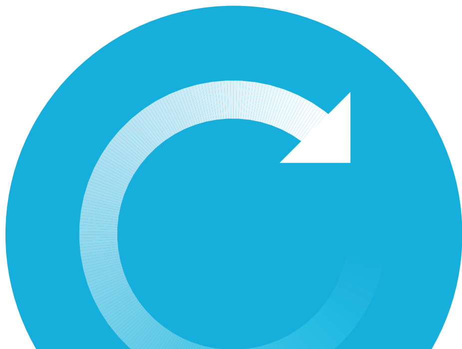
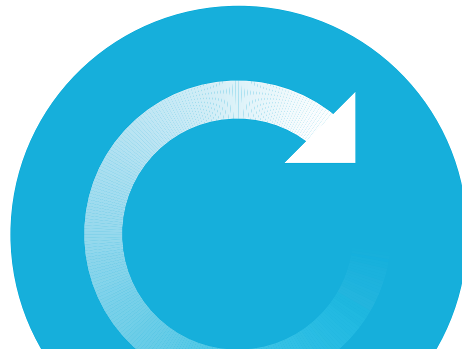
# Ambulatory Emergency Care

# A Compilation of Nursing Case Studies

# Ambulatory Emergency Care - A Compilation of Nursing Case Studies

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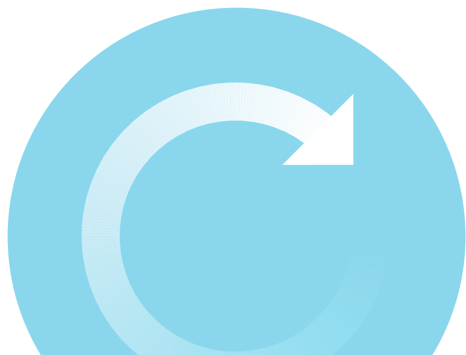
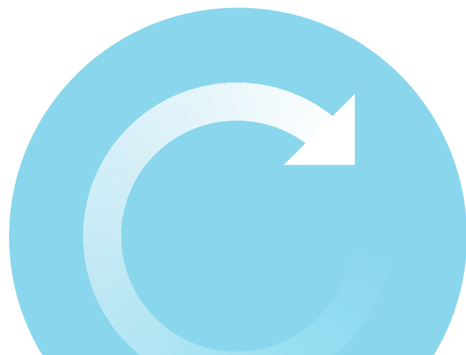
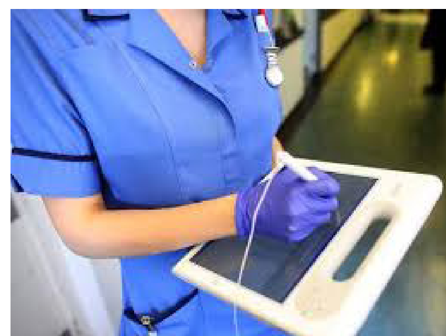



# 1. Broadening the Horizons of DVT Services

## Introduction

In common with many Trust's, Kingston Hospital NHS Foundation Trust has a nurse led DVT service. They have chosen to incorporate this into their general model of Ambulatory Emergency Care (AEC).

## Comprehensive Service



The DVT service at Kingston sees on average 10-15 patients a day; assessing, diagnosing and treating them in a single encounter. Patients are referred from GPs, Community Nurses, Physiotherapists, Outpatient Clinics and more. The only patients that the DVT Clinic does not see are those who are currently inpatients. Alexandra Dunkerley is a Clinical Nurse Specialist for DVT and leads this aspect of the AEC Service. As you would expect a typical day involves taking a full history and physical examination, performing and interpreting investigations and liaising with ultrasound for scans. But it doesn't end there for Alexandra, she also makes independent decisions regarding the pharmacological and non-pharmacological ongoing management of her patients, including selection of anticoagulants, compression therapy and vascular intervention. Alexandra also manages other limb problems that present as possible DVT such as chronic venous insufficiency, cellulitis and superficial thrombophlebitis. Further investigation of unexplained thrombosis is initiated by Alexandra to identify occult malignancy and thombophilias.

## Evolving the Role

"The DVT nursing role has evolved into one that offers ambulatory emergency care for patients with a range of non-traumatic lower limb complaints." Says Alexandra. This initially created some challenges as Alexandra's clinical background is thrombosis and haemostasis so she has recently begun an MSc programme. "I have chosen the route of Advanced Nurse Practitioner as I am already practising in many respects at an advanced level and to broaden my knowledge base and skill set." She said. Alexandra wishes to use this to enable her to take a more wide ranging role within the AEC service.

Alexandra is also respected as an expert clinician within the Trust and is responsible for the development of the Trust VTE policy including thrombosis in special circumstances. She has been

Involved with the introduction of new oral anticoagulants and regularly provides teaching in thrombosis and anticoagulation.

## Challenges

"The biggest challenges are regarding the quality of referral information and ensuring patients are being referred to the Ambulatory Emergency Care Clinic to be seen by the right health professionals, in the right place and time." Alexandra goes on to explain how sometimes there is a sense that people do not understand the purpose and constraints of the service which then causes problems down the line. Alexandra has also experienced occasions where patients have been referred as a perceived short cut to normal outpatient services. "On occasions the service is abused, particularly with regard to access to scans, when time could have been better spent referring the patients directly to a different specialist."

## Benefits

In terms of benefits to patients, Alexandra is very clear that the service reduces admissions, streamlines the care of her patients and provides and excellent patient experience. The care she is able to provide at her level gives a definitive diagnosis and an expert management plan that ensures the patient understands what is wrong with them and does not need an unplanned return.

As her patients bypass Accident and Emergency during clinic hours, Alexandra believes she is having a positive impact on patient flows there. She has also developed a robust out of hours procedure that means patients presenting late can be discharged quickly and return at a booked scan time without any delays.

Alexandra also feels she has benefitted on a personal level. "I feel that undertaking formal study has increased my job satisfaction. Overall I believe my career prospects have been enhanced in broadening my knowledge and skill base." She also talks about the benefits of bringing the DVT service into the wider umbrella of AEC. "Being part of a bigger team that has other nurses whom are practising at an advanced level with their own particular interests and specialist knowledge is great.

There is mutual respect and understanding of individual skills and a desire to provide patients with the best care and advice."

## Making it Work

Alexandra feels that DVT services and the wider field of AEC naturally lend themselves to being nurse led but to make that work she identifies 3 key factors in making it a success:

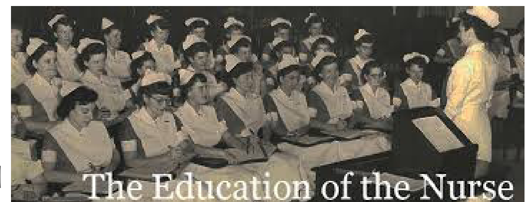
Employing people with the right knowledge, skills and mind-set for AEC and having a plan to develop junior staff into these roles.

A strong leading clinician to drive the service forward and ensure quality.

A shared organisational vision of what AEC services provide and clarity around where that fits into the trust strategy.

## 2. New Degree Module for Ambulatory Care Nurses

Learning on the job is generally the only way for Ambulatory Emergency Care Nurses to gain the skills they need. But, at East Kent Hospital University NHS Foundation Trust, there is now a degree module that nurses can take which equips them with comprehensive knowledge and skills, as well as a detailed understanding of the social, political and financial context for Ambulatory Care.




## Context

The Ambulatory Emergency Care module has been developed by Sue Holmes, Matron for Ambulatory Care, in conjunction with the local university. She explained why she believes this qualification is needed:

“Over the years, nurses in Ambulatory Care at East Kent Hospitals have gained many different skills and competencies by working on the unit, but I noticed that many did not fully understand the rationale for Ambulatory Care, the national drivers for it and why it is better for patients and the health service as a whole. This felt like a vital missing component as, without this, there is no clear context for Ambulatory Care.”

“I wanted nurses to have a better understanding of both the service improvement commissioning and how changing the way we deliver services can improve patient experience and outcomes. It felt like a dedicated Ambulatory Care qualification was the idea way of doing this. I worked with the university to develop an Ambulatory Care module that can be used towards a Bachelors or Masters degree. A pilot module was launched in February 2014. We used feedback from this pilot to refine the module, which was made available to the next cohort of nurses.”

## Capabilities

The roles and responsibilities of nurses in Ambulatory Emergency Care differs from A&E nurses in several important ways. Many Ambulatory nurses work as autonomous practitioners in their own right, running DVT clinics, discharging patients and carrying out or assisting with clinical procedures. Ambulatory nurses provide a more holistic form of patient care, overseeing the care of patients throughout their time on the unit and, sometimes, seeing the same patients for follow-up procedures. Ambulatory nurses need quick assessment and decision-making skills, as well as a good understanding of which patients are suitable for ambulatory treatment so they can actively pull patients from A&E and CDU.

## Confidence

The new qualification supports nurses to gain these skills and helps them to develop confidence to work in a different way. It is work-based and nurses complete essays and workplace assessment documents that are relevant to the particular needs of their workplace.

Sue added: “The Ambulatory Care degree module gives nurses an understanding of the importance of seamless patient pathways and how ambulatory care links to primary and secondary care. It is designed to help them develop confidence to challenge the practice of colleagues and critical thinking skills.”

## Band 4s

All Band 4 Associate Practitioners and nurses are eligible to apply for the qualification through the hospital's practice development department. Individuals who have not done any academic study for a little while are expected to complete an academic development module beforehand to give them a grounding in writing essays and referencing skills, which are an important part of the qualification.

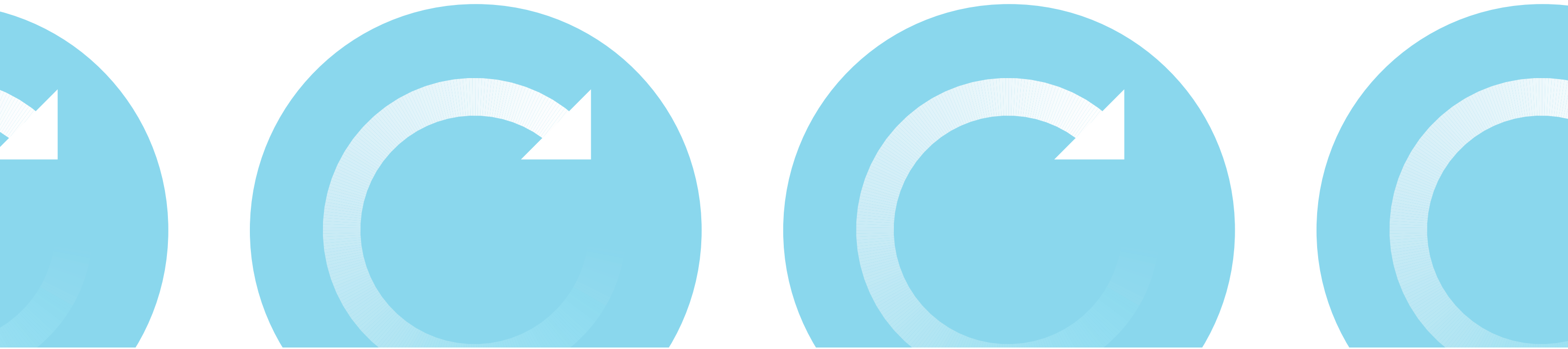
## Our Advice on Developing an Ambulatory Degree Module

Be clear in your mind about what you want to provide and why. What do you want to achieve?

Think about how you are going to deliver the qualification and where.

Collaborate closely with your chosen university and be patient, it takes time to get everything in place.

Be determined and maintain a clear vision of what you want.



# 3. Kingston Cuts Admissions with Nurse-Led PE Pathway

Patients with suspected Pulmonary Embolism (PE) are no longer being admitted to Kingston Hospital thanks to a new nurse-led ambulatory PE pathway.

## Improved Patient Experience

Hospital admissions of up to seven days were not uncommon for PE patients before the pathway was introduced. Now patients who are at low risk of adverse outcomes are seen in the Ambulatory Emergency Care Unit by an Advanced Nurse Practitioner and discharged same-day. The result is a huge improvement in patient experience, as there are fewer delays and patients have a clear time line for their care. Often, the unit is able to work around the patient's existing commitments and the fact that treatment si delivered by a single clinician with a detailed understanding of the condition proves hugely popular with patients.

## Fewer Admissions

From a Trust perspective, the benefit of the ambulatory PE pathway has been a significant reduction in admissions, helping to fee up beds and reduce delays in A&E. Staff are experiencing greater satisfaction at being able to manage the entire process for patients and transform what was considered a poor patient experience into a positive one.

## Confident Diagnoses

Nurses on the unit use the PESI (Pulmonary Embolism Severity Index) score to identify which patients are suitable to be treated in an ambulatory way. PESI predicts the 30-day outcome of PE patients using 11 clinical criteria. This provides a level of confidence in accurately identifying low risk patients. Out of hours patients are given low molecular weight heparin to stabilise their condition and asked to return to the Ambulatory Emergency Care Unit the following morning for assessment.

Patient Sticker

PE Clinical Probability Assessment

Patient Contact Telephone Number ______
Date ______

| Pregnancy Test | | Weight | |
|---|---|---|---|

BP ____ Pulse ____ RR ____ Temp ____ SaO2 on air (post exertion) ____

PREDISPOSING FACTOR Yes or No

| | | | | | |
|---|---|---|---|---|---|
| Contraceptive pill | Y | N | Malignancy/Cancer | Y | N |
| Pregnancy or <6/52 post partum | Y | N | Air travel >4hrs in previous 4/52 | Y | N |
| Surgery in last 4/52 | Y | N | Bedbound | Y | N |
| Previous VTE | Y | N | Family Hx of VTE | Y | N |
| Known Thrombophilia | Y | N | Obesity | Y | N |
| Smoker | Y | N | IVDU | Y | N |

| Clinical Pre-test Probability (PTP) for PE (Wells Score) | Points | Score |
|---|---|---|
| PE is most likely diagnosis | 3 | |
| Clinical symptoms/signs of DVT (swelling/pain) | 3 | |
| HR>100bpm | 1.5 | |
| Immobilisation>3/7 or surgery within previous 4 weeks | 1.5 | |
| Previous DVT / PE | 1 | |
| Haemoptysis | 1 | |
| Active Malignancy (on Rx within past 6/12 or palliative) | 1 | |
| Probability of PE ( Low <2 Moderate 2 - 6 High > 6 ) | Total | |

If Wells score is high, D-dimer Not indicated / If Moderate & Low Wells score, D-dimer indicated

| D-dimer | <0.3 | Troponin | < 0.05 | | |
|---|---|---|---|---|---|
| FBC | | Coag | | U&E | | LFT | |
| Hb | | INR | | Na | | Bili | |
| WBC | | APTR | | K | | Alb | |
| PLT | | Blood Gas | | Urea | | ALT | |
| CRP | | BHCG | | Cr | | ALP | |
| CXR | | | | ECG | | | |

If Wells score is low/ moderate & D-dimer is negative no further investigations are required.
Further imaging using most appropriate modality to minimise exposure (PE imaging form to Radiology)
Please do not request a diagnostic investigation without conducting a risk assessment. If you wish to deviate a patient, consult a senior clinician

INVESTIGATIONS

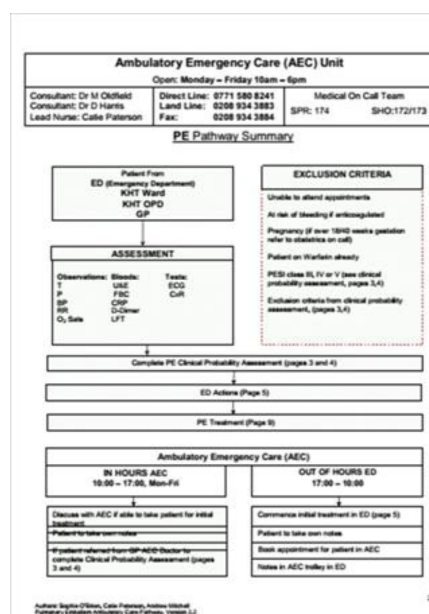
| Doppler | | CTPA/VQ | |
|---|---|---|---|

3

## Single Point of Access

The entire pathway is nurse-led by Advanced Nurse Practitioners, who are responsible for assessment, investigation, diagnosis and treatment. Having a single point of contact not only provides a better experience for patients but it is also resulting in fewer unnecessary scans. As the Radiology Department has developed greater confidence in the process, it has begun using Nuclear Medicine for scans, which reduces the radiation dose for patients. Oncology has become a particular advocate for the new ambulatory PE pathway as it means that its patients, who are more like to develop a PE, can be treated without unnecessary stays in hospital which is a particular priority for cancer patients.

## An Ideal Nurse-Led Pathway



**Ambulatory Emergency Care (AEC) Unit**
Open: Monday – Friday 10am – 6pm

| Consultant: Dr M Oldfield<br>Consultant: Dr D Harris<br>Lead Nurse: Catie Paterson | Direct Line: 0771 580 8241<br>Land Line: 0208 934 3883<br>Fax: 0208 934 3884 | Medical On Call Team<br>SPR: 174 SHO:172/173 |
|---|---|---|

**PE Pathway Summary**

Patient From
ED (Emergency Department)
KHT Ward
KHT OPD
GP

ASSESSMENT

| Observations: | Bloods: | Tests: |
|---|---|---|
| T | U&E | ECG |
| P | FBC | CxR |
| BP | CRP | |
| RR | D-Dimer | |
| $O_2$ Sats | LFT | |

EXCLUSION CRITERIA
- Unable to attend appointments
- At risk of bleeding if anticoagulated
- Pregnancy (if over 18/40 weeks gestation refer to obstetrics on call)
- Patient on Warfarin already
- PESI class III, IV or V (see clinical probability assessment, pages 3,4)
- Exclusion criteria from clinical probability assessment, (pages 3,4)

Complete PE Clinical Probability Assessment (pages 3 and 4)

ED Actions (Page 5)

PE Treatment (Page 9)

Ambulatory Emergency Care (AEC)

| IN HOURS AEC 10:00 – 17:00, Mon-Fri | OUT OF HOURS ED 17:00 – 10:00 |
|---|---|
| Discuss with AEC if able to take patient for initial treatment | Commence initial treatment in ED (page 5) |
| Patient to take own notes | Patient to take own notes |
| If patient referred from GP AEC Doctor to complete Clinical Probability Assessment (pages 3 and 4) | Book appointment for patient in AEC |
| | Notes in AEC trolley in ED |

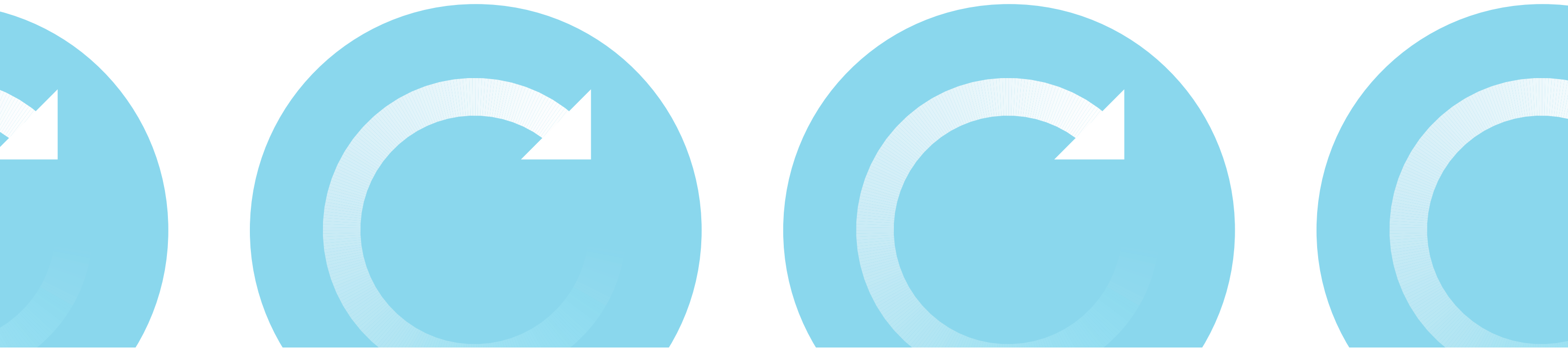
2

The Trust believes there are particular factors that make the PE pathway ideal to be led by nurses rather than consultants. "The investigation and management of PE is well defined and there is a high degree of consensus about the evidence." Said Andy Mitchell, who leads the pathway. "NICE has a clearly set out PE pathway, the management of a PE is highly standardised and the decision points and outcomes are easily identified. The PESI score, in particular, provides useful reassurance in identifying risk levels in patients."

Andy underwent training with the Radiology Department, specifically the Nuclear Medicine team, to equip him with sufficient knowledge to head up the pathway. He also completed an anticoagulant practitioner course at level 7, which has provided invaluable in supporting patients with complex scenarios.

## Overcoming The Challenges

Introducing a nurse-led PE pathway has not been without its challenges. Inappropriate referrals remain the greatest of these and the hospital has implemented a number of measures to try and tackle this, including introducing teaching sessions, simplifying pathway documentation and requiring consultants to sign off patients. Andy said: "I have had to develop confidence in my ability to decide not to investigate some patients for a PE and find ways of communicating this decision with patients that leaves them satisfied. This is where advanced clinical skills and, more importantly, experience come fully into play in seeking an alternative diagnosis and putting together an appropriate ongoing plan."



# Our Advice on Setting Up a Nurse-Led PE Pathway

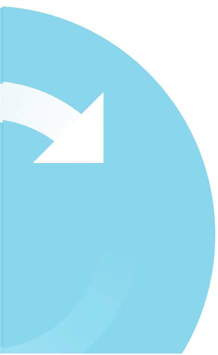
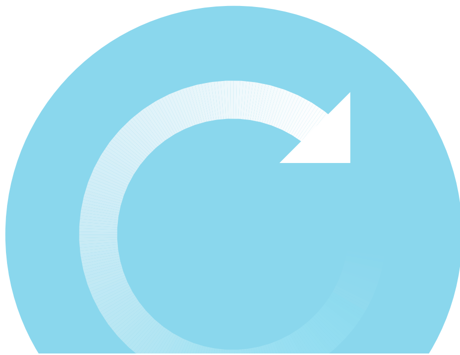
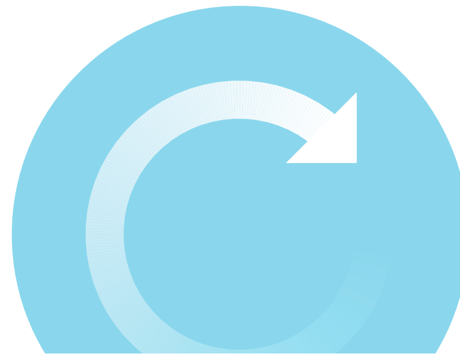
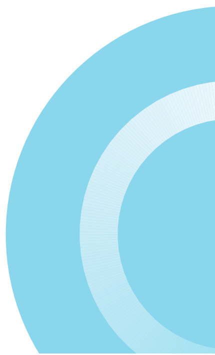
Work with the Radiology Department to calm any anxieties about the pathway generating extra work. Reassure them that it won't do this, as these patients would have been investigated anyway as inpatients.

Consider having a gatekeeper for the service, someone who understands both sides of the referral process.

Put in place a clear out of hours process for referrers to follow.

Plan for possible unintended consequences - you will discover cancers, thrombophilia and occult malignancy. How will you arrange this? Can you get access to radiography in a reasonable time frame. Who will manage anticoagulation?

Consider Nuclear Medicine as a way to spread the workload with Radiology and minimise the potential radiation dose for patients.

# 4. Nurse-Led Paracentesis Improves Patient Experience

At the Royal United Hospital in Bath, all paracentesis or ascetic drainage is now carried out as a day case procedure on the Ambulatory Emergency Care Unit.

## Fewer Delays

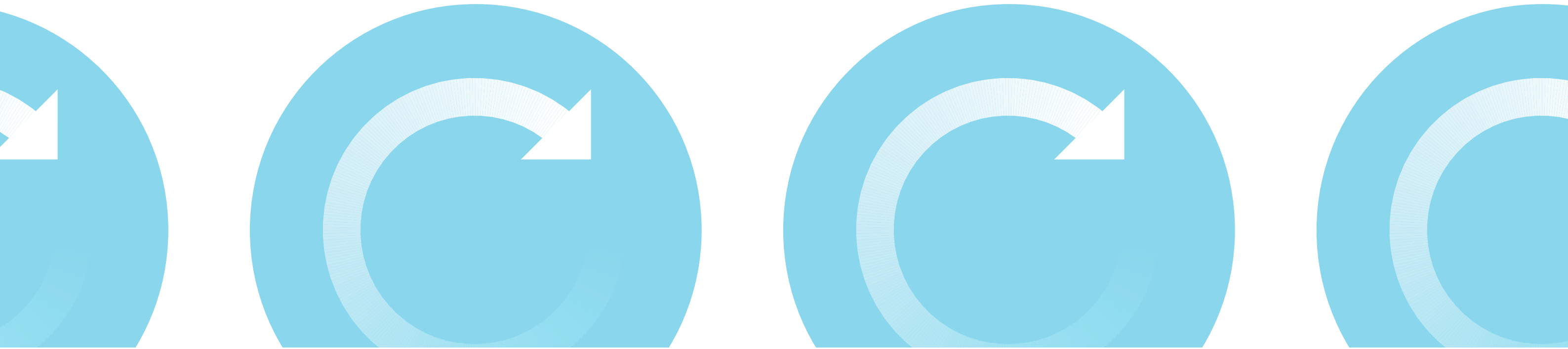
The unit sees between 5 and 10 patients per week who are referred by other inpatient teams, such as Oncology and Gastroenterology, by GPs or even by the patients themselves if they become a regular attender. Paracentesis is carried out either by a qualified Nurse Practitioner or a Doctor, which means that patients no longer face delays if the Doctor on the unit is busy attending to other patients.

## Consultant-Led Training

Julie Vaughn is the Medical Nurse Practitioner who introduced the idea of nurse-led paracentesis. She explained: Paracentesis has been carried out in Ambulatory Emergency Care over the last 7 years. The idea of making this a nurse-led procedure came about as a result of a Masters degree that I did. I analysed waiting times and patient satisfaction levels, developed a training plan and protocol for the Nurse Practitioners and evaluated the impact of the potential change on the service. The training proved to be a challenge as there is no formal training course but we were able to negotiate with a small team of medical consultants to teach the procedure to our nurses and to provide supervision and support."

## Less Risk of HAIs

Introducing nurse-led paracentesis to Ambulatory Emergency Care has greatly improved the patient experience at the Royal United Hospital. The fact that they rarely need to be admitted to hospital for the procedure means it is easier for patients to fit their treatment around work and



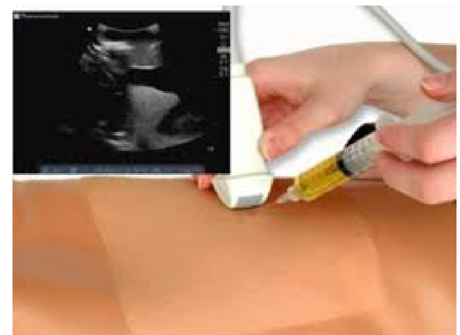
personal commitments.  There is also less risk of being exposed to hospital-aquired infections (HAIs) and patients like the fact that they receive continuity of care from the same expert team each time they attend the unit.

## Saving Bed Days

For the hospital, offering paracentesis as a nurse-led case procedure reduces hospital admissions, saving bed days and cutting costs.  Nurse Practitioners are ideally placed to manage patients requiring paracentesis and there is an increase in job satisfaction that comes from developing new skills and expanding their practice capabilities.  Patients are enthusiastic about the service, which is leading to more positive feedback.

## Quick Win

Julie added: "Paracentesis is an ideal procedure for nurses to deliver. It does not take long, patients do not have to be monitored.  All you need is an area with one or two trollies, a small bedside ultrasound machine to confirm the presence of fluid and a sluice to empty the fluid drained.  Our experience of developing the service has been positive and the benefits clear. I would recommend this as a way for other hospitals to reduce their admissions and improve the patient experience without requiring major training investment for nurses."



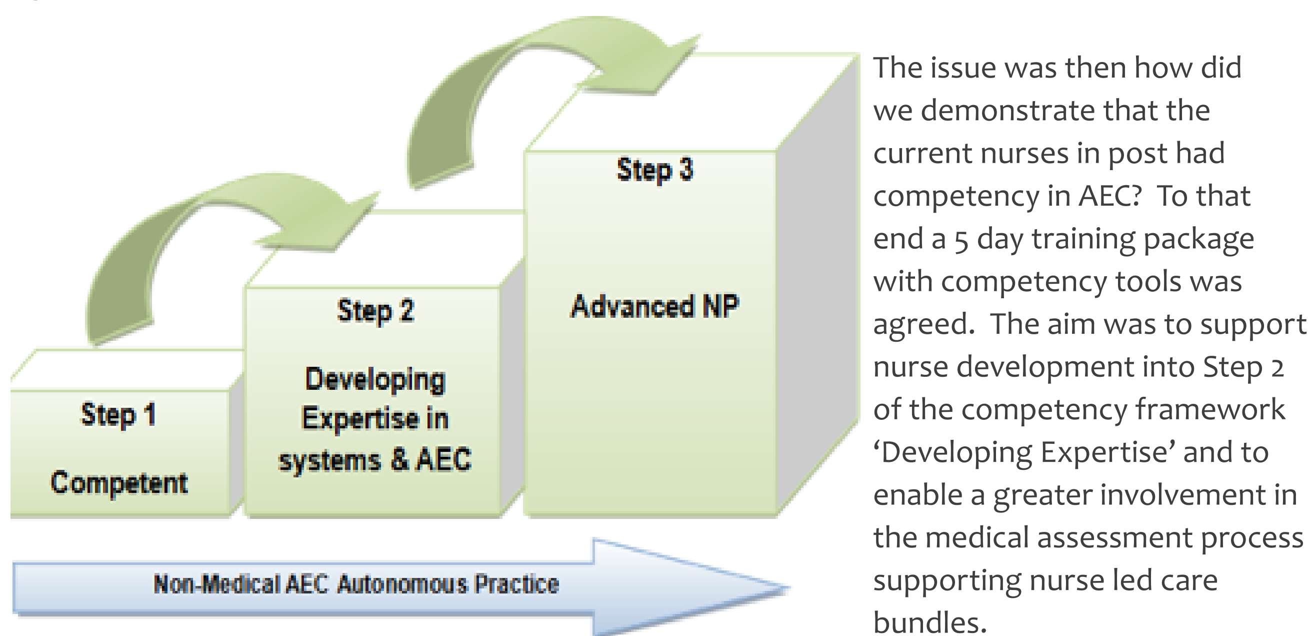
# 5. Developing a Competency Framework for Nurses Working in Ambulatory Emergency Care

The AEC at Kings College Hospital opened in February 2014 with nurses who had previously worked in the Acute Medical Unit. Two of the nurses had undertaken a physical examination module within a Masters programme but had not been using the skills

developed and the initial pathways were all medically led with the nursing roles within the Ambulatory Emergency Care Unit a little unclear.

In order to ensure that the Nurses had the skills to develop 'nurse-led' pathways and care effectively for future patients 'pulled' from ED into AEC, a competency framework was developed with an initial 5 day AEC Course.

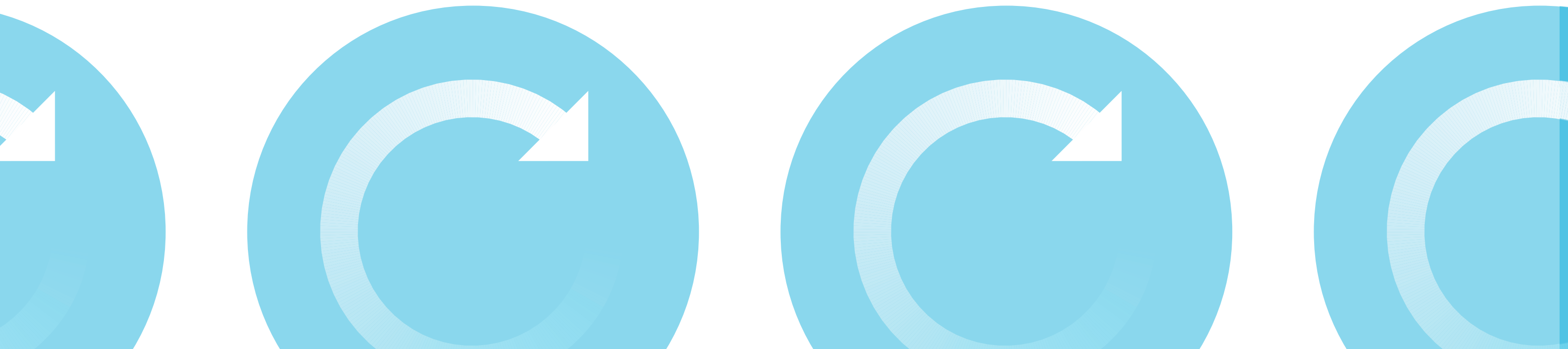
Following focused group discussions and a review of the competencies that had been developed for Emergency Care (Wessex) and the Society for Acute Medicine, the following framework was agreed:



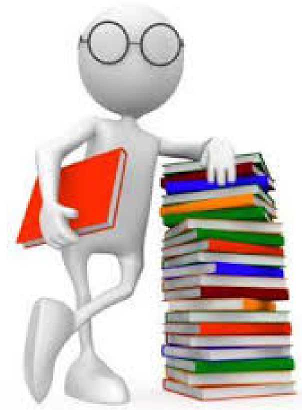

The issue was then how did we demonstrate that the current nurses in post had competency in AEC? To that end a 5 day training package with competency tools was agreed. The aim was to support nurse development into Step 2 of the competency framework 'Developing Expertise' and to enable a greater involvement in the medical assessment process supporting nurse led care bundles.

The course delivered the following areas of care:

- History
- Examination of the respiratory, cardiovascular, gastrointestinal and musculoskeletal systems
- Assessment - what else could it be? Understand the potential differential diagnoses
- Red flags
- Investigations required
- Treatment and management
- Evidence based knowledge
- Reflection on cases



The course was nicknamed the 'Hear it Here' course and was supported by a pre-course learning booklet.  Following the course staff were given time out to work alongside the Acute Physician's on take in ED to assure competency in documentation and to assure that the competencies could be attained.  A portfolio was developed to allow for observation and case reviews etc.



Evaluation found that staff increased in confidence and skills, medical staff stated that the documentation of histories and assessments showed that the nurses were developing their competency and skills.

The framework has also enabled nurse nurses joining the team to have clarity in their focus when in their induction phase.

## Our Advice to Other Ambulatory Emergency Care Units

- Be clear about what you want to achieve and recognise what will be possible to achieve swiftly with minimum service disruption but maximum reward
- Undertake a 5 day course tailored to your needs
- Have a structured competency framework as this helps to support nurse autonomy and confidence

*For more information contact: muriel.makotore@nhs.net or mandyrum@aol.com*

*Further information on courses can be found at www.ecares.co.uk*

To find out more about Ambulatory Care
please go to:

www.ambulatoryemergencycare.org.uk
Or email aec@nhselect.org.uk