Exploring the Hospitalist Movement in the USA

Tehmeena Khan
Churchill Fellow 2015
Acknowledgements

Firstly, I would like to thank the Winston Churchill Memorial Trust, for giving me this fantastic opportunity to travel, to learn and to inspire.

I would like to thank all the wonderful people at Rush University Hospital in Chicago and at the Institute of Healthcare Improvement in Boston, who took time out from their busy schedules to talk to me, to answer my questions, and allowed me to spend time shadowing them.

In particular, I would like to thank Dr Amir Jaffer, Head of Hospitalist Medicine at Rush, who took me under his wing and facilitated my project. David Smart, Administrative Project Assistant, who even to this day, continues to provide me with invaluable data and information. To Abbey Mastroianni, Administrative Manager, who remained my point of contact prior to my travels and helped me network throughout the hospital. Also, to Cathy Johnson, Patient Relations Manager at Rush, who spent several days showing me her exceptional work for patient safety initiatives.

Finally, I would like to thank my current hospital, Barking, Havering & Redbridge NHS Trust for allowing me to take time away from work in order to undertake my Fellowship.
Executive Summary

The term Hospitalist Medicine was coined in 1996 and refers to the care of patients during the entirety of their inpatient stay (1). Various models existed in some hospitals prior to this but now around 70% hospitals in the United States of America have a Hospitalist Medicine department (4,17). Earlier this year, in 2016, Hospitalist Medicine was recognised by the Centre for Medicare/Medicaid Services (CMS) with a dedicated billing code (2).

The need for this speciality arose when junior doctors in the USA were subjected to working time regulations. This meant that senior physicians had to spend more time in the hospital and on the wards, undertaking work that was previously done by the house staff (15). Additionally, there was also a financial requirement when CMS started to reimburse hospitals on a fixed term, discharge diagnosis rate rather than a daily fee. Following this, hospitals decided it would be more cost effective to reduce the length of stay for patients and ensure there was a faster turnover of patients (10).

The United Kingdom finds itself in a similar situation. The newest specialty, Acute Internal Medicine (AIM), was first proposed by the Royal College of Physicians in 1996, but only recognised as a sub-specialty of General Internal Medicine in 2003 (3). The need for AIM emerged as a result of the European Working Time Directive and the Emergency Department 4 hour wait times in the mid 2000s (4).

Both of these relatively new specialties provide generalised care for patients; however, AIM caters for patients in a dedicated unit, usually in the first 48-72 hours of their inpatient stay, before they are transferred to a specialist ward and team. The Hospitalists on the other hand, work hospital wide, caring for most medical inpatients, as well as some services extending to surgical and intensive care patients.

Studies in both specialities show that they have reduced length of stay without affecting the quality of care provided, reduced mortality rates and hospital complications (11-14,28). Additionally, patient satisfaction has increased (14,29).

In the United Kingdom, we do not have the workforce to deliver such generalised medical care to inpatients, the way it is undertaken in the USA, however, we can still adopt some of their working methods. General medicine physicians should be able to provide peri-operative care for surgical patients as they do so in the USA. We should be utilising our Physician Associates (PAs) and Advanced Nurse Practitioners (ANPs) to undertake more clinical work rather than purely administrative tasks. More patients are being admitted on the General Medicine on-call, we can learn from the USA, that capping team numbers and distributing patients between on-call teams may provide safer care and greater training opportunities for junior staff.
Lessons can be learnt from the Hospitalist system in the USA that are translatable to Acute Internal Medicine and General Medicine in the UK. In light of this, I conclude my report with recommendations for the UK health system.

**Recommendations**

In my opinion, we are not able to adopt this model of care in the UK in its current form; however, there are certain aspects that I think are adaptable to the UK:

1. *Introduce Co-management into UK hospitals*
   There is a lack of peri-operative medical care in the UK; except in the field of orthopaedic geriatric care. This is a service that generalists are able to provide in terms of pre-assessment clinics, ward reviews in the pre and postoperative period, medication reviews and early rehabilitation. This is a recommendation that I have discussed with the Advisory Board Company prior to their latest publication on how we may be able to adopt the Hospitalist model to the UK.

2. *Expand the Chief Registrar to reflect the Chief resident type role*
   Various fellowships exist for training registrars in the UK, however this Chief Resident type of role allows residents to get a flavour of consultant life before they have the full responsibility of being a consultant. It will provide them with more experience, confidence and leadership skills required for their consultant roles. The RCP is currently rolling out a pilot scheme (RCP Chief Registrar) for registrars to focus on quality improvement, leadership and management skills. This is a role that can be expanded upon and provided by other institutions.

3. *A Greater Emphasis on Apprenticeship style training for junior doctors*
   The training structure in the UK is changing. Responsibility is being passed up to more senior clinicians and this can have a negative impact on training. There are fewer and fewer ward rounds led by junior members of staff. Junior doctors should be able to take more responsibility and ownership of their patients and the consultant able to provide them with real time feedback.

4. *Invest, encourage and support quality improvement (QI) initiatives and programmes, especially by the acute medicine faculty*
   As hospitalists are at the forefront of quality improvement, acute medicine physicians are also at the front door and centre of the hospital and are in the perfect position to evaluate the system and introduce and test improvements in the system. The NHS is now introducing QI into its services; this is a perfect opportunity for acute medicine physicians to take this on to transform the services they provide.

5. *Capping team numbers to ensure admitting teams are not overwhelmed and have the time to provide good safe care*
   The medical on-calls in the UK are getting busier, with more and more patients being admitted to hospital each day. So perhaps re-thinking the on-call structure, and having a “long-call/short call” type structure and
having caps on the amount of patients admitted to a team may mean we are providing safer and better value care for patients. In addition to this, we may be able to adopt a “rolling three day” structure in MAU, similar to the one on the GMF. This is where the team is on call on the first day, post-take on day two and pre-call on day three, when they can focus on investigating and discharging existing patients prior to their next on-call.

6. **Expand the ANP and PA role**
   There is an increasing role for both advanced nurse practitioners and physician associates in the UK. Some hospitals are already adopting such models, but in my experience, they have fewer responsibilities compared to the USA. My current NHS Trust is expanding the role of PAs and providing this training with the local university.

7. **Encourage an open discussion of evaluations from students/junior doctors**
   Much of the feedback and evaluations that staff receive are anonymised and not discussed openly. Having this discussed in an open forum with the rest of your faculty ensures you are accountable for the training you are providing. This will allow those with poor evaluations to receive adequate support, in order for them to provide juniors with better training.
**The Hospitalist Movement**

**Glossary of Terms**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABIM</td>
<td>American Board of Internal Medicine</td>
</tr>
<tr>
<td>ACN</td>
<td>Advanced care nurse</td>
</tr>
<tr>
<td>ANP</td>
<td>Advanced nurse practitioner</td>
</tr>
<tr>
<td>Attending</td>
<td>Physician who has completed their training and is responsible for patient care</td>
</tr>
<tr>
<td>CMO</td>
<td>Chief Medical Officer</td>
</tr>
<tr>
<td>CMS</td>
<td>Centre for Medicare/Medicaid Services</td>
</tr>
<tr>
<td>ECI</td>
<td>Emergency Coding Index</td>
</tr>
<tr>
<td>ED</td>
<td>Emergency Department</td>
</tr>
<tr>
<td>EMR</td>
<td>Electronic medical records</td>
</tr>
<tr>
<td>EWTD</td>
<td>European Working Time Directive</td>
</tr>
<tr>
<td>GMF</td>
<td>General medicine floor</td>
</tr>
<tr>
<td>Housestaff</td>
<td>Inpatient based junior doctors</td>
</tr>
<tr>
<td>HM</td>
<td>Hospitalist Medicine</td>
</tr>
<tr>
<td>HMO</td>
<td>Healthcare Maintenance Group Organisation</td>
</tr>
<tr>
<td>Intern</td>
<td>A first year resident</td>
</tr>
<tr>
<td>LOS</td>
<td>Length of Stay</td>
</tr>
<tr>
<td>MAU</td>
<td>Medical Assessment Unit</td>
</tr>
<tr>
<td>NAIP</td>
<td>National Association of Inpatient Physicians</td>
</tr>
<tr>
<td>PA</td>
<td>Physician Associate</td>
</tr>
<tr>
<td>PCP</td>
<td>Primary Care Practitioner</td>
</tr>
<tr>
<td>QI</td>
<td>Quality Improvement</td>
</tr>
<tr>
<td>RCP</td>
<td>Royal College of Physicians</td>
</tr>
<tr>
<td>Resident</td>
<td>Physician in training</td>
</tr>
<tr>
<td>SHM</td>
<td>Society of Hospitalist Medicine</td>
</tr>
<tr>
<td>Sub-specialist</td>
<td>Physician who has specialised in an area within medicine (specialist in the UK)</td>
</tr>
</tbody>
</table>
**Background**

Dr Robert Wachter, Chief of Medicine and Chief of the Hospitalist Division at the University of California San Francisco Medical Centre (UCSF) in California, and Dr Lee Goldman, Chair of UCSF’s Department of Medicine, coined the term “Hospitalist” in 1996 (1). This term refers to a physician whose practice is dedicated to caring for a patient during the entirety of their hospital stay. They care for medical patients, providing cover twenty-four hours a day and seven days a week. In many units the cover extends to surgical specialities and intensive care patients. Hospitalist Medicine is the term given to the medical care of patients under the care of a Hospitalist physician. As Hospitalist Medicine now approaches its 20th anniversary, the membership of its national society is almost 15,000 members and in 2016 it was formally recognised by Centre for Medicare and Medicaid Services (CMS) with a dedicated billing code (2).

In 1996, The Royal College of Physicians (RCP) in the United Kingdom (UK) suggested a physician with the specific responsibility for medical emergencies. Almost 20 years later, the field of Acute Medicine is the UK’s fastest growing specialty with approximately 600 recently trained and trainee physicians (3). The need for acute medical physicians was reinforced when the Emergency Department (ED) 4 hour wait and European Working Time Directive (EWTD) 48 hour working week came into force in the mid-late 2000s (4).

“Acute medicine is that part of general (internal) medicine concerned with the immediate and early specialist management of adult patients with a wide range of medical conditions who present to, or from within, hospitals as urgencies or emergencies” *RCP Task Force 2007* (5).

It was proposed that by 2008 all hospitals should have a dedicated Medical Assessment Unit (MAU), where these trained physicians would carry out their work and that there should be at least 3 of them in every hospital (1). The patients spend the first 48-72 hours of their stay in these units and are subsequently discharged or transferred to a ward under the care of a different consultant physician, who specialises in the relevant field.

It is thought that the care of a patient with a specific ailment will be better cared for by a specialist in that field. However, the majority of patients will not fall under the “one organ, one problem” category and due to speciality wards filling up and consequently a lack of beds in that area, many of these patients will end up under the care of a specialist in another field. Several studies show that this may lead to inappropriate investigations, increased cost of care and increased mortality (6). The development of a Medical Assessment Unit ensures the care of these acutely unwell medical patients is delivered in one safe environment, where the junior doctors, nurses and the multidisciplinary team are trained to deal with such patients.

It was not until 3rd July 2003 that the Specialist Training Authority recognised Acute Internal Medicine as a sub-specialty of General Internal Medicine. The first batch of consultants qualified in 2007 following four years of training (3). Every year a number of trainees finish their training and join these forward thinking
pioneers throughout the UK. Compare this modest group to our physician colleagues across the Atlantic, where there has been an exponential growth of hospitalists since 1994. In 2002, there were more than 20,000 hospitalists in the USA, at the time a size comparable to cardiologists in the country. In 2014, the numbers were probably closer to 48,000 (2,7). This type of model also exists in some European countries as well as Canada. Prior to 1994, in the USA, the responsibility of a patient in the hospital was with the Primary Care Physician (PCP), and they recruited the help of specialists when necessary. In the UK, primary care is delivered by General Practitioners (GPs) but they do not look after patients when they are admitted to hospital. Hospital consultants provide hospital care, with Acute Medicine being the initial specialty that patients are admitted under. Currently, in the UK, there are numerous acute medical consultant vacancies, resulting in many MAUs being run by generalists as well as specialists. Interestingly, in 1996, Wachter and Goldman did state that this may be the most effective way to run a hospitalist service and those with the appropriate expertise within a group would see the patient (8).

**Introduction**

The aim of this project was to explore a system that is essentially a decade ahead of us, a system that pours more money into its health system, a system that is not bound by the confines of time and space. This is where the general physician is not restricted to one unit and whose responsibility towards the patients exceeds the 48-72 hours in the MAU. Examination and evaluation of this system will allow us to see if, in a time when the government wants to reduce the number of specialists, it would be beneficial to have a hospital wide, out of hours, acute physician, who is the named consultant throughout a patients stay.

I spent several weeks shadowing and interviewing the Hospitalist Medicine Faculty at a large, university hospital in Chicago. The aim of this was to directly observe their procedures and processes, their skills and working practices. I conducted several interviews with patients; these interviews gave me understanding and insight into the people that are directly affected by the Hospitalists. It also allowed me to assess patient satisfaction and experiences. I undertook a series of interviews with Primary Care Practitioners (PCPs); these allowed me to understand how significant a change it has been since the introduction of the Hospitalists. It also gave me an insight into the continuity of care post discharge. I spent some time interviewing and talking to different specialists; this allowed me to understand things from a specialist’s view of this expanding speciality. In this report I shall discuss my relevant observations, any imperative points noted during my interviews and what recommendations may be useful to the UK.

NHS hospitals are at crisis point; we have an ageing population, with multiple comorbidities and due to advanced medical technologies, people with chronic illnesses are living longer. As inpatient length of stay is forced to become shorter and hence more intensified, there will be a greater importance on the skills and experience of the physicians caring for such patients (8). Thus the need to explore an existing generalised model of care and evaluate which aspects may be translatable to the UK.
Hospitalist Medicine: A new Specialty

In the 1990’s the American College of Internal Medicine realised there was a problem with hospital medicine. Following years of advocating specialist medicine, they realised that there was a lack of generalism and suggested that they train more generalists who would need to look after patients globally with complex medical problems. A new breed of hospital specialist was required. It is thought that many organisations, for example the Kaiser Permanente Group, the largest Health Maintenance Group Organisation (HMO) in the country, and Rush University Medical Centre, amongst others, had their own variation of Hospitalist Medicine since the 1980s although these places had no official name given to this model of care (9).

The financial requirement for Hospitalists emerged when CMS decided they would reimburse hospitals on a fixed-term discharge diagnosis rate, but physicians were still charging a daily or fixed visit fee, so the aim of the hospitalists was to reduce the length of stay and the costs of care for patients (10). Hospitalists are always available to discharge patients, creating empty beds and allowing more patients to be seen. Hospitalist Medicine (HM) has also reduced the Length of Stay (LOS) index compared to other specialities and these cost savings do not come at the expense of quality of care (11,25). The length of stay index is calculated by the observed length of stay divided by the expected length of stay. A score of 1.00 would mean the observed length of stay and the expected length of stay are the same i.e. patients are not staying in the hospital longer than expected. A score higher than 1.00 means patients stayed in the hospital longer than what was expected, and scores below 1.00 indicate patients are spending less time in the hospital than expected. Cost savings also occur from the standardisation of care and process re-engineering. Studies show that the severity adjusted LOS (in days) for community acquired pneumonia is 4.37 for a Hospitalist, compared to 6.03 for a specialist (11,12). Hospitalists have also been shown to improve the value of care; this is the quality of care divided by the costs (13). Many institutions, for example, St Francis Hospital in New York have shown that not only are patient satisfactions scores are on par, and sometimes even better than other physicians, the readmission rates, mortality and complication rates are lower compared to other internists and primary care practitioners (14).

Ten to fifteen years ago, as working time regulations came into force for residents, the number of house staff available to look after patients decreased. These regulations followed cases like that of Libby Zion in New York, where her death was attributed to the long working hours of residents (15). This led to the requirement of internal medicine physicians whose primary responsibility would be the hospitalised patient. It was a description for one doctor who was a “Houseman and Attending” all in one. The theory was that people would become better at inpatient medicine if they did more of it. A further need emerged because Primary Care Physicians (PCPs) no longer wanted to cover the on-call without being reimbursed for them; in many institutions they were not getting paid for their on-calls (16). The recent recognition of Hospitalist medicine by CMS allows benchmarking and comparisons of performance by different institutions (2).
Variation between Hospitalist Medicine Models

The type of Hospitalist model utilised is very institution specific. There may be a full-scale Hospitalist team, where every patient admitted to the hospital has a Hospitalist as their named doctor. The hybrid model is one that is present at Rush University Hospital, where all internal medicine patients are under the Hospitalist team but the surgical and certain medical specialties e.g. Oncology, Haematology and Liver Transplant remain under their base teams. In some hospitals there are Subspecialty Hospitalists for example Oncology Hospitalists – these are specialists who only care for inpatients and do not undertake any outpatient work. Around 70% of the hospitals in the United States of America have adopted a Hospitalist model of some sort (4,17). However, down the road from Rush, at the University of Illinois Chicago, there is no Hospitalist model in use. The hospital is specialty based and the house staff cover any general medical issues arising in their patients. The patients without any specialty specific complaint are under the care of the general medicine team (i.e. the original Primary Care Physician model of care).

There are many different variations for the rota design for a Hospitalist and hospitals are continuously experimenting with different designs e.g. one week on duty and one week off duty, inpatient medicine for 2 weeks and outpatient medicine for 3 weeks. Some services also provide a follow up with Hospitalists in their clinic upon discharge. This may be in the form of a post hospitalisation clinic for high-risk patients. The Nocturnist Hospitalists, who only cover night duties usually, have a seven on seven off rota design.

John Nelson, one of the pioneers of hospitalist medicine predicted that there would be burn out with the models of care that were present and suggested a structure that preserved longevity (18). Wachter also predicted in 1996 that spending 12 months as a consultant undertaking inpatient work would lead to burnout, and that we must follow our intensivist colleagues in that they spend 3-6 months in the unit and the remainder of their time, they will be have more opportunities for creativity. These physicians become a core group in the hospital; they are aware of the infrastructure and processes and thus are the perfect group to be committed to quality improvement in the hospital and would also have the time to undertake this work (8). These physicians have the responsibility of not only taking care of the patients in a hospital but also taking care of the systems in place. They are able to see where improvement is required and are in a perfect position to test and implement this improvement.

John Nelson and Winthrop Whitcomb formed the National Association of Inpatient Physicians (NAIP) as a national society for Hospitalists in 1997. In 2003, the society had 3500 members and the name was changed to Society of Hospital Medicine (SHM) (2). Although, it is now estimated there are 48,000 hospitalists in the USA, as there is no national certification, the exact number is difficult to estimate (2).
The following section is mainly from first hand accounts of faculty members, unless otherwise stated.

**Rush University Medical Centre: History & Founding Faculty**

Rush University Medical Centre in Illinois, Chicago, is a 664-bed hospital and was ranked as one of the top hospitals in the United States of America according to the US News and World Report 2014-15 (19). These figures take into account patient safety, death rates and complexity of cases. Being a hospital with an interesting history and one that went from a journey where it was in the red for many years to being one of the top ranked hospitals in the USA, it was only natural to feel curious and want to learn not only about hospitalist medicine but also about its transformation.

Five physicians were fundamental to the formation of Hospitalist Medicine at Rush in 2005; these were Dr Margaret McLaughlin, Dr Scott Hassler, Dr Jisu Kim, Dr Richard Abrams and Dr Richard Huh. Their ideas behind this model of care was to have separate inpatient and outpatient physicians as they felt that general medicine services could not function with on-going outpatient commitments. PCPS were always the largest group of internal medicine doctors at Rush and prior to 2005, a group of PCPs shared the on-calls and mainly saw patients who themselves did not have a PCP, this accounted for around 10-15% of all patients. Occasionally, some of the sub-specialists (in the UK, known as specialists) would join this on-call rota. Patients were admitted to hospital and the residents/interns would look after them. Around this time, a consultancy firm visited Rush and advised them that they required a much larger service in order to continue providing this style of care for patients. The Hospital Chairman at the time did not approve of this new service, as he was a firm believer that patients ought to see their own PCPs whilst in hospital, as the PCP knew the patient far better than anyone else did. He advised the five pioneers that attempting to implement this type of service would tarnish his reputation as Chairman.

Dr Margaret McLaughlin who initially trained as PCP, started at Rush in 1980 and was one of two general internists at the time. She knew from her interaction with residents that they were not happy with working for PCPs, as the residents typically worked for 8-10 different PCPs and there was no time for any teaching and there was a lack of continuity in the team structure. The subspecialists relied on their residents to deal with any medical issues that they were unable to deal with themselves and this could potentially be unsafe and lead to poor quality of care for patients. So the pioneers decided to use this information in their argument to take back to the Chairman. They decided that the main reason to establish the hospitalist model would be to provide more teaching opportunities and a more consistent team structure for their residents and students, and they would do the research, benchmarking and initial set up themselves. The result was that the Chairman was pressured by the rest of the board to try out this new model of care. Once he had been persuaded to permit this new system of care, he became an advocate of the model, using his power and presence to win round the subspecialty doctors. This model did not impress many of the subspecialty physicians but it seemed to be their only feasible option to try. Scott Hassler thinks that fewer phone calls are made to specialist consults now compared to
when the PCPs saw their inpatients. The contribution of PCP to inpatient care at Rush is now less than 5%.

Margaret feels that people often still look down on HM because they see hospitalists as doctors who do all the “grunt work”. However, she knows that colleagues can often create their own area of expertise within the field in order to earn respect. For example, Amir Jaffer, the current Chief of Hospitalist Medicine at Rush, has undertaken an incredible amount of work on medical anticoagulation and this has enabled him to become a well-respected, published author in this field. When asked about deficiencies in the current model, Margaret appreciates that most HM doctors have little knowledge about outpatient medicine and this can often lead to issues occurring around discharge planning. Another downside, which is echoed by many others I have spoken to, and also echoes some of the voices of Acute Medicine physicians in the UK, is that there is a high risk of burnout in this high pressurised, intense working schedule. She advises that people need to find other non-clinical interests for example research or medical education. The current model meets the current care needs of patients and the training for the house staff; it has evolved because gaps were seen in these two areas especially. Speaking about the future of HM, Margaret thinks that there will be an increased awareness of it and more people will be involved with quality and safety work. She also thinks that models of care in institutions are likely to stay varied but there may be some standardisation with the accreditation pathways and certification for Hospitalist Medicine.

Scott Hassler has been at Rush for 15 years and has been the Internal Medicine Program Director for several years. His job is to oversee that the national training requirements are met for residents. The feedback he receives from trainees shows that they really enjoy the Internal Medicine Programme at Rush, residents say that there is a positive learning and teaching culture and the institution does not appear to be hierarchical. Scott mainly works in the outpatient setting, having given up his inpatient role in order to continue his programme director role. During these clinics his main job is to supervise trainees and ensure they are getting the best out of their outpatient experiences. The main issue for Scott in the HM field is that physicians are often being seen as “super residents” and that they need to work on ways in which they are being recognised for being Attendings and for the work they are doing. Scott has undertaken a substantial amount of quality improvement (QI) work in the hospital; he has taken Rush forward in achieving many of the national patient safety goals. There is now a training requirement in the residency programme to teach QI and residents are given time to ensure this work is undertaken and completed.

Richard Hah also trained as a PCP and joined Rush in 1998. At the time, he was one of 11 internists, and only 4 of these physicians were working full time in the hospital. In 2004 he decided to stop undertaking any outpatient work. In 2015 there were 25 full time Hospitalists that work during the day and even more Nocturnists and part time Hospitalists. Richard spends a lot of his time working with and teaching surgeons. He is the founder of Co-Management, which will be discussed later in the report.
Jisu Kim also trained as a PCP and started working as an internist in 2001. He worked in the outpatient setting for 5 years and then joined the inpatient service, where he worked for 4-12 weeks in the inpatient setting followed by a few weeks in outpatients. In 2004, he stopped all his outpatient work and continued a full time career in inpatient medicine as he was already spending months at a time in the hospital and was worried about not being able to provide adequate care for his primary care patients in his absence. He thought that it would be easier to transfer their care onto a full time Primary Care Physician.

Jisu tells me that initially there was some reluctance from the PCPs to send their patients to Hospitalists, but this confidence and trust grew over time. As their patient numbers began to increase, the service and the recruitment grew. In his opinion, over the last 5-6 years, the interest in HM has increased significantly so there have been very few issues with recruitment and retention.

Jisu thinks several problems still exist nationally and locally within HM. Locally, he feels that the service still lacks its own identity and because of this people often feel this role is an extension of residency. He feels that the speciality does not have the respect it deserves from colleagues. Surprisingly, this contradicts all the information I have gained from my interviews with sub-specialists, they all have a lot of respect and admiration for Hospitalists. They feel Hospitalists work hard, are good at what they do and are able to act as care facilitators for patients. Jisu feels that Hospitalists’ view of themselves as “senior residents” may lead to this perceived lack of respect. The national problems he describes seem more daunting. There is an obvious lack of communication between the inpatient and outpatient setting, with many Hospitalists not understanding outpatient pathways and hence discharging patients home without the appropriate follow up measures in place. This is also something that was predicted by Bob Wachter in 1996 (8). When asked about the future of HM, Jisu tells me that it is here to stay and will expand. He thinks it will also extend its services to a post discharge follow up clinic, to nursing home clinicians, rehabilitation facility cover and more community programmes will be available.

Rush University Medical Centre: Current situation

Rush is based in outer Chicago, where there are two other hospitals within a three-mile radius. The hospital has approximately 50 medical admissions per day. Patients either self-present to the Emergency Department or are referred by their PCP to the ED or to a Care Distributor (similar to a bed manager in the UK). Once the ED team has made a decision to admit, they contact the Care Distributor and are allocated a bed. Dr Ed Ward, the ED lead clinician, thinks this system is much easier and quicker to admit patients, compared to several years ago when he would spend hours on the phone trying to find the right specialist to admit his patient.

Rush has just over 130 medical beds and the Hospitalist Medicine faculty consists of 38 physicians including six Nocturnists. There are 8 General Medical Floors (GMF), as well as Surgical floors and Haematology-Oncology floors. Out of these teams, two will be on a “long call” per day, where they will receive the majority of the new patients, these teams are capped at 20 patients each. There
will be two “short call” teams, which also receive a proportion of the new patients; these are capped at 14 patients in total. There are two “mini-teams” who always take the overflow of new patients and are capped at 14 patients each, and these teams do not participate in on-calls. Usually, the long call teams will take 14 new patients and the short call teams take about 4-5 new patients. There are 6 full time Nocturnists in the hospital and several part time ones, 4 are on per night and provide cover for the entire hospital. These are either fully qualified Attendings or doctors that have finished their residency and have not yet applied for an Attending job. The GMF teams are on-call every 4th day from 7am-9pm, where the whole team is based on the ward and admit new patients sent from the ED. An intern is allowed to see 5 new patients and 2 patients that are either follow-ups or step-downs from other units. A senior resident can supervise 2 interns and see 10-14 patients themselves. The second day would be a post call day for the GMF teams to allow them to focus on patients admitted the previous day, the 3rd day is a short call day where about 3-5 patients are admitted from the overnight call (if the long call team has their quotas saturated) and the 4th day is a pre-call day where no new patients are admitted, allowing the team to catch up on their work. The Attendings should see patients within 24 hours but they usually do so within 12 hours.

Attending Directed Services
Rush has teams covering Attending Directed Services (ADS), where there is an Attending and an Advanced Care Nurse practitioner; they do not have any house staff on this service. They are capped at 16 patients per day for safety reasons. The ADS roughly work 30 weeks of the year and work 7 days a week in that time, and their hours are 8-4pm. They get paid more than the GMF teams, as do the Co-Management physicians due to lack of house staff thereby making their work more intense with more administration. Subspecialists occasionally admit patients to a hospitalist service, but the Hospitalist will be their named physician and the specialists will only provide consultations if asked to.

In the majority of institutions, for example, at the other side of the city at Northwestern University Hospital, most patients are taken care of by an Attending Directed Service (ADS). At Rush, this type of team structure is a minority, as there has never been a shortage of house staff thereby ensuring this type of service was not necessary.

Observation Unit
During my time at Rush, the Observation Unit was opened; this is a unit run by the Hospitalist Faculty. This unit would admit patients who are low risk and require minimal investigations e.g. troponin tests and echocardiograms. The patients are admitted for less than 48 hours. One Attending physician and one ANP run the department. There is a specific admission criteria (appendix 1). The ward currently has 8 beds but they would like to expand up to 12 beds in the near future. It seems that the ANPs had more independence and skills compared to most ANPS in the UK. An ANP I met, Nicole, would undertake complex procedures like chest drains and ascetic drains. Although she had no admitting rights to the unit, she was able to review and discharge patients independently.
Whilst I was there, 4-6 beds were usually occupied on a daily basis, and all patients that were being discharged were usually home by midday.

The General Medical Floor
On the GMF, at 7-8am, the house staff prepare notes and patients to be seen, and they will usually start seeing the patients themselves. When the Attending usually arrives after 8am, they will see new patients and complex patients together with the juniors. One of the main notable differences from the UK, was that the junior doctor and even medical students take ownership of individual patients, they see the patient and discuss the management plan themselves, with the Attending observing them, the Attending then adds anything if necessary. Following the rounds, the attending physician then provides feedback to the juniors regarding their interaction with the patient. This feels more like an apprenticeship based system; where the junior has full responsibility for the patients with senior supervision. In the UK, there are many ward rounds, where even senior registrars act as scribes for the consultant, and never have an opportunity for direct observation and feedback in such a way.

At 10am, there is a case round, also know as a multidisciplinary round, to ensure there is an opportunity to discuss the holistic needs of the patients. Those in attendance are physiotherapists, a case manager (who is usually an ex-nurse), occupational therapist, pharmacist, and the attending doctor; After this meeting, the Attending may go and review the rest of the patients themselves. Notes are usually typed up on the Electronic Medical Records once all patients have been seen, some people even write their notes at the end of the day. The afternoon rounds are usually based around a computer workstation, and are to ensure all tasks have been completed and for the Attending to facilitate things that have not been completed e.g. specialist reviews that have not been undertaken so the Attending will call the specialist and ask for the review to be expedited. A yellow safety checklist is used by some of the Attendings (appendix 2) to ensure nothing is missed from the afternoon round and to provide structure and consistency to the rounds. This checklist emerged as a result of a quality improvement project undertaken by one of the teams. The house staff ensure that discharge summaries are faxed to PCPs as well as making phone calls to them to ensure there is verbal communication too. Some residents are given iPads by their training programmes and have easy access to the EMR.

Co-management
In 2007, Rush Hospital had to expand its Hospitalist faculty in order to care for the increased number of patients entering its doors and in addition to this started the sub-specialist field of “Co-management.” This is essentially shared peri-operative care; the surgeon is still the primary Attending, the Hospitalists however take care of any medical problems arising; they see the patients daily, can write orders and make decisions related to the patients’ care. Certain surgical specialities have contracts with HM to co-manage their patients routinely rather than an as required; these specialties are Orthopaedics, Neurosurgery, Gynaecology and Rehabilitation Medicine.
When undertaking medical consultations, the Hospitalists usually see about 12 patients per day. They also see all surgical patients under these above named specialities unless the patients are under a private doctor. Each of these patients under the above named specialties are seen in a pre-assessment operative clinic by a Hospitalist and then again when they are in hospital having their procedure performed. Even if the patient is young, or healthy and has no known medical problems, due to the nature of the contract, the hospitalist must still see the patient. An alternative contract with some specialties requires a Hospitalist to see a patient if they are aged 65 years or under and have two chronic medical conditions or if over 65 years of age and have one medical condition.

The Co-management team usually involves the surgical residents on their ward rounds and provide them with teaching and training. Richard Hah spends an hour every day screening all the surgical admissions to see which patients have been admitted and then distributes them amongst the 4 Co-managers; they see 80-100 patients per day between them. At night the Nocturnist looks them after and the Co-managers provide a 7-day service.

Most of the HM faculty take part in the Co-management rota, there are 4 of them on at any one time. Some of the faculty, for example Richard Hah, only do Co-management. Co-management is an example of an Attending Directed Service at Rush. Richard’s team ensure that all postoperative patients are seen on day zero. The Co-management Attendings are on service for one week at a time and a full time work is 30 weeks out of 52. Barriers to Co-management according to the faculty is that they are often short staffed as not all the faculty feel comfortable undertaking this type of work, and that the current faculty see far too many patients that they do not need to (e.g. the young and fit). However, they are concerned that if they don’t see the patients and a problem occurs they would have breached the contract they have with the surgical teams and there may be repercussions. If a patient refuses to see a Hospitalist, then the surgeons do their own pre-operative assessment for that patient.

There are 5 pre-assessment clinics per week; these are every afternoon of the week and they see around 11 patients per clinic. Studies on Co-management and patient safety are variable. The Mayo clinic has undertaken the largest study in 2005, however, it revealed that there was no difference in length of stay and adverse patient effects. The biggest benefit was in those patients who were less complex, for example orthopaedic and neurosurgical patients. However this was a relatively small study and more work needs to be undertaken in the future to further evaluate this (20).

**Electronic Medical Records**
The hospital has an online patient records system called EPIC, where the patient records are shared with other hospitals and certain PCP offices; this allows easy dissemination and sharing of information when necessary. Patients also have access to part of this system, known as “Rush My Chart”, where they are able to view a summary and their test results. They are able to contact any doctor via email using this programme and are able to access it on their personal devices.
During my patient interviews, I was told by almost all of them that they used this and found it extremely useful.

**Quality Improvement**
As stated earlier in the report, Hospitalist Medicine is at the centre of the hospital and these physicians are the ones that are best placed to undertake quality improvement and systems improvement. Rush has embraced this journey and has focussed on 4 key areas in the last few years. These are:

- Infection control
- High value care
- Medicine safety
- Care transitions/hand offs (i.e. hand overs).

One Hospitalist has been assigned to each pillar to lead it; they have formed a team and undertaken projects to improve the care that Rush delivers to its patients. Examples of projects have been; improving safety of blood transfusions, reducing echocardiogram requests in syncope, introducing a ward round checklist (appendix 2). In 1996, Wachter and Goldman predicted that the Hospitalists would become leaders in clinical work, research and education, and in particular they would be at the forefront of quality improvement (8).

**Patient relations**
I spent a few days in the Patient Relations Department with the Patient Relations Officer Cathy Johnson, where I learnt about the honest and open culture there is at Rush. This allows teams to delve deeper into why problems are occurring. There are many initiatives in place, staff can put their own errors on the hospital website and identify themselves without fear of censure. The staff have taken part in patient safety videos to display to other staff and patients regarding errors made and near misses. These stories are all distributed to all staff via email and the hospital website.

CMS has associated financial initiatives, in order for the payments to be made, 50% of the patient experience survey response rate is required. The response rate for medicine is notably quite low at 20% and even lower for Hospitalist Medicine. Cathy speculates that, as there are so many Hospitalists and often patients are transferred from the one on admission to another the next day, this leaves patients confused about who their actual doctor is. Cathy spends her days trying to improve patient care and satisfaction and tells me she is in awe of the NHS and really wants the USA to follow in its direction.

Rush receives around 1500 complaints per year total and these are provided to the heads of departments, along with any compliments their teams have received. The Office names the doctors who have had complaints or compliments. Six years ago, Rush was receiving 500 complaints but Cathy speculates this was because people were not reporting them.

I met Francis Fulham, Strategic Planning Director for the hospital, who has also spent some time in the UK shadowing different aspects of the NHS. He tells me there are two types of patient satisfactions surveys. The first one, Prescathy a profit organisation looks at patient satisfaction scores; this is a census, and
patients are sent a letter in the post. The hospital requires a 30% response rate for this. The other is Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) from the Federal Government. In this survey, however, there are only 3 questions that relate to a doctors communication. Epic maestro is a program that allows doctors to view all the survey results for their own departments as well as their colleagues in the hospital. Some hospitals publish survey results along with patient comments online. Since the Hospitalist program has become more established, the patient satisfaction score have increased, moving from the 4th national percentile to the 66th percentile and is now amongst the top 5 hospitalist programs in the country (21).

Rush Hospitalists have the lowest length of stay (LOS) amongst the Chicago Academic Medical Centres and are in the top decile nationally in UHC from 2012-2015. UHC is the University Health System Consortium, the membership includes academic institutions from across the USA. The institutions came together to develop the Quality and Accountability study in order to have benchmarking and comparative data (21). The LOS index was discussed earlier in the report. The average LOS (days) at Rush in 2001 was 6.031, in 2002 6.0582, this is data from all staff groups, and the data for 2015 shows the LOS (days) for Rush Hospitalists was 4.27 and the LOS index was 0.84 (data from Information Services Division, Rush University Medical Center).

Quality Assurance & Leadership Meetings
The HM department have weekly Quality Assurance meetings. The Attendings, nursing staff, patient relations team, administrative staff, pharmacy, legal department, risk management and social workers attend these meetings. The purpose is to discuss any issues arising over the past week. The main issues discussed were complaints due to poor communication. One of the possible explanations for this was that things may not always be documented in medical notes right away and this can lead to confusion and missed information between care providers. Other issues raised where there were medication supply issues on wards, equipment access issues e.g. pump availability overnight and unsafe transfers of patients from wards e.g. no oxygen during transfer to diagnostics. The purpose of the meeting is to ensure all the right people are in the room to ensure these issues do not arise again.

There was also a weekly Leadership Meeting attended by all the HM departmental leaders. There were usually 6-8 Attendings who attend these meetings. They discussed issues such as resident recruitment, which was ongoing during my time at Rush. They also discussed physician's job plans. Hospitalists receive student/resident evaluations and these were discussed in the meeting, there was also discussion around mentorship programme for new Attendings and the annual departmental awards.

The Emergency Department
A visit to any hospital isn’t complete without a visit to the Emergency Department (ED). This felt very much like any ED in the UK; noisy, lots of monitors beeping and code reds on the loudspeaker. There are roughly 180 patients seen in the ED within 24 hours, this increases to 210-230 patients in the
winter; 30% are admitted to hospital, and of these 80% are admitted to general medicine. There are three different areas (or pods as they are known) to allocate patients to. Patients are first scored using the Emergency Coding Index (ECI) where 1 is a low score and 5 is high; this is based on their observations on arrival (22). Pod A: scores 1-3 and staffed by a physician associate (PA) or an Advanced Care Nurse (ACN), Pod B is for the rest of the patients and is staffed by doctors, PAs and ACNs. Pod C is known as the overflow area, this has restricted opening times and is for when there is an increased demand of patients to be seen. There is a High Dependency Area within the ED, where there is one nurse to every 2 patients. The ED contains 60 beds in total and a “mini” area for patients with mental health problems. There is an observation area within the ED which houses 6 beds and patients are generally allowed to be there for 23 hours. Prior to the opening of the HM observation ward, the hospitalists came down to see patients within this area and provided their medical input.

In the UK, ED is the area that is struggling most with recruitment and retention, however in the USA, the ED doctors have the most favourable pay in the hospital and most favourable rotas according to the staff in the ED. This particular unit at Rush, has between 8-10 consultants on the shop floor daily including at weekends. The ED works closely with HM, there is a ED HM collaborative group and they have once monthly meetings to discuss any issues that have arisen this includes issues with delayed care, adverse effects and poor handovers.

Dr Ed Ward, the lead physician in the ED, has been at Rush for 16 years and was present during the transition to Hospitalist care. He thinks that since this transition, it has become much easier to admit patients to general medicine, as before it often took several hours to call around and find the right physician to admit the patient to. He feels that a drawback of the current system is it may be too confusing for the patients as there are often many providers involved in their care. Ed believes that HM is definitely a win for medicine, as separate inpatient physicians will stay in the hospital and focus on the care they provide, rather than rushing in and out of clinic and trying to fit their patients into their busy outpatient schedules. He also states that in a world where patients do not fit under “one organ one problem” category, we are in need of a breed of generalist physicians to take care of these patients.

Route into Hospitalist Medicine
The route of entry into medicine is a 4 years Bachelors’ degree, followed by 4 years in medical school. Then 3 years of residency, the first of these years is known as the “intern” year. Usually the residency is in Internal Medicine, this is then followed by a 3-year fellowship in a subspecialty, except for HM, where residents can choose to do one year as a Chief Resident (discussed in detail later) or apply for an Attending role. The three-part United States Medical Licensing Exam (USMLE) is taken at the end of the 2nd year, the end of 4th year of medical school and during the Internship period. Residency programs are not standardised and local interviews are required to get onto a residency programme.
Residency working patterns

The residents have 4-week rotations. They spend 3 months in General Medicine, 1-month undertaking nights, 2 weeks of inpatient Haematology, 2 weeks of Infectious Diseases, and are also expected to work in the Emergency Department and General Medicine outpatient clinics. One third of residency training has to be outpatient based and the trainees are required to do 130 sessions in a continuity clinic. They have the opportunity to undertake electives with subspecialists in the same hospital. Trainees work on average 50-55 hours week. Trainees are also expected to undertake some work in the Intensive Care Unit and Coronary Care Units as part of their medicine rotations. The residency programme ensures that the residents work 60 hours per week maximum and they work no longer than 16 hours per shift. Once the three years of residency are completed, the residents undertake their board exams with the American Board of Internal Medicine (ABIM) (source: resident interviews).

Interviews

During my time at Rush University Medical Centre, I undertook several interviews; with the Hospitalist leads, the faculty, residents, patients, primary care physicians and specialist physicians. The next section of the report summaries some of these interviews.

Amir Jaffer

Amir trained in Boston in General Medicine and worked in both inpatient and outpatient medicine following his training. Amir slowly transitioned more into medical consultations in particular peri-operative medicine and then in 2002 decided to transition out of primary care. This allowed him to create a niche in peri-operative anticoagulation management for himself. He moved to Miami to become Division Director in Internal Medicine and published his first book on peri-operative anticoagulation and following this, received a teaching award from SHM. Amir advises that in order to become successful in a new area, one has to take ownership of an area that no one else wants to own. He holds the annual SHM Continuing Medical Education (CME) event; this is currently in its 11th year now (23). In 2013, Amir was recruited as the head of HM at Rush and was also asked to be Assistant Chief Medical Officer. Amir works 44 weeks of the year and spends some of his time undertaking HM leadership activities, 20% of his work is clinical, and he spends some time undertaking medical education and working in the Office for Clinical Resource Management (CMO). The majority of his time is spent in a managerial role as the Vice Chair in Medicine. The work he undertakes at the CMO focuses on providing value in healthcare, examples of this include redesigning care with cardiac surgery and flow in the neonatal unit.

Amir’s advice to us in the UK is to focus on the value that generalists or acute medics can provide and use that to take ourselves forward. We need to figure out what the optimal staffing model is for safe and effective patient care and expand ourselves out of the MAU. Many studies show the value of HM, particularly when it comes to reducing the length of stay and teaching and training for junior staff (24,25,26,27). Amir thinks that the respect and credibility for hospitalists is ever expanding and this is something that people need to earn for themselves. He is a well-published author in his field and to date has almost 60 publications. He is
fully aware that some of his staff are still experiencing identity issues and is working with them to try to overcome this.

**Junior Hospitalists**
A junior Hospitalist Attending that I spoke to, Manya Gupta told me her reasons for choosing this particular field. She enjoyed her residency training so much and thought that a career in Hospitalist Medicine would give her enough flexibility to do other things she was interested in. Her concerns are that sometimes patients may not feel satisfied with Hospitalists as they are not their usual doctors and so there is an element of unfamiliarity. She occasionally feels like she is working for the subspecialists rather than with them, as their junior rather than their equal. This is a recurring theme I noticed in my conversations with the other junior Hospitalists.

**Chief resident**
During an interview with Leslie Schmaltz, I discovered that like me, she chose the field of Hospitalist Medicine, as she found that there was not one speciality which she enjoyed and liked a variety of everything. Hospitalist Medicine allowed her to see a variety of conditions, but also allowed her to focus on non-medicine related work. Leslie feels that one of the current issues with HM is that discharge planning is not very appropriate at present, especially for patients that have underlying social concerns. She feels they will keep returning to hospital because of these social issues and as patients are getting older, this problem is getting worse. Leslie foresees HM taking over all inpatient medical patients. As there will be faster turnover of patients, more patients will be admitted and there will be more administrative duties and hence specialists will want someone else to focus on the inpatient stay. Leslie suspects that for new recruits it may be difficult for HM to compete with subspecialties because of their appeal. For example, specialties like Cardiology and Gastroenterology will always have that extra appeal as they are seen to be specialties for the “high achievers” and there is much scope for private practice. She thinks that Hospitalists were looked down upon by the specialists, people thought they had no knowledge but this has now changed and everyone has more respect for the Hospitalists due to the amount of cross speciality knowledge they have and the amount of quality improvement work they undertake in the hospital. Others now understand the need and the necessity for this specialty, and this is a field for which there will be more demand in the future.

As a Chief Resident, Leslie’s role is mainly an administrative one. The majority of her time is spent teaching residents and rota coordinating. She also undertakes a 6-week “Attending service”, where she steps up in the Attending role and also undertakes their on call duties. The purpose of this is to allow Chief Residents to achieve the “Attending experience” before they have to do this on their own. She chose to work at Rush as she feels that everyone is friendly, there is a “nurturing community” and there is no competition between physicians.
Specialists
Sonal Kendalwhal is a Rheumatologist and has been at Rush for ten years and this is where she undertook her residency training. During this time, the Hospital Medicine transition was in its early days. She tells me that HM provides more holistic care for a patient and this is the reason she wanted to work at Rush. She receives about 7 calls per day regarding patients, 2-3 are for new patients and 70% of these calls are from Hospitalists. She doesn’t feel that she receives too many calls from the Hospitalists, and if she is even just called to inform her that one of her patients is in hospital but does not need a review, she appreciates this phone call to keep her involved. Sonal has a very high opinion of Hospitalists and thinks the consultations they ask for are always appropriate.

Charlotte Bai has been a Rush Cardiology Attending for 3 years and was also at Rush as a trainee. Charlotte really likes the idea of Hospitalist Medicine and thinks it is good for a patient to have a doctor who is always available to them and is not stuck in outpatient clinics or in operating theatres. She sees about 5-10 consultations per day but usually asks her resident or fellow to see them first for their own learning needs. She thinks 90% referrals are appropriate and the inappropriate ones are usually because lack of knowledge and more often from the surgical specialities rather than the Hospitalists. She thinks there is definitely good continuity of care and communication between physicians. She remembers that as a resident, the biggest challenge she faced was getting hold of the PCP and all the decisions usually ended up getting made later on in the day and hence many tasks were not completed. Charlotte works on the Coronary Care Unit, and occasionally some of her patients will have medical problems that are not related to Cardiology, and this often makes her feel uncomfortable and this is something she will ask her house staff to look after. Charlotte respects Hospitalists and thinks they have a good knowledge base and know how to care for inpatients.

Sheila Eswaran has been a Hepatology Attending at Rush for 5 years. She tells me that having hospitalists around has reduced her workload significantly. She appreciates that there is someone communicating with the specialist teams and coordinating the patients’ care. Usually, if the patient has been admitted before, one of the Hospitalist team will know the patient from a prior admission, and this is useful for continuity of care for the patients. Sheila’s team usually see about 5 new consultations per day and about 15-25 follow up patients, half of her referrals are from the Hospitalist team and the rest from the Liver Transplant team. She thinks all the referrals she receives are appropriate. Sheila has great respect for the Hospitalists and that they can focus on their inpatients and ensuring that the short stay in hospital is a valuable one and the patient has everything they need. However, she often worries that the Hospitalists do not know the patient as well as the PCP does and that the knowledge base between the Hospitalists differs. The majority of the time she feels she is working together with the Hospitalists, however very occasionally, she feels they do not follow her team’s advice and are focussed on discharging patients rather than evaluating them whilst they are in hospital. In her opinion, the Co-management structure is a really valuable resource, and she thinks this would be good for Hepatology and would provide a good learning environment for students and residents. She also thinks it would help with providing training for the Hospitalists if they did their
ward rounds together and worked as a unit rather than two separate entities. This would inevitably improve communication without having to reinvent the wheel each time.

One of the patients I spoke to, also happened to be a retired orthopaedic surgeon from Utah, in a hospital where Hospitalists care for all inpatients. In this hospital, surgeons only provide surgical input for patients. This gentleman has great respect for the field and that says it is definitely the way medicine should go and that every patient should have a designated general medical doctor in the hospital. However, he was concerned that some Hospitalists where he worked had a limited knowledge base and they perhaps asked for too many referrals from other specialities. After describing the specialist based system in the UK to him, he tells me that he is not completely opposed to this as long as the specialists are aware when they need help and ask for it. But that help should be someone competent and not junior residents like is the case in some hospitals in the United States.

Dr Jochen Reiser is a nephrologist and the Chairman of Internal Medicine. He has been at Rush for 4 years. Jochen tells me that Hospitalist Medicine is extremely important to internal medicine and echoes the very reasons I wanted to explore this model of care in the USA; he tells me that as patients are getting older, with more comorbidities and complex care needs, we need more generalists to look after them. He thinks that this speciality is especially beneficial for surgical patients with medical problems. As it is a young speciality, the academic role has not been derived yet but it is something definitely worth investing in. But he agrees with others that there is a general lack of respect for HM and they are sometimes seen as “super residents”. It needs to continue to provide a great service, show it has good outcomes and needs to establish an academic programme to ensure its credibility. Jochen is of the opinion that as we continue to define the speciality it will become more respected. An example Jochen gives is that he witnessed an orthopaedic surgeon asking a hospitalist “do you want to use the computer to put an order in” she said yes and used it but in fact what she should have said to him was “do it yourself”. He feels that some of the inferiority complexes the Hospitalists are experiencing is coming from within the speciality itself and they ought to give themselves the credit that they deserve and in turn will earn the respect of others.

Comparing this to the PCP model from before, a Hospitalist knows the hospital, the infrastructure and knowledge of its processes. But the PCP on the other hand, knows their patients very well. He understands that both systems have their advantages and disadvantages and we need to utilise this to ensure there is better communication between the two departments. One question he is considering is that should the PCP be involved in the discharge decision, would this help with the communication and continuity of care, however this may impact negatively on the length of stay for some patients.

**Primary Care Practitioners**

Rupel Dedia is a PCP who has worked alongside Rush for the last 6 years and is completely outpatient clinic based. She thinks it is extremely helpful having a Hospitalist around and feels that there is usually great communication between
the faculty and her. Occasionally, Rupel will come into the hospital to see her patients. She appreciates that it is very difficult for PCPs to keep up with the knowledge base around a hospital setting and PCPs have many outpatient commitments and therefore cannot be in the hospital whenever a patient needs them. She is able to use the Electronic Medical Records to review her patients’ investigations and results. Having a hospitalist around has definitely reduced her workload and thinks that to provide this type of generalist care for patients may be more challenging for a specialist to do.

Jan-Wan Koo is a PCP who is also outpatient based only and has been affiliated with Rush Hospital for 17 years. He was previously working in both in and outpatient settings but wanted to focus his efforts on medical education and decided the best way forward would be to continue in one setting only. As there are so many Hospitalists in the faculty, Dr Koo occasionally feels that there are some issues with communication and feels that the discharge summaries he receives are not completed appropriately and a lot of vital information is missed out, especially when it comes to actions for him to undertake. He does feel, however, that having the Electronic Medical Records does help with this communication block. He feels that Hospitalists are good at not requesting inappropriate consultations from specialists but perhaps that more diagnostic tests are ordered because of the ease of ordering and getting tests done. He occasionally goes to the hospital to check up on his patients especially if they are complex or requiring end of life care because of a genuine interest in their outcome.

Chief Medical Officer

Omar Lateef, the Chief Medical Officer (CMO) at Rush has been at the institution since 2003. He values and respects the idea of HM. But does think that the department has to do more to define their goals and needs. In the USA, he tells me, medicine is judged by how many patients you are seeing and how much revenue you are generating. But he does not think this is how the Hospitalists see their goal at Rush. He thinks having a HM department ensures there is more accountability for the patients’ care. However, he feels that the Hospitalists do more unnecessary investigations. For example if a patient comes in with recurrent ascites, they will investigate from the beginning, even when this is not needed. He also doesn’t think that subspecialists get consulted as much as they should be. One recurring theme in all my conversations is the lack of communication between inpatient and outpatient care, which Omar agrees is a big issue and needs to be tackled. As the CMO, he is often brutally honest, he thinks the HM knowledge is narrowed to inpatient care and this is not good when patients are discharged without the appropriate follow up being arranged. One of his biggest bugbears is that the discharge summaries are not very comprehensive and this may be because they are usually done by the most junior staff, for example by the students or interns, as is often the case in the UK hospitals. He feels they often miss out vital information that the patients’ outpatient doctor will find useful.

During Rush’s improvement journey, Omar has ensured they have made quality improvement a strategic goal. Rush has often come out one of the top hospitals in
the country in many surveys. He encountered many barriers initially getting people involved in quality improvement, but used data and feedback to get more people on board, he ensured they had protected time to undertake this work and it was a top organisational priority.

Patients
Undertaking a series of interviews with patients, the emerging theme was that patients were very happy with the care provided by Hospitalists and the care they received at Rush. Most patients respected their Hospitalists and thought they had an adequate and appropriate range of knowledge. Patients did not have an issue if they moved ward a few times as they thought the communication between the different areas was good. A few patients would have preferred their PCPs to continue to look after them in hospital as they knew each other better, but this was a minority. On describing the role of Acute Medicine in the UK and the specialist structure on the wards, most of the patients I spoke to were not entirely happy that this would fulfil their holistic needs and provide them with the generalist care that they need. A small minority of patients did however prefer a specialist structure to a more generalised one, as they associated being a specialist with being more knowledgeable and more respected. They were happy at the prospect of the specialist asking for help if the problem was outside of their area of expertise.

Physician Associates
Physician Associates are a more common sight in US hospitals compared to the UK. These clinicians often carry out a role similar to the interns and provide physicians and their teams with any assistance they require. One of the PA’s I met was Jenna, who was working in the Gastroenterology Department. She was a highly qualified individual, who had completed a MA in public health, undertaken a research degree and then completed a Physician Associate degree. Jenna had a lot of responsibility within her team, she saw follow up patients independently on a daily basis and had a weekly general GI clinic. She was well respected by all her colleagues, as were all the other PAs I met during my travels. All the PAs I met undertook similar roles in their respective fields; this allowed physicians to undertake other duties and thereby distributing the workload of the team.

Conclusions
The necessity for generalised medical care is a worldwide issue. Some of the reasons why Hospitalist Medicine in the USA and Acute Internal Medicine in the UK evolved share many parallels. In the USA, the restrictions to the residents working hours and in the UK, the EWTD and the 4-hour wait target for ED admissions. A direct comparison is not possible for parameters such as mortality and length of stay between the two countries, due to the differences in the workforce structure. However, it appears that HM in the USA is much more established and is already setting an academic profile for itself; in the UK fewer studies have been undertaken. However, these do show that a continuous consultant presence has a reduction on case adjusted mortality (except for early deaths less than 3 days into admission), and a reduction in the 28 day readmission rates, some report a reduction in length of stay and an increase in staff and patient satisfaction (28,29). The current Hospitalist model is not
directly translatable to the UK due to the limited generalist workforce, especially in the larger teaching hospitals. But a similar structure may be more appropriate in the smaller, rural District General Hospitals. As hospitals are getting busier, with older, frailer patients, we need to be more innovative in the ways we provide generalised medical care.

**Recommendations**

In my opinion, we are not able to adopt this model of care in the UK in its current form; however, there are certain aspects that I think are adaptable to the UK:

1. **Introduce Co-management into UK hospitals**
   There is a lack of peri-operative medical care in the UK; except in the field of orthopaedic geriatric care. This is a service that generalists are able to provide in terms of pre-assessment clinics, ward reviews in the pre and postoperative period, medication reviews and early rehabilitation. This is a recommendation that I have discussed with the Advisory Board Company prior to their latest publication on how we may be able to adopt the Hospitalist model to the UK.

2. **Expand the Chief Registrar to reflect the Chief resident type role**
   Various fellowships exist for training registrars in the UK, however this Chief Resident type of role allows residents to get a flavour of consultant life before they have the full responsibility of being a consultant. It will provide them with more experience, confidence and leadership skills required for their consultant roles. The RCP is currently rolling out a pilot scheme (RCP Chief Registrar) for registrars to focus on quality improvement, leadership and management skills. This is a role that can be expanded upon and provided by other institutions.

3. **A Greater Emphasis on Apprenticeship style training for junior doctors**
   The training structure in the UK is changing. Responsibility is being passed up to more senior clinicians and this can have a negative impact on training. There are fewer and fewer ward rounds led by junior members of staff. Junior doctors should be able to take more responsibility and ownership of their patients and the consultant able to provide them with real time feedback.

4. **Invest, encourage and support quality improvement initiatives and programmes, especially by the Acute Medicine faculty**
   As Hospitalists are at the forefront of quality improvement, Acute Internal Medicine physicians are also at the front door and centre of the hospital and are in the perfect position to evaluate the system and introduce and test improvements in the system. The NHS is now introducing QI into its services; this is a perfect opportunity for acute medicine physicians to take this on to transform the services they provide.

5. **Capping team numbers to ensure admitting teams are not overwhelmed and have the time to provide good safe care**
The medical on-calls in the UK are getting busier, with more and more patients being admitted to hospital each day. So perhaps re-thinking the on-call structure, and having a “long-call/short call” type structure and having caps on the amount of patients admitted to a team may mean we are providing safer and better value care for patients. In addition to this, we may be able to adopt a “rolling three day” structure in MAU, similar to the one on the GMF. This is where the team is on call on the first day, post-take on day two and pre-call on day three, when they can focus on investigating and discharging existing patients prior to their next on-call.

6. *Expand the ANP and PA role*
   There is an increasing role for both Advanced Nurse Practitioners and Physician Associates in the UK. Some hospitals are already adopting such models, but in my experience, they have fewer responsibilities compared to those in the USA. My current NHS Trust is expanding the role of PAs and providing this training with the local university.

7. *Encourage an open discussion of evaluations from students/junior doctors*
   Much of the feedback and evaluations that staff receive are anonymised and not discussed openly. Having this discussed in an open forum with the rest of your faculty ensures you are accountable for the training you are providing. This will allow those with poor evaluations to receive adequate support, in order for them to provide juniors with better training.
Appendix 1

General Medicine Observation Unit

The goal of this 12-bed unit is to create additional capacity and improve throughput for the General Medicine patients. The Observation unit is intended for patients requiring less than two midnights. The unit will be staffed daily 24/7 by nurses, PCTs and by a hospitalist and an advance practice provider from 7am to 7pm. After 7pm the Nocturnist will admit patients overnight and also provide cross coverage of these patients.

Diagnoses and Symptoms

The patients best suited for the Observation Unit on Kellogg 5 are those that the Emergency room physician determines will stay less than two midnights and have one of the following conditions requiring further evaluation and management. All patients must be admitted under observation status:

<table>
<thead>
<tr>
<th>Cardiac</th>
<th>Pulmonary</th>
<th>Metabolic</th>
<th>Hematologic</th>
<th>GI</th>
<th>ID/Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chest pain without EKG changes nor elevated troponin</td>
<td>Mild Asthma</td>
<td>Hyperglycemia without Ketoadidosis</td>
<td>Anemia of known etiology just requiring transfusion</td>
<td>Abdominal Pain with normal or mildly abnormal Labs</td>
<td>Cellulitis</td>
</tr>
<tr>
<td>Syncope/Near Syncope</td>
<td>COPD</td>
<td>Dehydration</td>
<td>DVT</td>
<td>Constipation</td>
<td>Uncomplicated Pyelonephritis</td>
</tr>
<tr>
<td>Palpitations/Lightheadedness</td>
<td>Community Acquired Pneumonia with low CURB 65</td>
<td>Hyperkalemia in non-ESRD patients</td>
<td>PE without elevated Troponin or BNP</td>
<td>Gastroritis</td>
<td>Simple Migraines</td>
</tr>
<tr>
<td>Urtal Fibrillation response to rate control needing Initiation of Anticoagulants</td>
<td>Hyponatremia &gt; 125 mEq/L</td>
<td>Nausea or Vomiting</td>
<td>Weakness or Fall in &lt;Age 79 without evidence of Fracture</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Known heart failure with mild decompensation</td>
<td>Hypoglycemia on oral agents or insulin</td>
<td></td>
<td>Acute back pain without chronic pain</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uncontrolled Hypertension</td>
<td>Nephrolithiasis</td>
<td></td>
<td></td>
<td>Alergic or Drug Reactions</td>
<td></td>
</tr>
</tbody>
</table>

Flow:
1. ED attending identifies potential Obs patient
2. Pages 3024, Obs team will call back within 10 minutes
3. Post discussion:
   a. If deemed Obs Unit appropriate: ED attending places bed request for SK
   b. If deemed GMF appropriate: ED attending places bed request for GMF
4. Once bed assigned, patient placement pages 3024 with the bed information
   a. If patient goes to GMF, the Obs team to give the handoff / report to the appropriate team

Revised 11/27/15
Appendix 2

High Value (Best Care) Checklist

**Care Efficiency:**
- Does the patient's clinical status and proposed tests/consults require continued admission?
- Are there alternative treatments that do not require hospitalization?
- Have we removed the tethers?
  - Foley, CV lines, Oxygen, IVF, Telemetry, SCDs

**Pharmacy and Therapeutics:**
- Are we using high cost drugs?
- Have we stopped non-essential drugs?
- Have we stopped empiric drugs that did not help?
- Have drugs been switched from IV → PO?

**Diagnostic Testing:**
- Is the testing redundant?
- Will the test answer my clinical question?
- Is the testing likely to change management?
- Could the testing be completed as an outpatient?
- Is the testing harmful?
- Is the testing consistent with patient’s values/goals of care?

**Phlebotomy and Laboratory Studies:**
- Does the patient need daily labs?
- Will these labs impact the care of the patient?
- Are the labs "send outs"? If so will the results help now?

**Blood Utilization:**
- Are we using the approved transfusion guidelines?
  - OK to transfuse RBCs if:
    - Hgb < 7 in stable patients
    - Hgb < 8 with active bleeding
    - Hgb < 10 with sepsis/acute MI/stroke
  - One-unit-at-a-time transfusions

**Therapy Services:**
- Are PT/OT/SLP services necessary for the patient?
- Will it impact discharge planning and disposition?
References


