-Gyn (who spent a few months training at Grady Hospital in Atlanta in the mid-80s). She gave us an overview of the project – now in about 25 hospitals. She also set up a series of meetings for us at three London-area hospitals with HaN pilot projects:

- Homerton University Hospital, a 550 bed hospital in a diverse, predominantly poor neighborhood of London with a very busy ER;
- Hillingdon, a 450 bed hospital with a more homogeneous patient population in the suburbs; and

- Guys and St Thomas, a large, academic tertiary care medical center with 1200 beds at 2 sites, with the largest site (St. Thomas), some 800-900 beds located directly across the Thames from Parliament.

At these hospitals we talked with the medical directors and/or attendings in charge of the HaN projects, and the Clinical Site Managers (CSM) who ran the HaN teams at Homerton and Guys and St. Thomas. We sat in on two evening handovers of the teams (also at Homerton and Guys & St. Thomas) and followed the CSMs around the hospital to see what their duties entailed. At Guys and St. Thomas we also briefly spoke with residents. (See appendix for list of everyone we interviewed during our visit).

Why Hospital At Night?

Between 1994 and 2004, resident work hours in the UK were significantly reduced from about 100 per week to 72-76 per week. In 2004 the European Union Work Time Directive (EUWTD) took effect for residents, with the limit set at 56 hours per week, e.g. all time spent in the hospital, even if sleeping. (Note: the weekly limit for all other workers in the EU is 48, including attendings. In 2009, all residents must also be down to 48)

The National Health Service (NHS) allotted additional funds to help hospitals make the transition to 56 hours per week for residents. While some hospitals chose to simply hire more doctors to cover the shortfall, the London Deanery (which trains the largest number of doctors in the UK and is the most influential) decided to re-think how the work gets done.

They observed that 12 am – 7 am was the quietest time in the hospital, with most patients stable and that they probably didn't need to have so many residents on duty, each specialty and subspecialty 'watching its own patch.' They also observed that in general, across specialties, communication (between nurses and residents and residents and attendings) was sub-optimal, that the most junior residents were called first (with several subsequent calls up the chain of command until an attending was consulted) and that all residents on duty at night were constantly paged ("bleeped") by nursing staff for questions large and small, interrupting their work and any rest they might be able to get while on call.

How does HaN Work?

Out of these observations came the Hospital at Night project: a multi-disciplinary team of medical and surgical residents, headed by a Clinical Site Manager (usually a nurse, although it could be another healthcare practitioner such as a NP, PA, Chief Resident, Fellow, or Attending. The Clinical Site Manager is referred to in some hospitals as the Site Nurse Practitioner). The team identifies and manages all

emergencies and seriously ill patients at night. A key component of the HaN project is the handovers (each about 15-20 minutes long) that occur every 12 hours:

- At about 9 pm, the day team of medical and surgical residents meets with the night Clinical Site Manager/s (CSM) and the medical and surgical residents coming on duty at night to alert each other to the sickest patients and/or the ones they are most concerned might become sicker over the night and need to go to the ICU.
- Again in the morning about 8 am, before going off duty, the night residents meet with the incoming day residents and the incoming day CSM to once again alert each other to those patients who are most sick or of concern.
- HaN handoff does *not* take the place of the normal handoffs that take place between day-night medical and day-night surgery teams. The HaN handoff focuses on identifying and alerting everyone to the sickest patients.

Ob-Gyn is not part of the HaN pilot because by nature of the service required, it must be staffed 24/7 and because this service has already transitioned to shifts of no more than 12-13 hours at a time. Pediatrics is also not part of HaN because of the special expertise required to care for children. However, it appears that Peds-only HaN projects are beginning to crop up, as that specialty also sees the value of this work reorganization. In these cases, they work in parallel to the adult HaN teams.

Clinical Site Manager Role Key

The Clinical Site Managers (CSM) play a critical role in running the team. From what we saw and heard, they are primarily senior nurses with a background in emergency and/or intensive care. (At one site they were Nurse Practitioners.) The role and shift schedules of the CSMs can vary somewhat from hospital to hospital. The number of CSM's on duty corresponds to the size of the hospital. At Homerton (a 550 bed hospital) there were two; at Guys & St. Thomas (1200 beds) there were 3 on at St. Thomas's, and 1 at the much smaller Guys site.

At Guys and St. Thomas, the night CSMs come on duty at about 7 pm and first meet with the ICU Outreach Team, 1-2 nurses whose job it is to keep track of the status of all ICU patients. The Outreach Team tells the CSM what beds are available in the intensive care units – or might be available if needed be. (We're not certain that every hospital has an ICU Outreach Team – 2 out of the 3 we visited did.)

Then the CSM takes sign-out from their daytime CSM counterparts. This includes identifying the sickest patients on the floors, as well as doing a detailed bed analysis – which beds are open on which wards and what beds are available (or might be available in the ICU if need be), potential discharges, emergency department activity, etc. The CSMs may also communicate with attendings by phone

to alert them to any admissions and/or the possibility that they may be called – or called in – by the residents during the night if their patient gets sicker.

By 9 pm and the HaN handover, the CSM has an overview of all the medical and surgical patients on the floors. The CSMs and the day and night residents together then identify and share pertinent information about the sickest patients. It's also a chance for a focused discussion and questions (e.g. 'what's going on with this patient?').

“No Bleep” Policy

After 9 pm, the Clinical Site Managers also take all pages (bleeps) for the residents. In other words, if a nurse on the floor has a question for a resident, they must page the CMS first. If he/she can answer the question, they will. If it's a request for service (e.g. an IV re-start that can't wait until the morning), he/she will do it. If the question or service provision requires a physician, the CSM, will then contact the most appropriate medic on duty (e.g. if it is a patient in crisis, they may decide to go directly to the most senior resident on duty or to the attending). They usually see the patient themselves first, to better assess whom to call. When a resident does get a bleep, they know it is a) from the CSM, and b) it must be important. The residents are no longer constantly interrupted by pages, which frees them up to see and care for patients. Fewer bleeps mean residents spend less time on low priority tasks and are able to focus and complete their work more efficiently. This re-engineering of how the work gets done contributes significantly to being able to staff the hospital at night with fewer residents.

Reducing Resident Hours

Above all, it was emphasized to us over and over again that there is no 'one size fits all' HaN pilot. Each hospital has to determine for itself how best to implement the idea.

At Homerton, they were able to reduce the number of residents on call after 9 pm from 7 to 5 (the Ortho and Surgical senior residents were now on call from home). At Guys and St. Thomas, they reported being able to reduce the number of residents on site at night by 2/3rds after 9 pm. The residents on the day team were not all working 12-13 hour days. There were a group of residents working a "normal" day, then a group on short-call. At 9 pm there were two fewer people on the night team than had been on short-call. Each hospital will vary in the number of residents reduced, based on the ability of specialty cross-coverage, those who can be on home call, and the number of beds in the hospital.

Identifying Key Benefits & Success of Hospital at Night

Universally -- big hospital or small hospital, aggressive or soft implementation approach – everyone we spoke with identified the same key benefits:

- **No bleep policy** – hands down a winner. Eliminates stresses between nurses and residents, e.g. nurses describe the stress of seeing a patient quickly deteriorate and not being able to get the attention of the resident and doctors describe the stress of being interrupted for ‘stupid’ questions.
- **Clinical Site Manager role** – ensures that the appropriate level doctor is alerted at the proper time, thus improving patient safety; gives support to the floor nurses, who get their questions and concerns addressed promptly; helps with hospital work flow, bed identification, timely discharges, and allow doctors to focus on physician work by screening calls and doing scut work, thereby maximizing efficiency and quality patient care.
- **Protocols developed** – hospitals developing more and more protocols to deliver timely, appropriate care, e.g., floor nurses know that any change in vital signs triggers an immediate call to the CSM. Protocols standardize care and contribute to patient safety, as sick patients are identified quicker.
- **Improved communication between doctors and nurses** – HaN provides a much-needed system-wide connection between nurses and doctors. The Clinical Site Manager passes information between the two more quickly and efficiently, and this improved information flow eliminates stress between the two. Many reported being surprised by this outcome; it wasn’t something that HaN set out to achieve.
- **Attendings used appropriately** – Initially, attendings were concerned that HaN could increase the number of calls they receive at night. Subsequent feedback has shown that not to be the case. We were also told that ICU attendings in two of the hospitals we visited felt that when they did get a call in the middle of the night, they were already familiar with the patient, having been alerted to problems or potential problems.
- **Patient safety improved** – Although we saw no hard numbers (we may get some from Guys and St. Thomas), everyone we talked to said that the perception was HaN was safer for patients. One hospital said that the resuscitation rate had gone way down. They attributed this to more successfully identifying – and treating – patients at risk before they got worse. Also, HaN has largely eliminated the problem of the most junior resident on the service being called for problems that were above his/her level of competency. (Does it pass the “My Mum” test? – in other words, would I want my very ill mother taken care of by someone so junior? Even attendings that had been extremely skeptical of the project (and afraid that they would be called constantly, at all hours of the night) admitted that their fears had not come true and that they felt that patient care had improved. *No one* wanted to return to the prior ways before Hospital at Night.

How do Residents like HaN?

We didn't get to talk to as many residents as we would have liked. (We hope to make contact with more residents through follow-up email exchanges.) However, from the brief discussions we had with residents at Guys and St. Thomas and with staff representatives of the residents union (the Junior Doctors Committee of the British Medical Association) we found the following:

- **Not much collective memory before Hospital at Night** – as with all changes in residency training, after the initial year or two of change, the new people coming up don't know much is different. HaN began in August of 2004 and already, the residents we talked to had only worked in hospitals with HaN projects. (Note: the NHS has now funded a national HaN project to encourage implementation of the project throughout the UK.)
- **Proper Implementation Key** – One resident said when it worked well – it was great, but proper implementation was key. Another said it was important that the handoff be relevant, not just a formality. One said they liked HaN in principle, but that it could vary in quality depending on how good the CSM was.
- **Patient Safety & Education** -- One person who was very early in her training (a pre-registrar) and who had formerly been a nurse, said she thought that doctors were a lot less tired and that the quality of medical care was better and safer. She said the CSMs were superb, but that decision-making opportunities for doctors may be reduced.

[In its 2005 Evaluation Report – The implementation and impact of Hospital at Night pilot projects, resident survey respondents were quoted as having more time to observe procedures, participating in decisions with the clinical coordinator and senior resident and having more senior residents awake and working at night. The entire report can be downloaded by going to www.wise.nhs.uk/sites/workforce/usingstaffskillseffectively and then clicking on Hospital at Night. Other useful HaN background information can also be found on this site. See also a senior anaesthetist's growing acceptance of HaN: http://www.rcoa.ac.uk/docs/B29_Editorial.pdf .]

- **Junior Doctors Committee** – declared they were somewhat the victim of their own success. The union was part of the effort to reduce hours (Simon Eccles, the former head of the JDC, was a key player in the HaN project). Current residents can't remember what it was like to work such long hours, but they do remember that their pay has fallen (In 2000, JDC had negotiated a 3-band salary scale that paid residents significantly more for scheduled overtime work

greater than 48 hours. Now those hours and that extra pay have greatly diminished; and some perceive the BMA as having colluded with the government to reduce hours and salary.

Problems/Challenges of HaN

- **Successful Implementation** – as mentioned before, one size does NOT fit all – each hospital has to analyze their own particular situation and devise a Hospital at Night that fits their individual requirements. Going through that process is key to ‘owning’ the project. It cannot be imposed.
- **Management Support Critical** – at Guys and St. Thomas, the two physicians in charge of the overall project attended every HaN hand-off the entire first month to ensure that it worked as planned and that the Clinical Site Manager role was respected and followed. Once engrained, it then worked on its own.
- **Surgery Buy-In** – is still less than perfect, perhaps, people speculate, because they have less to do at night. Medicine residents may feel that they bear more of the burden of the work at night. No one we talked to appeared to have any bright ideas about how to solve this, but it doesn’t seem to affect the overall efficacy of HaN.

Final Thoughts on Changing the Culture of Medicine

Physician training in the UK has undergone a dramatic reduction in resident work hours and a substantial re-engineering of how hospital care is provided – all in a relatively short period of time. These seismic changes in the culture of medicine can be attributed to:

1. **European Union Work Time Directive** – the UK chose to take these hours limits very seriously, and the National Health Service allocated some money to help with the transition. [Elisabeth Paice of the London Deanery told the Auckland resident work hours conference that she actually had the idea for HaN many years before, but couldn’t interest anyone in trying it out because there was no impetus or mandate to make changes. When the work time directives set new hours limits, her ideas finally were heard by a more receptive audience.]
2. **Emergency Department (ED) 4 Hour Rule** – a NHS initiative (again, strictly implemented) which forced hospitals to change the way they provide care and manage patient flow in the ED. See details below.
3. **Medical Education’s Innovative Support for Change** – the London Deanery saw the evidence and rationale behind reducing resident work hours and the

opportunity to re-think how the work got done and by whom. Imagine if we had that kind of innovation and support coming from the AAMC and the ACGME!

Although we don't enjoy the same pressures for change as our colleagues in the UK, we thought that the Hospital at Night concept was exportable to a U.S. teaching hospital setting.

Other Interesting & Related Innovations Observed

We observed several other innovations which improved patient flow at work in the three HaN sites we visited and which we understand to be common to many London hospitals.

- **4 Hour ED Wait Limit** – Largely in reaction to patients' complaints of long emergency room waits, the National Health Service recently set a limit of 4 hours that a patient can stay in an emergency room before either being discharged or admitted. Hospitals are expected to reach 98% compliance with this 4-hour rule or risk sizable financial penalties (Note: psych patients are largely exempt). In order to deal with what is often seen as an impossible goal, the three hospitals we saw came up with new strategies:
 - a) **Clinical Decision Unit** – if the doctor suspects that a patient will be admitted, but doesn't have all the diagnostic tests back within 4 hours, the patient is admitted to the CDU for a stay of ideally between 12-24 hours (though sometimes it is 48). From this unit the patient is either discharged or transferred to the appropriate service. These are the patients who need serial troponins or have abdominal pain and need a CT scan.
 - b) **Medical Admissions Unit** – all admitted patients went to one floor so that the residents could streamline the work for the highest acuity patients and the hospital could better supply nursing where it was needed most. The MAU had more nurses than regular wards. Like the CDU, patients would stay for 24 – 48 hours and then move to another ward or be discharged.
 - c) **Hot Clinic** – if a patient is discharged directly from the ER without an admission, the doctor can schedule them for an appointment within the week at the 'Hot Clinic' for appropriate and timely follow-up care.
- **Patient Discharge Lounge** – timely discharges are a problem in UK hospitals too and now, with the 4 hour ED rule, it is more important than ever to identify and free-up beds quickly so that new patients can occupy them. The Patient Discharge Lounge was created to address this problem. Appropriate patients

who know in the morning that they will be leaving the hospital that day are first 'discharged' to the lounge while they wait for the results of a last test, or their medications, discharge orders, a ride home, etc. etc. The lounge is a pleasant room with comfortable chairs and loungers, a TV, fish tank, an area for the nurse in charge to do paperwork, a counter with water, juice, snacks, etc. and an adjoining room for a nurse to examine a patient in privacy, change a dressing, etc. Waiting in the lounge frees up beds for new patients and improves flow throughout the hospital. The lounge is staffed by a nurse and a transporter.

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For more information about Hospital at Night, go to:
www.wise.nhs.uk/sites/workforce/usingstaffskillseffectively
and click on HaN

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