Specialist centres: can surgeons heal the wounds?

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The policy of specialist centres for certain cancers is backed by research on outcomes. But surgeons in hospitals denied the right to treat cancer patients can find themselves cut adrift. Much of the UK has recently gone through the upheaval of regional specialisation. Are there lessons to be learnt from that experience?

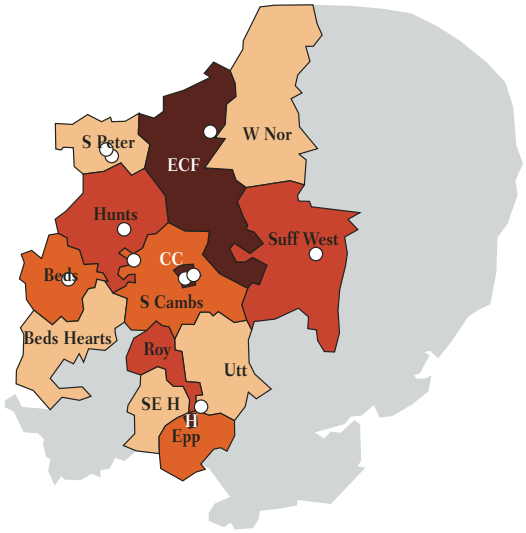
In the late 1990s a UK Department of Health report (the Calman-Hine Report) recommended a complete change in the way that cancer services were provided in England and Wales. Radical changes would see the formation of Cancer Centres for specialist diagnosis and treatment, including radiotherapy and specialist surgery. Cancer services at small district general hospitals would be designated Cancer Units, and these would not undertake major cancer surgery. These changes were driven by the growing evidence that high-volume hospitals obtained better results. Over a decade later, England and Wales are seeing the implementation of this centralisation process for cancer surgery starting with gynaecological cancer and moving on to upper gastrointestinal, hepatobiliary, urology and head and neck cancers. Breast and colorectal cancer are still treated in every hospital. The effects of this change have been profound for hospitals, doctors and patients.

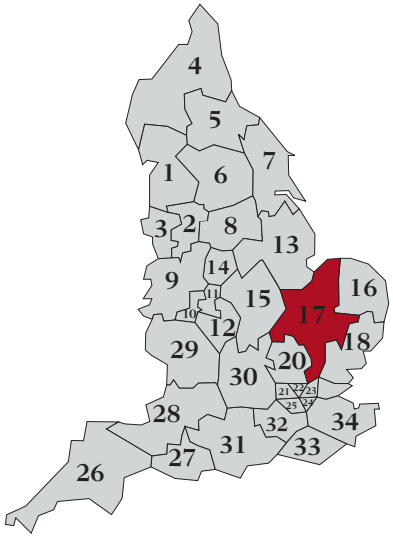
This article looks at how the change was managed in just one specialist area of cancer – upper gastrointestinal (GI) – in a relatively rural area of England – the western part of East Anglia. It looks at the obstacles, the lessons learnt and the implications for other European countries, which face the same hard choices.

In 2001, had you been diagnosed with oesophageal or gastric cancer while living in one of the rural English counties around Cambridge, now covered by the West Anglia Cancer Network (WACN), you could have been referred to one of five district general hospitals (Bedford, Peterborough, Huntingdon, Bury-St-Edmunds, Kings Lynn), or a teaching hospital (Addenbrooke's) or a specialist thoracic hospital (Papworth). All of these hospitals provided upper GI surgery, some doing as few as three such operations a year, others as many as 30.

But in September that year, faced with overwhelming evidence that patients' chances of survival are seriously reduced if treated by surgeons who operate infrequently, the Strategic Health Authority implemented national guidelines to concentrate upper GI cancer services at a single regional centre.

Today, any of the 1.3 million people served





The West Anglia Cancer Network *(left)* is one of 34 cancer networks covering England and Wales *(right)*, and caters for a population of around 1.3 million. Before 2001, cancer patients might have been referred for upper GI surgery to any one of seven hospitals shown on the map. Today, they would all be referred to the Addenbrooke's/ Papworth Cancer Centre (marked CC) near Cambridge

by WACN diagnosed with upper GI cancer is referred to the Cambridge Oesophago-gastric Centre, a joint venture between Addenbrooke's Hospital in Cambridge and Papworth Cardiothoracic Hospital, which are 18 kilometres apart. Potentially curative treatment is conducted by four surgeons and three oncologists supported by a team of gastroenterologists, cross-sectional radiologists, pathologists, specialist nurses and dieticians. Palliative care is still provided mainly in the local Cancer Units.

National plan

The decision to centralise England's upper GI cancer services had its origin in *Improving Outcomes Guidance* in 2001, which itself stemmed from the Cancer Plan for England. The plan looked at the evidence on the relation between outcome and annual caseload. It arrived at guideline figures for the minimum population that each specialist cancer centre would need to cover to treat a sufficiently high number of patients to develop real expertise. For pancreatic cancer, for example, the population was set at two to four million. For oesophageal and gastric cancers, it was set at the lower figures of one to two million people.

In every region, hospitals were invited to bid for the contract to provide specialist upper GI cancer services for their cancer network. In West Anglia, Addenbrooke's, in partnership with Papworth Hospital, won the contract to become the designated specialist centre.

Having a 'centralised' service spread across more than one site, avoided the need to build a specialist service from scratch, but the split site is not ideal.

Richard Hardwick, who led the Addenbrooke's bid and is now their lead clinician for upper GI cancer, says that the partnership with Papworth – recognised for its excellence in thoracic surgery – has led to a fruitful collaboration that had been conspicuously missing between the two specialties. However, the 18 kilometre gap has limited the extent of this collaboration. This will improve when Papworth eventually moves onto the Addenbrooke's site.

Hardwick says that the separation between upper GI surgeons and thoracic surgeons developed over decades. "Twenty years ago thoracics used to do nearly all the oesophagectomies in this country.

"They worked in a particular way; it was a technical tour de force. The patient was given to them, they did the operation, and handed the patient back, instead of integrating into a multidisciplinary team and being involved in the work-up and follow-up.

"Many of them believed that an oesophagectomy was the best palliation for patients, but we now know this to be untrue. As multidisciplinary teams were established, it was not too surprising that gastroenterologists teamed up with the upper GI surgeons they worked with regularly, rather than with thoracic surgeons they rarely met."

The upper GI surgeons began to take on more

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oesophagectomies and, at the same time, a new generation of dedicated oesophago-gastric upper GI surgeons emerged who had trained extensively in specialist centres around the world and wanted to establish their own teams back home. "An inevitable turf war ensued." says Hardwick. "This conflict has occurred in many parts of the world and is not always in patients' best interests."

As a result of the partnership between Addenbrooke's and Papworth, this breach is being healed and patients can be allocated to upper GI surgeons or to thoracic surgical specialists depending on who is more appropriate. The isolation of the thoracic team has gone and all patients are discussed in weekly specialist multidisciplinary team meetings. "We have produced a cohesive plan of how thoracics and upper GI work together, which we believe to be in the patients' best interest," says Hardwick.

Richard Hardwick: There are winners and losers, but at the end of this process you have to pick up the pieces to make the service work

Low morale

The picture for hospitals that lost out in the bidding process is less rosy. Upper GI surgeons in these hospitals have no cancer resections on their lists. For some, this is a relief, as they did few cases each year and felt under-supported in a small hospital. For others the loss of this work has seriously impacted on their job satisfaction. They are not personally paid per operation, so this has no financial implications for an individual, but it does impact on morale, and that is beginning to cause recruitment problems. Two district hospitals are having trouble filling vacancies for an upper GI surgeon.

With hindsight, says Hardwick, these problems were predictable and should have been foreseen by policy makers. He feels that morale was damaged unnecessarily by the way the bidding process was carried out. Because of other structural changes – Regional and District Health Authorities were being scrapped in favour of Strategic Health Authorities and Primary Care Trusts (PCTs) – there was not enough involvement from management. "It ended up with the clinicians having to battle it out as to who was going to get the cancer work, and it caused a lot of rivalries and interpersonal difficulties, particularly between surgeons. There are winners and losers, but at the end of this process you have to pick up the pieces to make the service work."

As a result, some upper GI surgeons in district hospitals have withdrawn from diagnosing and staging cancers, which results in some patients having to travel to Cambridge for minor procedures, such as staging laparoscopies or palliative bypasses.

Hardwick believes that it would have been better to create a 'joined-up' service where cancer work moved to the new Centres at the same time as high-volume benign surgery moved to the smaller district hospitals.

Some surgeons might have been appointed to do both types of work in different places. In the National Health Service (NHS) of old, this could have been done, but changes to the British system now make it difficult. "The reality is that this is not going to happen," Hardwick says, "because we are all individual hospitals competing with each other for work, following the introduction of a new 'payment by results' system for hospitals, which favours low-risk, high-volume and short-stay cases over expensive cancer surgery. Cancer Centres will rapidly be bankrupted

if they do not do these cash cases as well as the cancer work. The NHS is just fragmenting fast."

In West Anglia the national policy of referring upper GI cancer patients to specialist centres is being implemented, albeit with a few teething problems. It is today the job of Primary Care Trusts (PCTs) – at general practitioner level – to 'purchase' care, and PCTs are being given a firm steer in one direction. Hardwick says: "As part of the National Cancer Plan, PCTs in this region have been told by the Cancer Network Policy Board that the decision has been made that oesophageal and gastric cancer will be resected in the Cancer Centre and not at their local district hospital." As PCTs now control the budget, he adds, they have a responsibility to purchase care in an ethical and responsible manner. If they deliberately flout the policy of the Cancer Network, they could find themselves having to account for their decision if anything went wrong.

Safe vs local

WACN can be regarded as a success in terms of the quality of cancer care, yet it belies an uneasy compromise between the medical evidence and political expediency that will be familiar to anyone trying to centralise services in this way. Convincing smaller hospitals that they should stop carrying out these procedures was relatively straightforward, says Hardwick. The difficulties arose with the larger district hospitals that did intermediate numbers.

"The smaller places put their hands up and say: we realise that we only do three gastrectomies a year, and it's not sustainable. But someone at one of the larger hospitals who does 10 gastrectomies and 10 oesophagectomies a year with acceptable mortality rates will understandably want to carry on doing so. The trouble is that once we've put together a big specialised team in the Cancer Centre, we need the work. Each surgeon needs to be doing about 30–35 resections a year to get the best results – and we need about 100 cases going through the department."

In practice, the Addenbrooke's/Papworth centre is only just achieving this level of throughput, and Hardwick attributes this to the population pool having been set too low. He believes that the evidence supports a population pool of two to four million for every specialist upper GI cancer service, but the cancer plan opted for the one million figure because it was deemed more politically acceptable.

The pressures to remain as local as possible are obvious. Quite apart from the resentment among surgeons who are denied the right to treat cancer patients, hospitals feel threatened as their patient volume falls, and the patients themselves can find it very hard to get to and from the Cancer Centre. This may be a small issue for someone who is young and fit, but it is a big one for more elderly cancer patients.

"The biggest complaint we get is access. This place is a nightmare for patients to visit. The county council are insistent that we can't increase traffic onto the site despite continual expansion. Parking is inadequate, the road access is appalling and every single patient that I see finds it an issue. If you are telling patients in Bury St Edmunds they have to go to Cambridge for their treatment, you have got to do things that will facilitate that. 'Park & Ride' buses are not what patients and their relatives want to use."

Collaboration works

On the plus side, the introduction of a weekly video conference meeting of the multidisciplinary teams has allowed much better standardisation of the staging and treatment of upper GI cancer patients. This has already resulted in fewer patients being subjected to inappropriate exploratory surgery, and the complete elimination of inappropriate surgery with palliative intent. Much of the palliative care for patients is

Hardwick feels the population pool was set too low, for reasons of political expediency

Some adjuvant and neo-adjuvant chemotherapy can still be administered closer to home

provided at the district hospital, close to the patient's home. Gastroenterologists and oncologists at the patient's district hospital will also be involved in their care, enabling some adjuvant and neo-adjuvant chemotherapy to be administered closer to home.

Hardwick says, "We sit down and go through every new case each week and all the follow-up cases, reviewing all evidence before agreeing a management plan. This is actually working quite well now so long as clinicians present their patients early on and not half way through the work-up process. This is still a problem with one of our Units, but overall it is working well. In addition, we are able to collect data on a dedicated computer database, the Joint Clinical Information System (JCIS) and collate useful information on an easily accessible web-based system."

Learning the lessons

Had WACN been able to design its specialist upper GI cancer service from scratch, it would have ended up with a very different system. But it is precisely because it had to adapt an existing system to fit the new evidence-based requirements of minimum volume that makes the story of interest to health services elsewhere with similar problems.

For example, having a 'centralised' service spread across two, or even more, sites, avoids the need to build a brand new stand-alone specialist service, and is a solution that has been used in other countries, including the Netherlands.

But the logistical challenges are often less of a problem than enforcing implementation of a policy of referrals to specialist centres, when either individual clinicians or individual hospitals have a self interest – financial or otherwise – that deters cooperation between different parts of the system.

In Hungary, some voices are calling for referrals of certain cancer patients to specialist centres to be made mandatory – as is already the case with HIV patients. The Netherlands – where the policy of minimum volumes and specialist cancer centres has been pursued for almost a decade – has so far relied on persuasion, backed up by a threat of sanctions. Though largely effective, there are still surgeons who insist on trying their hand at the occasional oesophagectomy that comes their way.

In much of Europe it is health insurance systems, rather than public bodies such as the English Primary Care Trusts, that effectively 'purchase' care. Should they too be held responsible for the consequences of continuing to pay for patients to be treated in centres whose annual caseload is below the threshold known to be safe? Insurers in the United States have already started to use outcome indicators to dictate where patients should have certain high-risk operations.

With the latest research from the Netherlands showing that oesophageal cancer patients treated in smaller hospitals are ten times more likely to die than those treated in specialist centres, the pressure on Europe's health systems to provide a quality service based on appropriate patient volumes is mounting. Hopefully, being able to draw on the lessons of previous experience, such as the West Anglia story, will both facilitate and speed similar change elsewhere.

Should health insurances continue to pay for patients to be treated in non-specialist centres?