

# The impact of Physicians' Assistants (Anaesthesia) at Heart of England NHS Foundation Trust



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The concept of Physicians' Assistants (Anaesthesia) or PA(A)s has been established for 10 years. The initial proposal for the administration of anaesthesia by non-physicians in the United Kingdom arose due to a predicted future shortage of medically trained anaesthetists. The 'New Ways of Working in Anaesthesia Programme' was established in 2003. ([www.rcoa.ac.uk/node/1457/](http://www.rcoa.ac.uk/node/1457/)). The product of this was Anaesthesia Practitioners (now called PA(A)s), and training commenced in January 2004. The plan for the PA(A) role was to enable one Consultant Anaesthetist to supervise two PA(A)s administering anaesthesia in geographically co-located theatres.

The original plan to initiate 'two-to-one' working proved initially challenging for various reasons including concerns regarding patient safety, whether the model would offer value for money and whether it would reduce training opportunities for junior anaesthetists. Some ten years later, perhaps due to the realisation of the workforce shortfall, PA(A)s are becoming a more obvious choice to many departments. Successive audits of PA(A) activity have shown that initial concerns were unfounded, and they continue to enjoy the support of key stakeholders. PA(A)s have continued to steadily increase in numbers and NHS hospitals have started to see the benefits of a permanent, reliable, enthusiastic and skilled workforce.

Heart of England NHS Foundation Trust (HEFT) adopted the model of one Consultant Anaesthetist supervising two PA(A)s in 2011. Since then, significant benefits have been demonstrated. Crucially, quality and safety have been maintained using this model. Improvements have been identified in clinical standards and there has been a real cost benefit realised in the anaesthetic budget through using this relatively modern way of working in the United Kingdom. Consultant Anaesthetists have nurtured this model and the individual practitioners, and the service is now integral to the anaesthetic workforce. In the last three years the team of six PA(A)s have anaesthetised over 10,000 patients in this model, as ratified by the trust recording

systems. Each PA(A) is involved in 700-900 cases per year, covering a range of specialties and anaesthetising patients for minor, intermediate and some major operations, all under the supervision of a Consultant Anaesthetist.

## The supervising consultant's day

**Fran Murray (Consultant Anaesthetist Heart of England NHS Foundation Trust)**

The supervision of PA(A)s has added a new and interesting dynamic to the role of the Consultant Anaesthetist. At first it may appear daunting to have responsibility for two operating theatre lists, running side by side, but this can be an exciting and rewarding challenge.

The day begins with a meeting with the individual PA(A)s to discuss the content of the operating list and a proposed anaesthetic plan for each patient which will then be signed off. Depending on the number and complexity of cases the pre-operative assessments may be performed by the PA(A) and/or the Consultant Anaesthetist. As it is necessary for the Consultant to be present at the induction of anaesthesia, the commencement of each list needs to be agreed but in reality there are rarely any conflicts of timing. The Consultant will divide his/her time during the lists moving between theatres, as required, but also allocating time to particular cases as dictated by clinical priority. In addition, the

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Consultant will ensure that relevant postoperative drugs and fluids are prescribed. If the PA(A) has achieved competence in extended practice in regional anaesthesia, the Consultant will supervise this practice. Although there are certain constraints to managing two lists the flexibility of having three skilled individuals means that the Consultant can take an active role in list management leading to improved productivity. Although one would imagine that conflicting clinical priorities could interfere with the timely response of the Consultant, in practice this is not a problem.

As the PA(A)s are now an established and experienced part of our anaesthetic team it now allows us to conduct lists with increasing confidence in that they are reliable, consistent and highly professional in their work. In addition, as permanent staff they are free from some of the pressures and constraints associated with trainees.

## Do PA(A)s deliver quality care?

In order to answer this question, an audit was conducted in our department to ensure that clinical standards were being maintained. The data compared the changes between the 'sole anaesthetist model' and the 'two-to-one model' with PA(A)s. A total of 159 patient notes were reviewed. The two groups were matched for physical status and surgical procedure (Phillips, Dixon and Murray 2013).

Performance indicators were compared; pain score on arrival into recovery, requirement for additional analgesia in recovery; occurrence of nausea/vomiting in recovery requiring rescue anti-emetic and unplanned overnight admission. They concluded that in adopting the 'two-to-one model' the performance indicators were not just maintained but in fact improved upon when compared to the 'solo consultant anaesthetist' model (Phillips, Dixon and Murray 2013). This study won the first prize at the British Association of Day Surgery conference in 2013.

## Are PA(A)s 'worth' it?

HEFT reviewed the cost implications of using the 'two-to-one model' finding that a 22% saving was achieved by using this model in two operating theatres, over five days per week. They scrutinised actual cost using the zero model rather than notional costs. Based on these actual cost values it was derived that one consultant delivered clinical session equated to £445.20 and one PA(A) delivered session was £125.07. Therefore the cost of two Consultants staffing two operating theatres were £890.40, whilst the cost of two PA(A)s plus one consultant session was £695.34, making a saving of £195.06 per session. Utilising the 'two-to-one model' over a five-day week, fifty weeks per year (accounting for ten statutory NHS Bank Holidays) yielded an annual saving of £97,530 and annual saving of 22% (Phillips et al 2012). At HEFT four operating theatres five days per week are staffed in this model.

## Surgical case mix

Initially when this model of working commenced at HEFT, PA(A)s were deployed in day case theatres anaesthetising ASA 1 and 2 patients having routine day surgical procedures. Over the last 18 months a natural divergence into other specialties and cases has been allowed to occur in order to enhance the value of PA(A)s. Now PA(A)s have job plans and regular operating lists, and they will anaesthetise for the same surgeons on a weekly basis, this as a allowed a good relationship to occur. The case complexity has increased from day cases to inpatient procedures such as hysterectomies, joint replacements and major laparoscopic surgery.

## Skills, knowledge and continuing professional development

The Association of Physicians' Assistants (Anaesthesia) recommends that all PA(A)s should aim to achieve a minimum of 25 CPD points per year to demonstrate continuing competence

and up-to-date skills and knowledge. At HEFT all PA(A)s are given 'non-clinical-time' throughout the year to enable this process to occur and all practitioners are advanced life support providers.

Each PA(A) works within the boundaries of their job description and national and locally agreed guidelines. The PA(A) course, is delivered by the University of Birmingham ([www.birmingham.ac.uk/postgraduate/courses/taught/med/physicians-assistant-anaesthesia.aspx](http://www.birmingham.ac.uk/postgraduate/courses/taught/med/physicians-assistant-anaesthesia.aspx)). The university academic training does not currently examine students on how to perform regional anaesthesia. In response to this, HEFT locally developed a range of education and training packages which PA(A)s need to be 'signed-off' to allow them to administer such techniques. To ensure that the PA(A)s can work to their maximum potential they have been trained to perform spinal anaesthesia in addition to femoral nerve, ilioinguinal, fascia iliaca, Transversus Abdominis Plane, interscalene, ankle, wrist and Sub-Tenon blocks. The educational packages were designed in-house by the PA(A) service lead in conjunction with two Consultant Anaesthetists.

## The team

The PA(A) team at HEFT is led by Mike Phillips (PA(A)), Dr Fran Murray and Dr Richard Crombie (Consultant Anaesthetists). Monthly governance meetings take place with the Clinical leads, the Clinical Director and the directorate manager. This enables future planning to occur, team issues to be discussed and safety/quality issues to be reviewed.

## Leading the service

**Mike Phillips (Service lead, Physicians' Assistant (Anaesthesia) Heart of England NHS Foundation Trust**

The PA(A) service at HEFT emerged from a major service re-design of support services within the Anaesthetic Directorate. My initial role as leader was to tailor the services provided by the PA(A)s toward service requirements. These needs, as in any

large acute Trust, evolve and change periodically, and so maintaining that focus has been an essential objective. Early challenges included recruiting support from both inside, and outside of the existing anaesthetic workforce. Setting out the objectives of the role and potential function of the team was integral to gaining support. Some anaesthetists, theatre staff and surgeons were sceptical of what some perceived as a rather radical transformation to the provision of anaesthetic services within the Trust. A cohort of extremely supportive Consultant Anaesthetists emerged fairly quickly, and once the benefits already discussed in this article became more obvious, the support and enthusiasm diffused throughout the perioperative specialties.

An ongoing part of the lead role is to audit and evaluate all of the team's activities. This includes specific aspects of the team's work such as the use of locally developed education and training packages; adherence with drug administration packages like Patient Specific Directives; as well as ensuring overall maintenance of quality, safety and financial viability. The team's success has been the product of excellent recruitment to the PA(A) posts. The practitioners have worked above and beyond to not only provide the clinical service, but also to act as ambassadors for the role both within, and outside of the Trust. The support of Consultant Anaesthetists and senior managers within the Trust has been invaluable and without their enthusiasm and brave commitment to sponsoring such innovative practice – there would have been no development.

The anaesthetic directorate has embraced the PA(A)s and welcomed them into the department. We made a very early commitment that any activity undertaken by PA(A)s would not disenfranchise other staff groups within the department, and would not impact upon the training of junior anaesthetists. This is a commitment we have kept and are able to cite many

examples of an actual benefit to junior doctors in training. The activities of the team have been seen to normalise over the past 18 months and the two-to-one model is now 'how we do it' in four of our operating theatres every day of the week.

It has been our pleasure to welcome visitors from many other Trusts in the UK who are exploring the potential benefits of employing PA(A)s and we would encourage other Trusts to take up this offer. From the conversations we have with visitors we recognise that there is an increasing desire to grow the national PA(A) workforce.

### National support

Special thanks to Dr Tom Clutton-Brock and the University of Birmingham for supporting the training and the Royal College of Anaesthetists for its continued support. The PA(A) role is entering its second decade and in some places is an embedded and essential part of the anaesthetic workforce. With the increasing demands on Consultants Anaesthetists there is a feeling that it will become established in many more Anaesthetic Departments throughout the UK.

### Association of Physicians' Assistant's (Anaesthesia)

The 7th annual conference of the Association of Physicians' Assistant's (Anaesthesia) will take place on the 15th May 2015 at the University of Birmingham, entitled 'Enhancing the Anaesthetic Workforce with Physicians Assistants (Anaesthesia)', we hope to see you there. This year's event will focus on how PA(A)s continue to enhance the anaesthetic workforce in order to improve quality, safety and financial efficiency. A variety of eminent speakers will talk of their experiences and involvement in the delivery of services utilising PA(A)s from both clinical and non-clinical perspectives. The challenges of integrating the role into departments of anaesthesia, making a sound business case for training of PA(A)s and how to make further success of this, and

similar non-physician supported services will also feature in this stimulating agenda.

### References

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- 2 Phillips, Winwood, Murray (2012) Physicians' Assistants (Anaesthesia) Deployed in the 'Two-to-One Model'. Reduce the Cost of Providing an Anaesthetic Service to a Two-Theatre Day Surgery Unit by 22 Per Cent Heart of England NHS Foundation Trust, *The Clinical Service Journal* [www.clinicalservicesjournal.com/Story.aspx?Story=10061](http://www.clinicalservicesjournal.com/Story.aspx?Story=10061).