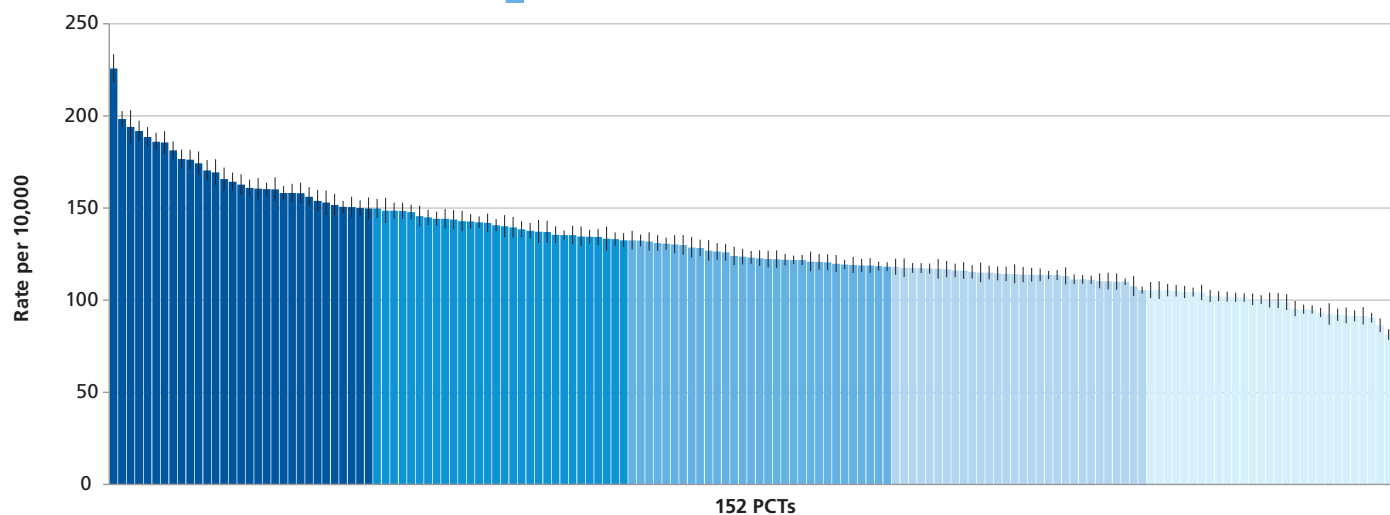
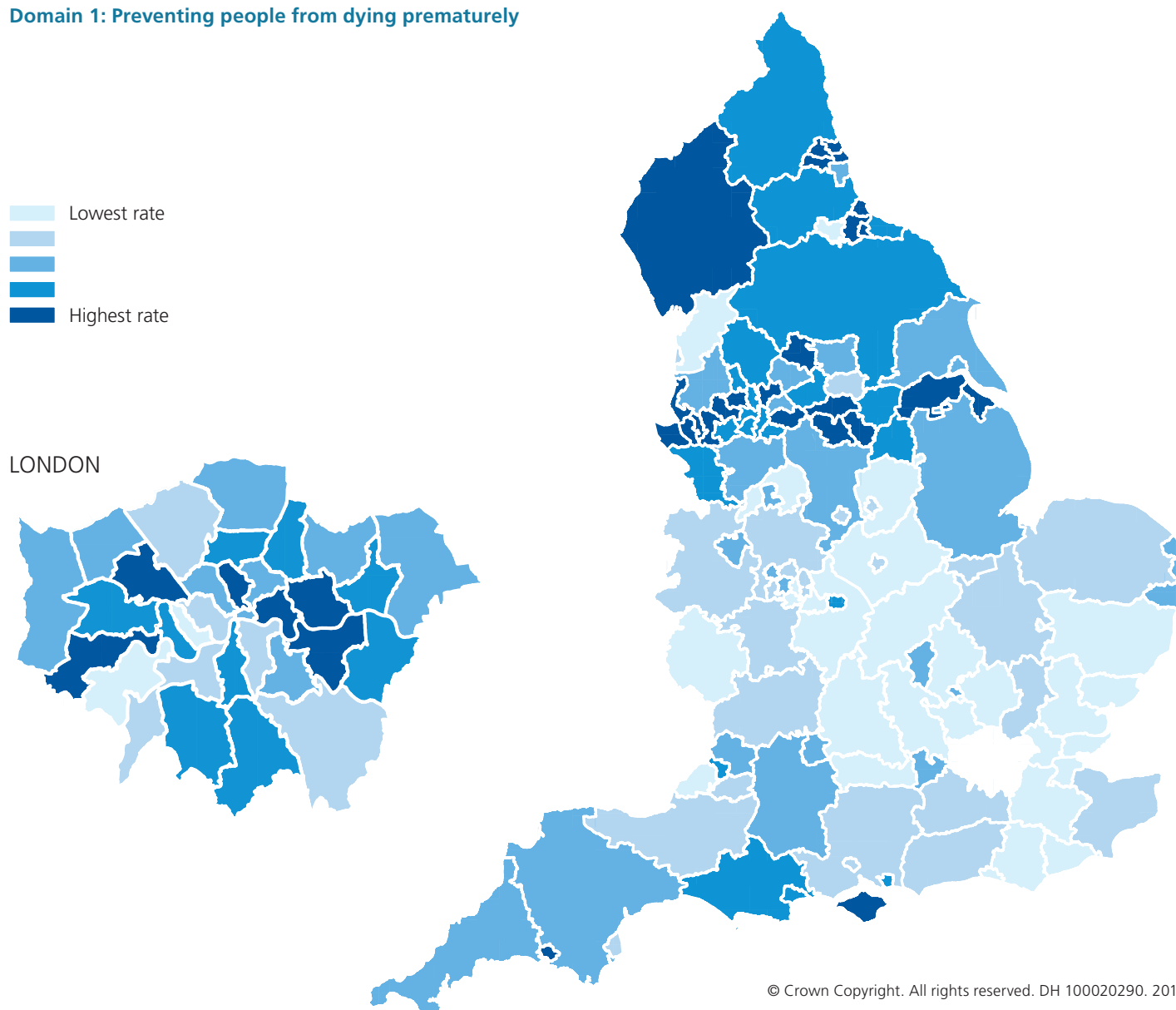


PROBLEMS OF THE GASTRO-INTESTINAL SYSTEM

Map 42: Rate of activity for gastroscopy (upper gastro-intestinal endoscopy) per population by PCT

Indirectly standardised rate, adjusted for age, sex and deprivation 2009/10

Domain 1: Preventing people from dying prematurely



Context

Gastroscopy is an investigation of the upper gastro-intestinal tract – mouth, oesophagus, stomach and duodenum (first part of the small intestine) – using a flexible endoscope. Diagnostic gastroscopy is used:

- › To investigate dyspepsia in older people;
- › To investigate difficulties and/or pain on swallowing (dysphagia);
- › To investigate abdominal swelling;
- › To identify cancer of the oesophagus or stomach, although it is difficult to identify pre-cancerous lesions using this technique;
- › To investigate patients presenting with upper gastro-intestinal bleeding or anaemia;
- › To detect complications of non-steroidal anti-inflammatory drugs (NSAIDs).

The value from the surveillance of chronic oesophageal disease to prevent cancer from a condition called Barrett's oesophagus is currently being evaluated in research studies.

Much of the demand for gastroscopy comes through referrals made by primary care.

Magnitude of variation

For PCTs in England, the rate of activity for gastroscopy ranged from 77.4 to 225.7 per 10,000 population (2.9-fold variation). When the five PCTs with the highest rates and the five PCTs with the lowest rates are excluded, the range is 91.4–185.9 per 10,000 population, and the variation is twofold.

One reason for variation in the rate of gastroscopy procedures is differences in regional cancer rates, which in turn is affected by smoking habit and prevalence of obesity. However, the degree of variation observed is greater than can be explained by variations in the incidence and prevalence of disease.

Possible reasons for unwarranted variation include differences in:

- › Thresholds for referral by GPs;
- › The amount of resources available for both diagnosis and surveillance.

Options for action

Commissioners and GPs need to work together to ensure that the referral rate for gastroscopy relates to the needs of the local population, including:

- › Developing local guidelines for chronic or recurrent upper abdominal pain;
- › Auditing local referral rates for gastroscopy to identify both under- and over-referral;
- › Communication from endoscopy services by visiting all local GPs to update them on ways to maximise value from the endoscopy service for patients.

The NICE commissioning guide can help commissioners and providers develop referral criteria and determine local service levels (see "Resources").

However, commissioners and providers may need to assess the relative value of gastroscopy and of colonoscopy/flexisigmoidoscopy for local populations because there may be a case for shifting resources from gastroscopy and increasing the rate of colonoscopy/flexisigmoidoscopy (see Map 1).

Commissioners and providers can use the results of the Global Rating Scale (GRS: see "Resources"), a tool that enables units to assess their provision of patient-centred care, including dimensions for quality and safety, and customer care. Applying the "Appropriateness item is important; it reassures commissioners that referrals are vetted against best practice. A planning and productivity assessment tool is now available: high scores indicate services are planning for future demand and resource use is efficient.

RESOURCES

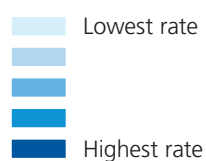
- › Joint Advisory Group (JAG) for GI endoscopy. JAG defines and maintains the standards by which endoscopy is practised in the UK. There is a section on "Commissioning" on the website. <http://www.thejag.org.uk/>
- › Endoscopy Global Rating Scale (GRS). <http://www.grs.nhs.uk/WhatIsGRS.aspx>
- › NICE. Upper GI endoscopy service commissioning guide (2007). <http://www.nice.org.uk/usingguidance/commissioningguides/uppergiendoscopyservices/uppergiendoscopyservices.jsp>
- › Barrett's Oesophagus Campaign. <http://www.barrettscampaign.org.uk/>

PROBLEMS OF THE GASTRO-INTESTINAL SYSTEM

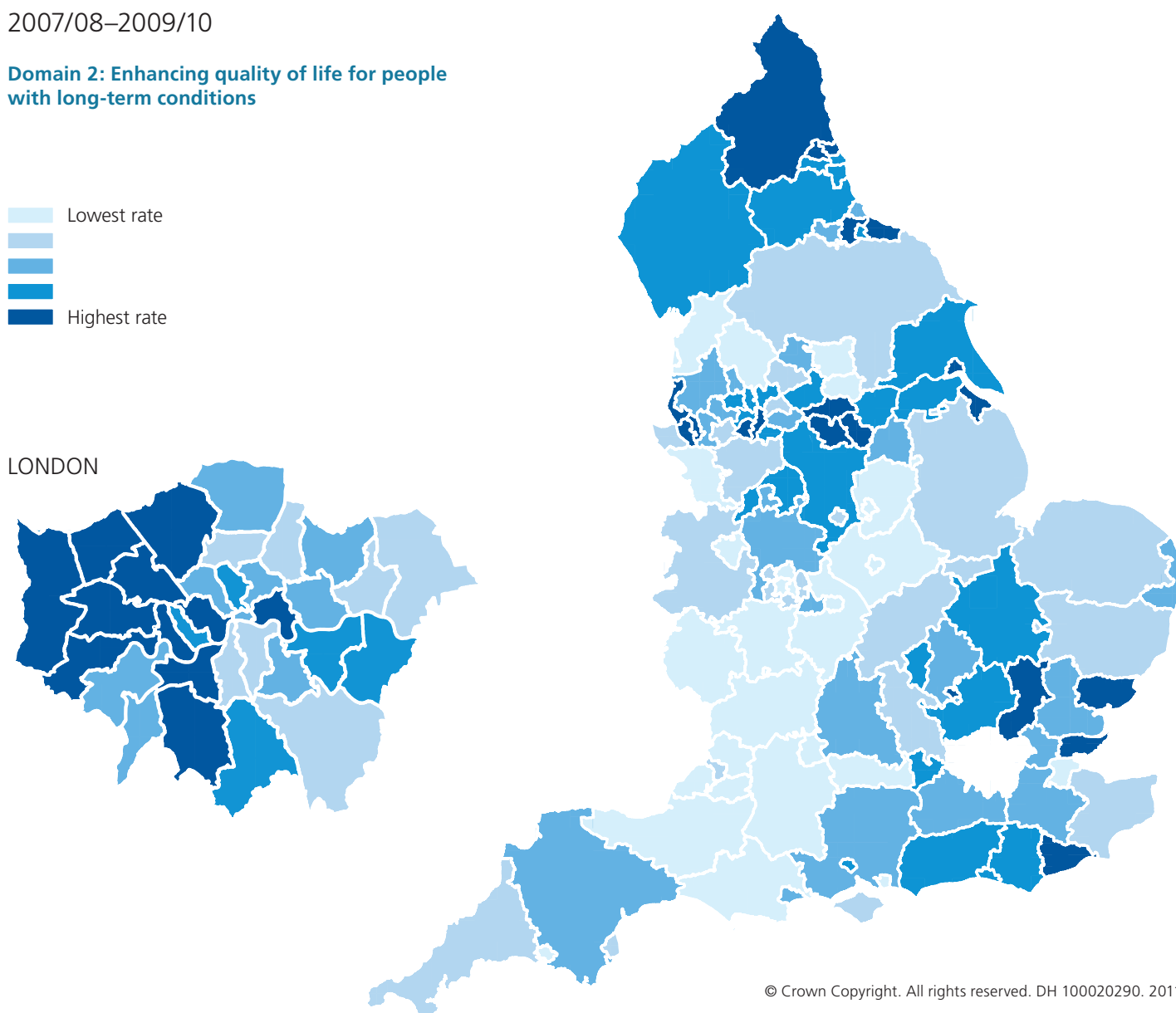
Map 43: Admission rate for children for upper and/or lower gastro-intestinal endoscopy per population aged 0–17 years by PCT

2007/08–2009/10

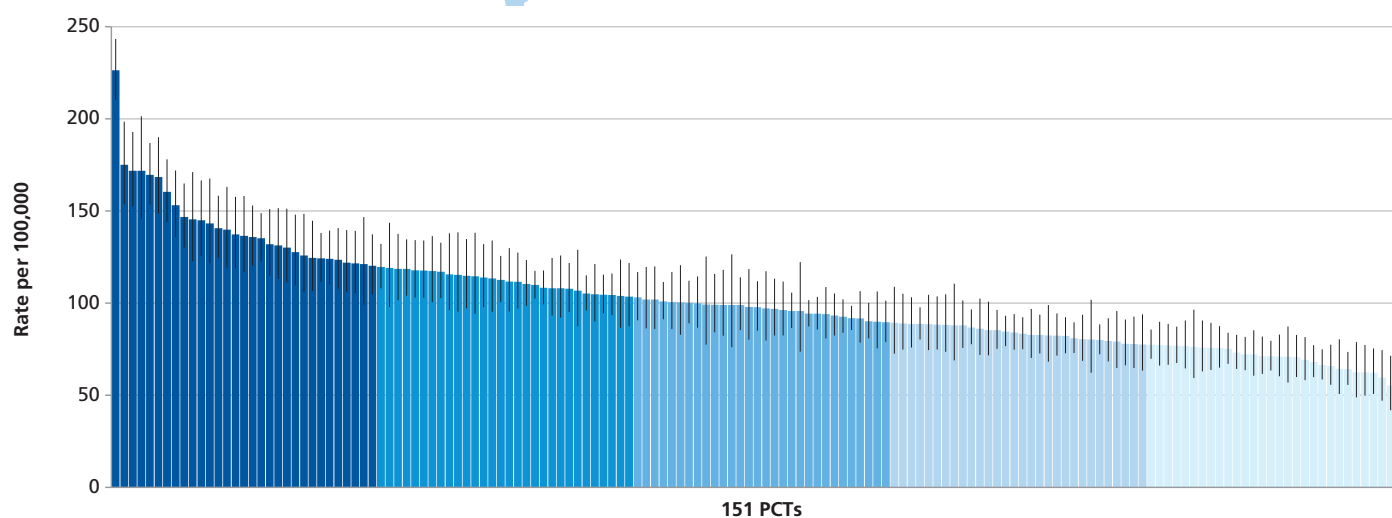
Domain 2: Enhancing quality of life for people with long-term conditions



LONDON



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Context

Diagnostic gastro-intestinal (GI) endoscopy enables the GI tract to be visualised directly, and for biopsies to be carried out to aid diagnosis. Endoscopy is undertaken in children to diagnose or exclude serious GI disease, such as inflammatory bowel disease, coeliac disease, enteropathy and gastro-oesophageal reflux.

The symptoms that most commonly result in referral for diagnostic GI endoscopy are abdominal pain, failure to thrive, recurrent vomiting and diarrhoea and/or blood per rectum. Where medical investigations (including GI endoscopy) fail to find an organic cause for these symptoms, a diagnosis of functional GI disorder (GI symptoms without structural or physical abnormalities) is considered.

Most research suggests that functional GI disorders are still the commonest outcome following a diagnostic GI endoscopy, i.e. no physical abnormality is found, which suggests that the existing selection criteria for GI endoscopy are not appropriate. The large numbers of children who undergo the procedure without receiving a diagnosis may affect child and family well-being. It also has resource implications.

However, the value of diagnostic GI endoscopy to exclude serious underlying illness is vital. Unwarranted delay or poor availability of paediatric endoscopy may compromise the diagnostic work-up and care of children with chronic GI symptoms.

Magnitude of variation

For PCTs in England, the admission rate for children for upper and/or lower GI endoscopy ranged from 39.9 to 226.3 per 100,000 population aged 0–17 years (6-fold variation). When the five PCTs with the highest admission rates and the five PCTs with the lowest admission rates are excluded, the range is 62.5–168.4 per 100,000 population aged 0–17 years, the variation 2.7-fold.

It is unlikely that this degree of variation can be explained by differences in the number of children with symptoms or the incidence of serious organic GI disease. The most likely reasons for this variation are:

- › differences in selection criteria and threshold for diagnostic GI endoscopy;
- › poor access to endoscopy in some areas of the country.

Unexpectedly low rates of GI endoscopy may reflect inadequate provision or poor access, leading to delayed or missed diagnosis in the local population of children.

Over the past decade, the rates of diagnostic GI endoscopy have greatly increased in the UK, as in most developed countries, resulting in earlier and more accurate diagnosis of severe GI disease. However, to maximise yield and reduce unnecessary risks to patients, evidence-based guidance is needed on the selection of children who are most likely to benefit from undergoing diagnostic GI endoscopy.

Options for action

At present, there is no national guidance.

Commissioners and clinicians should collaborate to agree local criteria for diagnostic GI endoscopies in children based on best available evidence. Criteria need to be outcome- as well as process-based, and should be benchmarked against the agreements made in other local areas to ensure equity of access and high-quality outcomes.

A networked system of delivering paediatric endoscopy will have considerable impact on rationalising the criteria for endoscopy:

- › ensuring that levels of activity relate to local population needs;
- › enabling the comparison of outcomes;
- › providing support for quality assurance.

RESOURCES

- › British Society for Paediatric Gastroenterology, Hepatology and Nutrition (BSPGHAN). Report of the BSPGHAN Working Group to Develop Criteria for DGH Gastroenterology, Hepatology and Nutrition Services. http://www.bspghan.org.uk/document/DGH_SERVICES_BSPGHAN.DOC
- › British Society for Paediatric Gastroenterology, Hepatology and Nutrition (BSPGHAN). Guide for Purchasers of PGHN Services. <http://www.bspghan.org.uk/information/guides.shtml>
- › Royal College of Paediatrics and Child Health (2004) Commissioning Tertiary and Specialised Services for Children and Young People. http://www.rcpch.ac.uk/sites/default/files/asset_library/Publications/C/Tert.pdf

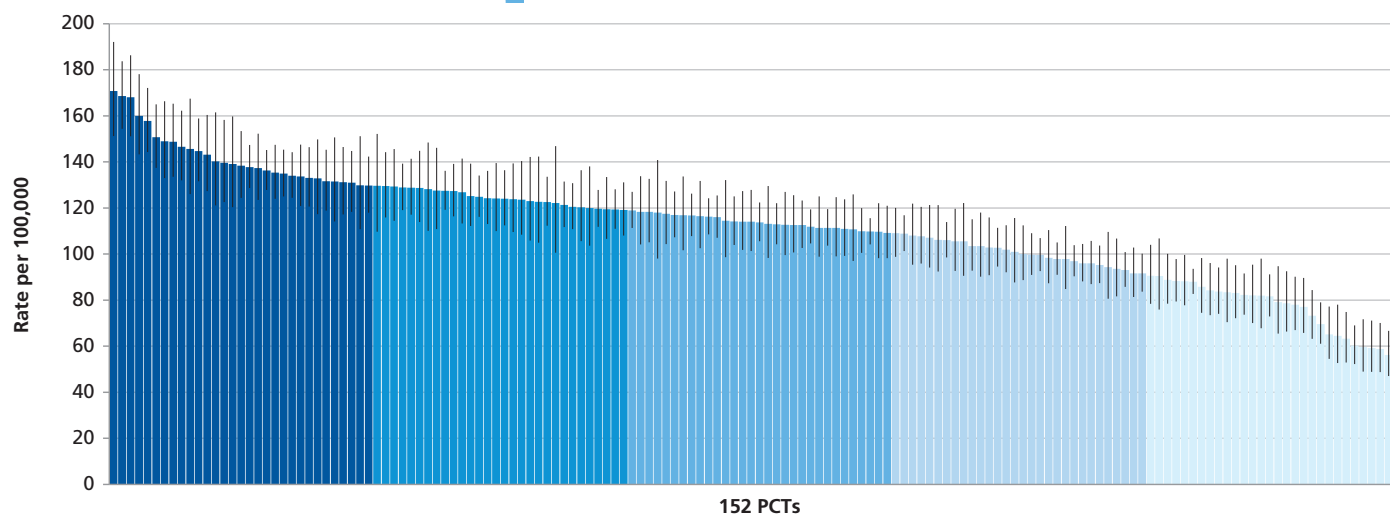
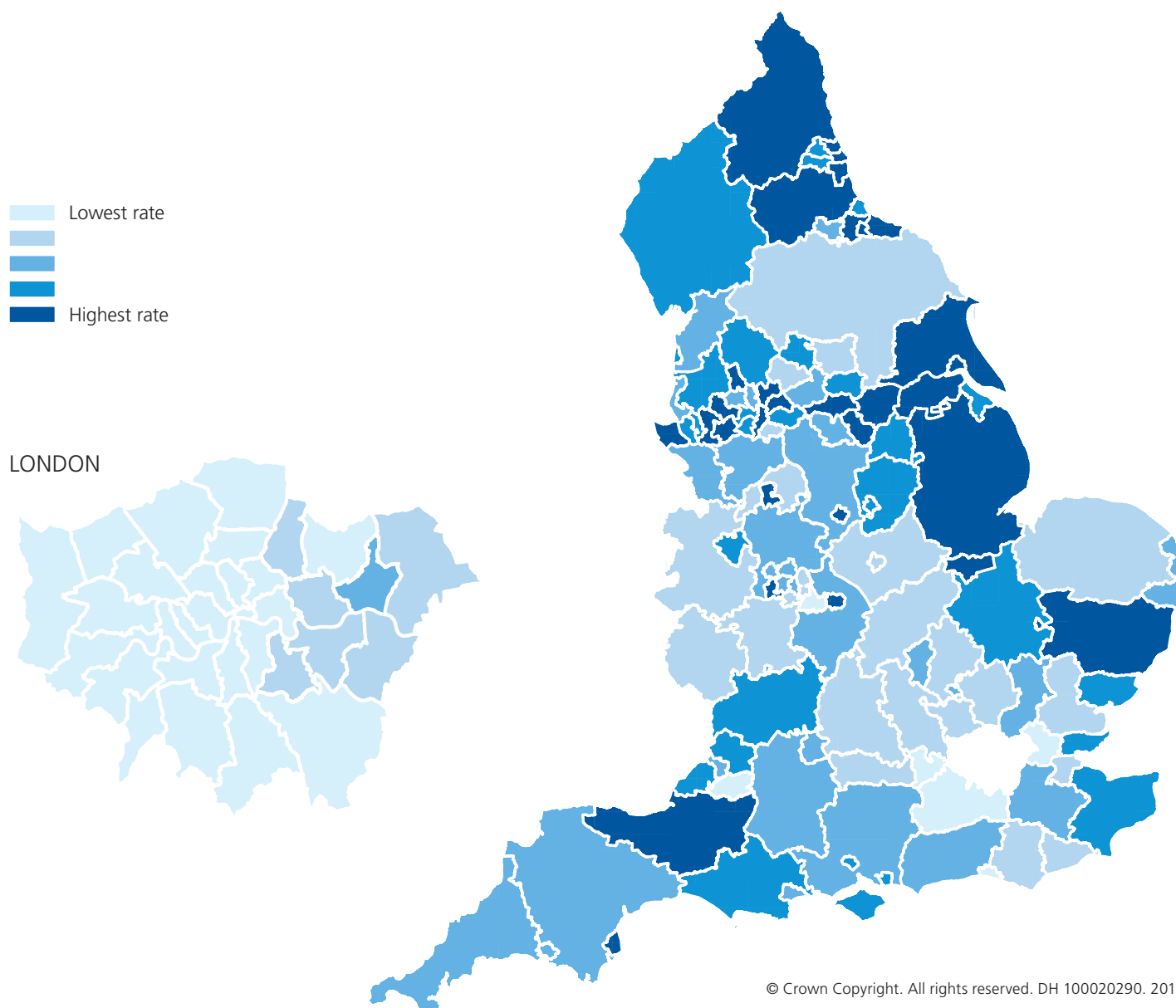
This indicator is from the Child Health Themed Atlas

PROBLEMS OF THE GASTRO-INTESTINAL SYSTEM

Map 44: Rate of cholecystectomies per population by PCT

Directly standardised rate 2009/10

Domain 2: Enhancing quality of life for people with long-term conditions



Context

Cholecystectomy is an operation performed to relieve the symptoms of cholelithiasis which may commonly present with the pain of biliary colic or the inflammation and infection of acute cholecystitis. If gallstones exit the gallbladder into the bile ducts, obstructive jaundice or pancreatitis may result.

The cholecystectomy procedure has changed dramatically with the advent of laparoscopic surgery in the early 1990s, offering minimally invasive surgery rather than the traditional open technique. As a result, cholecystectomy can now be offered to patients with serious co-morbidities who formerly would have been rejected as unfit for open surgery. However, the application of a new minimally invasive technology to an existing surgical problem that allows the less fit patient an opportunity for a surgical solution to their problem raises new and different issues.

This was first studied in Maryland by Steiner et al¹ who showed that laparoscopic cholecystectomy led to:

- an increase in the total number of people having operations;
- a reduction in the operative mortality rate.

However, the number of people dying as a result of the procedure did not change because the number of people overall receiving an operation had increased. This is an example of the way in which a change in technology results in a change to the clinical criteria for operation which then changes the nature of the operation and the management of the condition.

The data for this indicator comprise the combined total of open and laparoscopic cholecystectomies, that is, all cholecystectomies. The indications for both types of operation are the same, with the exception of the patient's fitness for operation, which has been altered by the development of the laparoscopic procedure.

Magnitude of variation

For PCTs in England, the rate of cholecystectomies per 100,000 population ranged from 51.1 to 170.8 (3.3-fold variation). When the five PCTs with the highest rates and the five PCTs with the lowest rates are excluded, the range is 60.2–150.7, and the variation is 2.5-fold.

The reasons for variation are not clear. It is unlikely that the degree of variation observed is due to differences in capacity or a lack of laparoscopic training. Trainee surgeons are trained in minimally invasive techniques, and laparoscopic surgery is now regarded as mainstream surgery.

There is little consensus on the appropriate rate of cholecystectomy. Data collected by the British Association of Day Surgery suggest that at least 60% could be performed on a day-case basis (see Map 45).

Options for action

Commissioners and providers need to review the ratio of laparoscopic to open cholecystectomy performed, and assess the potential to increase the rate of laparoscopic cholecystectomy (see Map 45). It is a safe and effective procedure^{2,3} with good outcomes which can be performed as a day case, thereby minimising patients' exposure to the risks of hospitalisation.

- Although laparoscopic surgery has a smaller morbidity and mortality risk when compared with the open procedure, the risk is not zero, and a patient with serious co-morbidities will require appropriate counselling taking into account the severity of their symptoms, and their general health and personal values.
- Accurate and reproducible measurement of gallbladder symptoms would allow an assessment of the threshold for intervention to see if the procedure is now being offered to people with less severe disease, given that the laparoscopic approach is the treatment of choice for most patients.
- Specialists and GPs should consider developing guidelines for the management of upper abdominal pain, which may be a symptom of gallbladder disease.

1 Steiner CA, Bass EB, Talamini MA et al (1994) Surgical rates and operative mortality for open and laparoscopic cholecystectomy in Maryland. *New England Journal of Medicine* 330: 403-408.

2 Dolan JP, Diggs BS, Sheppard BC, Hunter JG (2009) The national mortality burden and significant factors associated with open and laparoscopic cholecystectomy: 1997-2006. *J Gastrointest Surg* 13: 2292-2301.

3 Hannan EL, Imperato PJ, Nenner RP, Starr H (1999) Laparoscopic and open cholecystectomy in New York State: mortality, complications, and choice of procedure. *Surgery* 125: 223-231.

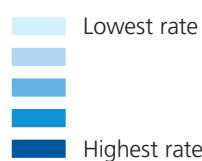
PROBLEMS OF THE GASTRO-INTESTINAL SYSTEM

Map 45: Percentage of elective adult day-case laparoscopic cholecystectomy per all elective cholecystectomies by PCT

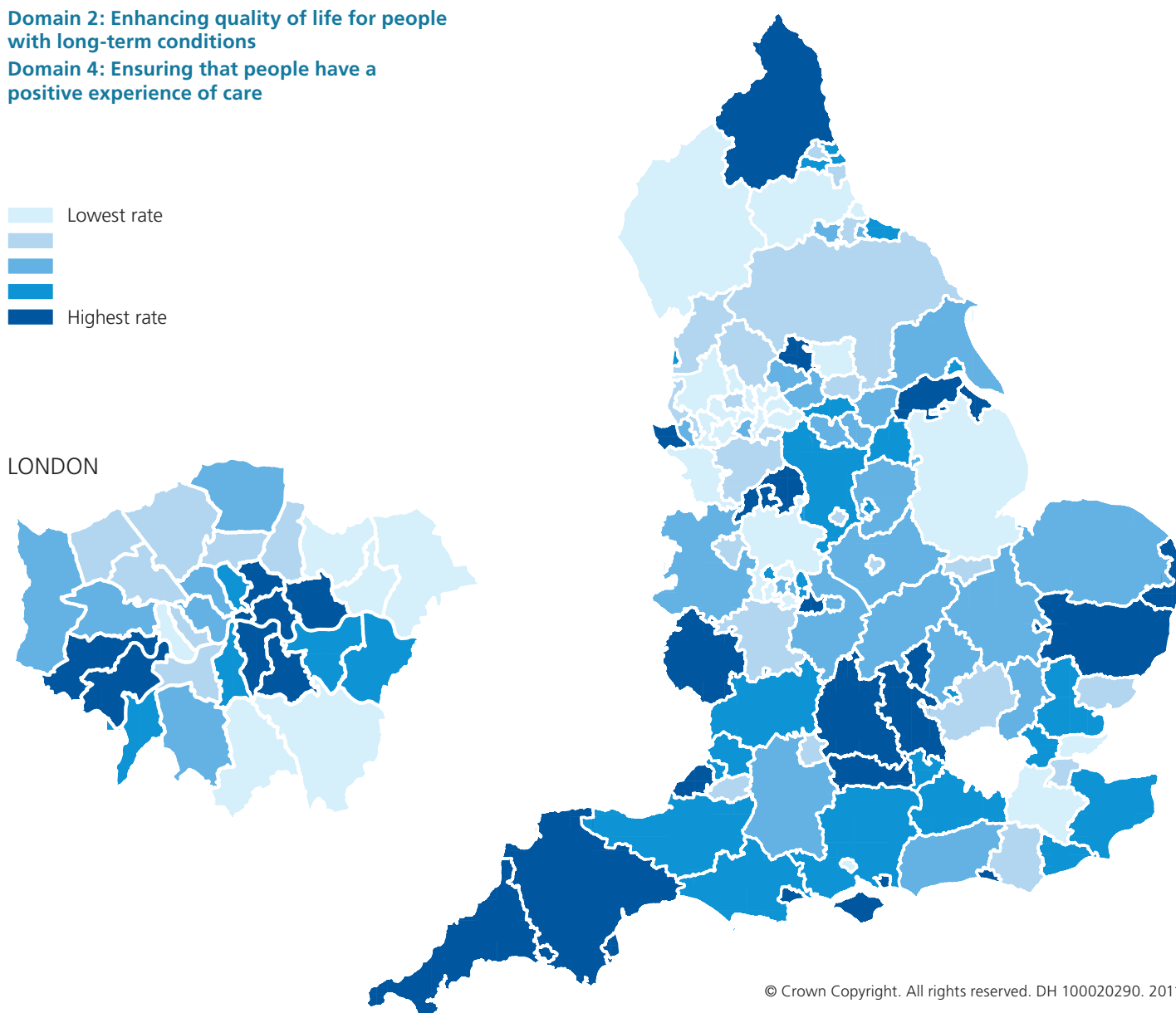
2010/11

Domain 2: Enhancing quality of life for people with long-term conditions

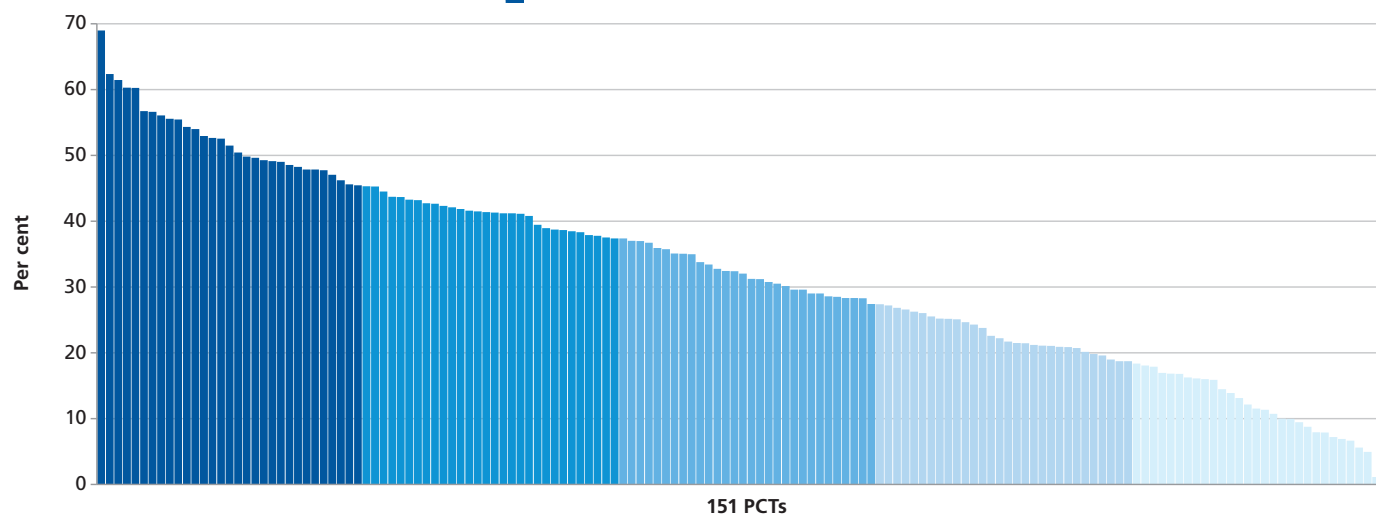
Domain 4: Ensuring that people have a positive experience of care



LONDON



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Context

Day surgery is the management of a surgical procedure in which patient admission, operation and home discharge are completed on the same calendar day according to a planned pathway. Advances in surgical and anaesthetic techniques have resulted in a wider spectrum of procedures that are now feasible as day surgery.

The planned pathway commences in the GP's surgery based on good knowledge of the procedures that can be undertaken as ambulatory care. Patients are referred to a provider with the intention of day-surgery management. There is an expectation that the provider will deliver a quality-assured care process including booking, the period of admission, and follow-up support immediately after home discharge.

Day-surgery rates for many procedures in the British Association of Day Surgery (BADs) *Directory of Procedures*¹ are published on the 'Better Care, Better Values' website.² If all providers in England were to match the performance of those in the upper quartile of day-case surgery rates for this set of procedures, the estimated annual saving could release more than £68 million.²

Originally included in the Audit Commission's "Basket of 25 Procedures",³ elective laparoscopic cholecystectomy has been promoted as suitable for day-case management for over 10 years. In the BADs *Directory of Procedures*, it is estimated that, with an optimised care pathway, up to 60% of patients could be managed on a day-stay basis.¹

Magnitude of variation

For PCTs in England, the percentage of elective adult day-case laparoscopic cholecystectomy per all elective cholecystectomies ranged from 1.1% to 69.0% (62-fold variation).⁴ When the five PCTs with the highest percentages and the five PCTs with the lowest percentages are excluded, the range is 6.9–56.7%, and the variation is eightfold.

Reasons for variation include differences in:

- patient co-morbidities;
- the availability of home carer support.

However, much of the variation is unwarranted due to:

- suboptimal planning of the day-surgery pathway;
- conservative inclusion criteria;
- conservative clinical practices and/or culture.

Options for action

Providers need to evaluate their care pathways for day surgery, and ascertain what level of transformational work might be needed.

Providers of day-surgery services could consider a "Default to Day Surgery" ethos as promoted by the NHS Institute for Innovation and Improvement (see "Resources", "Ten High Impact Changes for Service Improvement and Delivery").

Commissioners need to review their specifications for day-surgery services against the BADs guidelines for day-surgery service commissioning (see "Resources"), and could consider reinforcing a "Default to Day Surgery" ethos using CQUIN payment frameworks (see "Resources").

Commissioners and providers need to collaborate to optimise the care pathway for patients undergoing laparoscopic cholecystectomy using the NHS Institute for Innovation and Improvement guidelines (see "Resources").

RESOURCES

- British Association of Day Surgery. Commissioning Day Surgery. A Guide for Commissioning Consortia. May 2011. <http://www.daysurgeryuk.org/bads/joomla/images/stories/downloads/CommissioningDaySurgery.pdf>
- NHS Institute for Innovation and Improvement. Focus On: Cholecystectomy. 2006. http://www.institute.nhs.uk/option,com_joomcart/Itemid,194/main_page,document_product_info/cPath,71/products_id,186.html
- NHS Institute for Innovation and Improvement. Ten High Impact Changes for Service Improvement and Delivery. http://www.institute.nhs.uk/quality_and_service_improvement_tools/quality_and_service_improvement_tools/day_surgery_-_treat_day_surgery_as_the_norm.html
- PCT guide: http://www.natpact.info/uploads/2004_Oct/HIC_PCTguidefinal.pdf
- CQUIN payment frameworks. http://www.institute.nhs.uk/world_class_commissioning/pct_portal/cquin.html

1 British Association of Day Surgery (2009) *Directory of Procedures*, 3rd edition.

2 <http://www.productivity.nhs.uk/>

3 <http://www.audit-commission.gov.uk/nationalstudies/health/other/Pages/daysurgery.aspx>

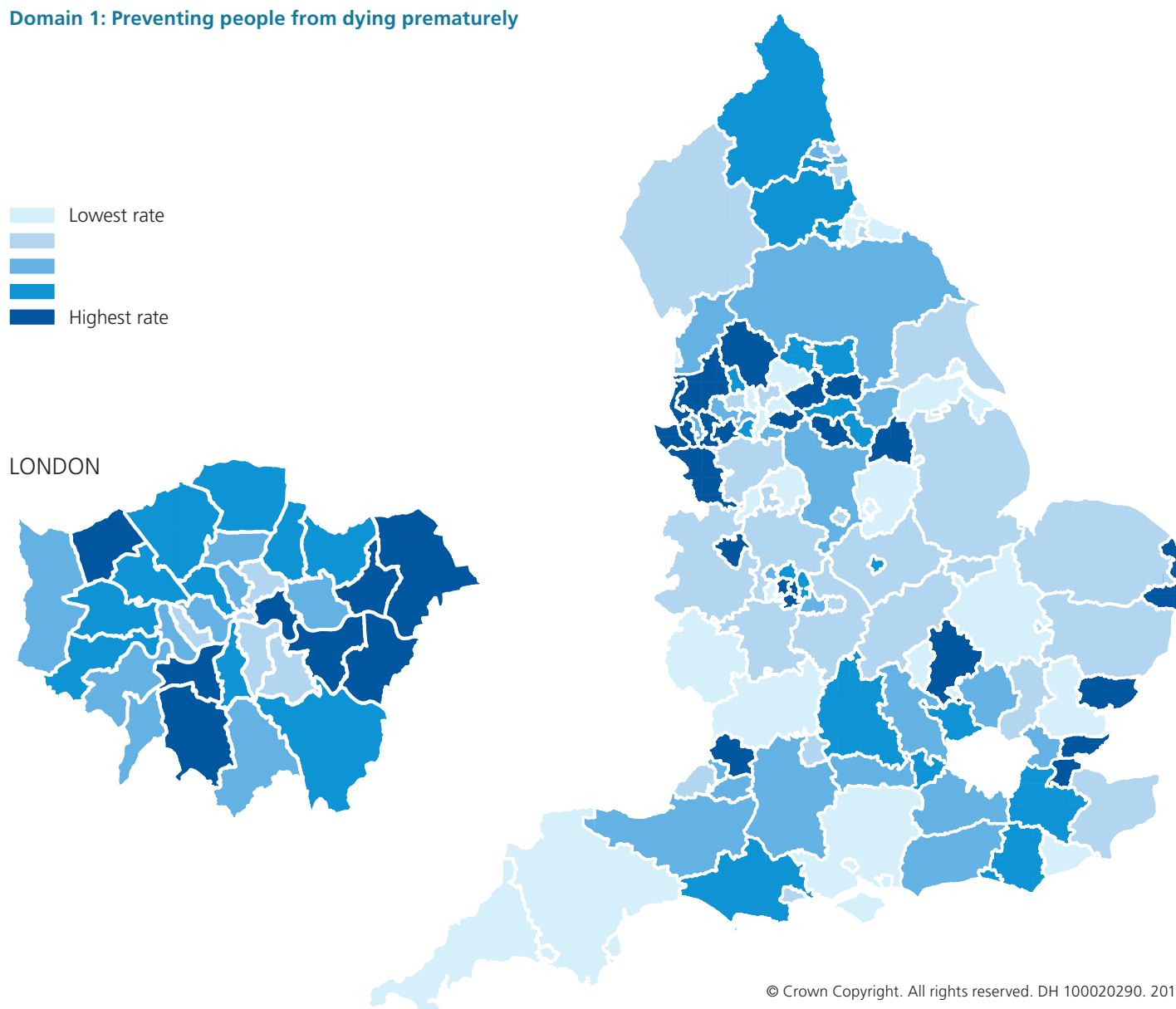
4 Data from one PCT have been removed.

PROBLEMS OF THE GASTRO-INTESTINAL SYSTEM

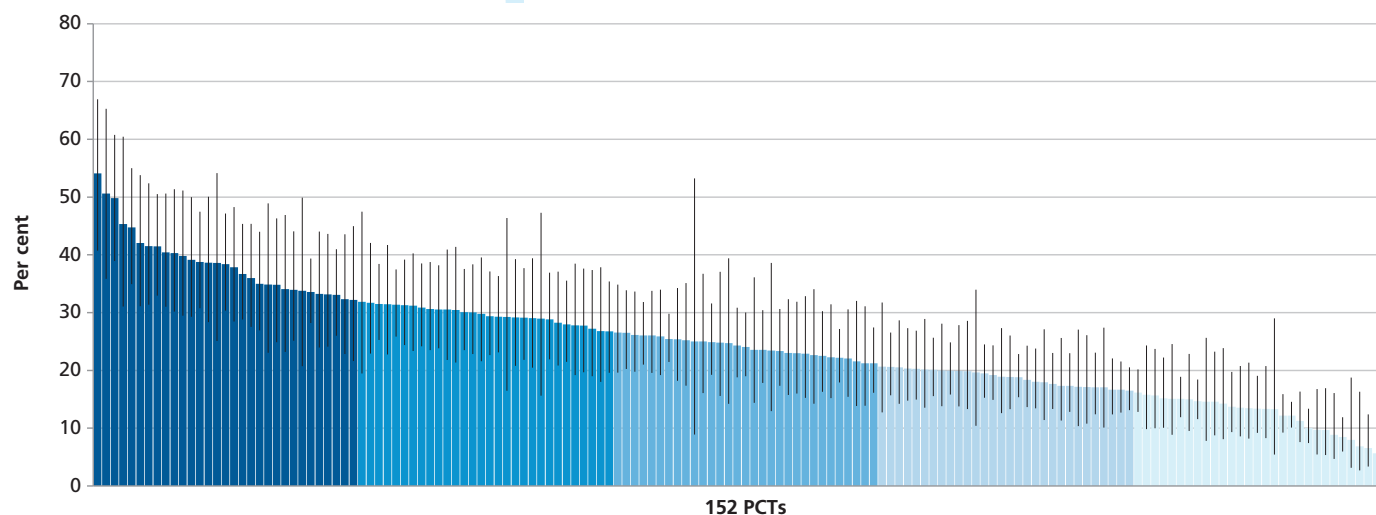
Map 46: Proportion (%) of admissions attributed to liver disease that are emergency admissions to hospital by PCT

2009/10

Domain 1: Preventing people from dying prematurely



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Context

Over the last 10 years, liver disease has become more evident as a problem. Although there are myriad causes, the rapid rise in presentation and death is related to:

- › Alcohol (see also Map 61);
- › Obesity;
- › Hepatitis B;
- › Hepatitis C.

These are all preventable causes, but if prevention strategies are not implemented or are ineffective, patients will continue to present to secondary care in increasing numbers, which would appear to be the case when considering the data presented for this indicator.

Magnitude of variation

For PCTs in England, the percentage of admissions attributed to liver disease that are emergency admissions ranged from 3.4% to 54.1% (16-fold variation). When the five PCTs with the highest percentages and the five PCTs with the lowest percentages are excluded, the range is 8.5–42.0%, and the variation is fivefold.

Some of the reasons for variation include differences in:

- › Distribution of risk factors for liver disease;
- › Prevalence of liver disease in different populations;
- › The coding of cases.

However, this degree of variation probably includes unwarranted variation due to differences in the organisation and management of care for people with liver disease in local health services.

It is important to note that not everywhere in the country is seeing the same types or volumes of liver disease, nor is there a uniform way of tackling this problem.

Options for action

Although the reasons for variation are not always clear, the purpose of presenting these data is to encourage local civil authorities and NHS organisations to identify whether there is a problem with liver disease and/or its identification and management in the local population when compared with populations in other areas, and if so how it might be addressed.

Preventative strategies for these conditions are important, but will require coordination for effective

implementation. Furthermore, there will be a long lead-in time before any positive health outcomes can be identified.

In the meantime, services need to be organised to address the rising burden of disease.

Action should be focussed on:

1. Conveying information to people about the health of their liver and the causes of damage;
2. Early identification of liver disease and early intervention in primary care;
3. Supporting outreach services – secondary care, where this problem has become concentrated, needs to play its role in the community to help reduce the burden of admission;
4. Effective collaboration among secondary care providers to ensure patients gain access to appropriate expertise and services that can manage their disease;
5. Raising awareness of the scale of the problem of liver disease among professional groups;
6. Skills development in the identification and management of liver disease for healthcare professionals.

Clinical networks are an effective way to coordinate responses to points 3–6.

RESOURCES

- › NICE Guidance CG100. Alcohol-use disorders – physical complications. <http://guidance.nice.org.uk/CG100>
- › NICE Pathway on alcohol-use disorders. <http://pathways.nice.org.uk/pathways/alcohol-use-disorders>
- › NICE Guidance. Obesity. <http://guidance.nice.org.uk/CG43>
- › NICE Guidance in progress. Hepatitis B and C – ways to promote and offer testing. <http://guidance.nice.org.uk/PHG/Wave22/3>
- › NHS Liver Networks. NHS Networks is a free resource dedicated to promote the development of networking in the health service, helping people to share ideas and improve the health service for those who use it and work in it. NHS Liver Networks is a resource providing useful information about liver disease, including the latest Government policy developments on curbing the rising trends in liver disease. To become a member, contact Mushi Rahman: mushi.rahman@dh.gsi.gov.uk

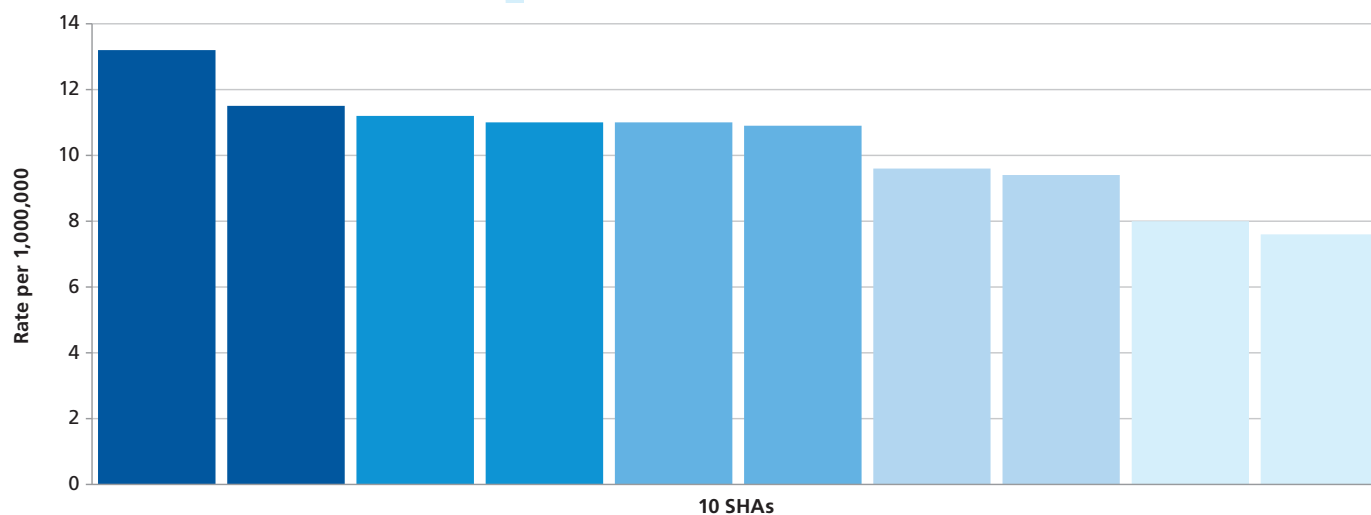
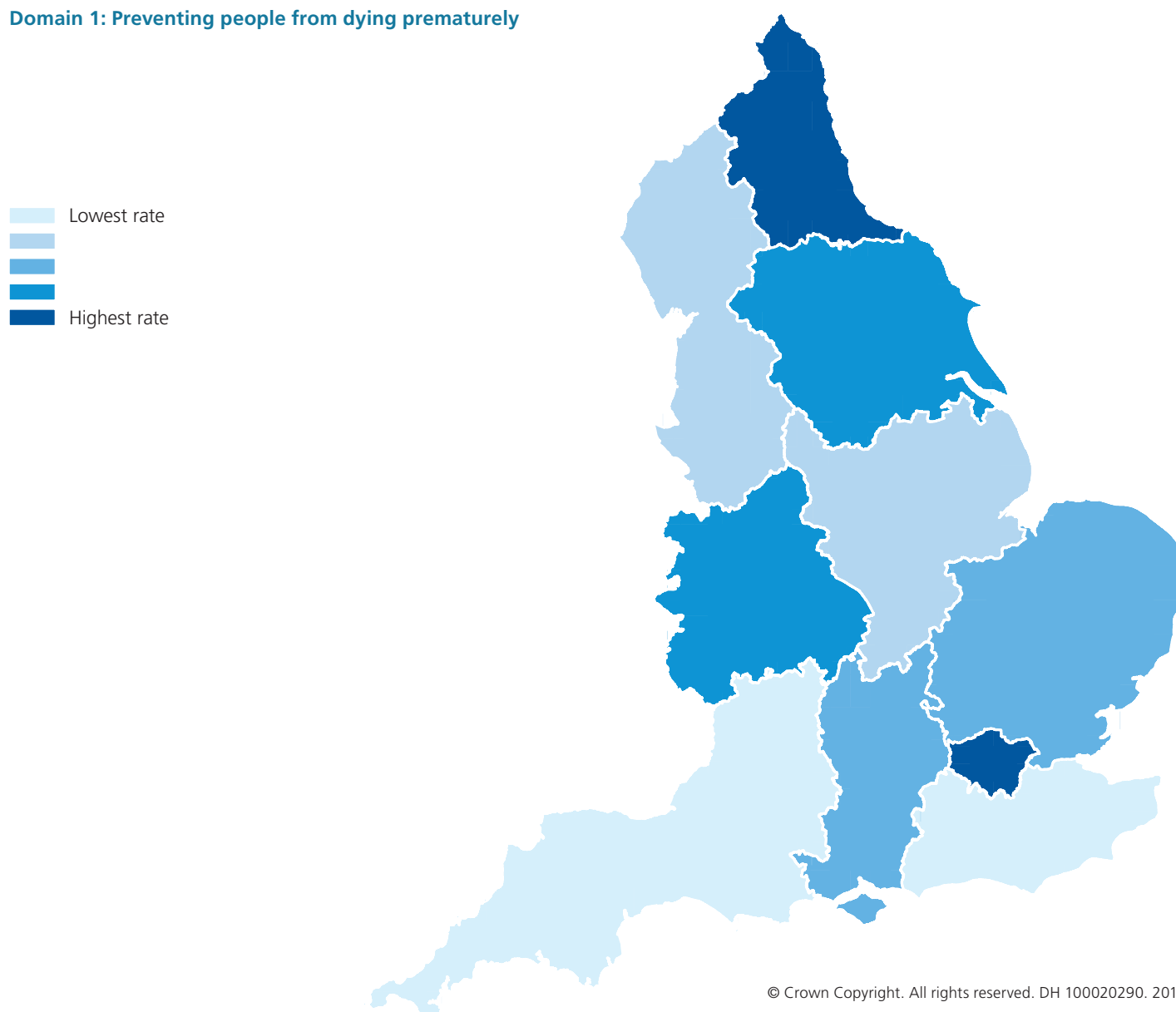
 **See what Right Care is doing about liver disease on page 32**

PROBLEMS OF THE GASTRO-INTESTINAL SYSTEM

Map 47: Rate of liver transplants from deceased donors per population by SHA

2010/11

Domain 1: Preventing people from dying prematurely



Context

Liver transplantation is a recognised therapy for patients with end-stage chronic liver disease and for specific patients with sudden acute liver failure and coma. The criteria for selection on to a transplant list have been defined, and are reviewed every year by the Liver Advisory Group at the Organ Donation and Transplantation Directorate at NHS Blood and Transplant (NHSBT).

Approximately 650 liver transplants are performed each year in the UK, in six centres in England and one in Scotland. Of all liver transplants, 14% are undertaken as a “super-urgent” procedure for acute liver failure and other causes; the remainder are elective procedures. Survival following liver transplantation is good, and continues to improve: in recent cohorts, survival at one year was 93.2%.

More patients are being registered for a liver transplant than there are organs available for transplantation. In four years, there has been a 55% increase in registrations with only a 5% increase in liver transplants. Mortality of people on the transplant list while waiting for a transplant is 15%.

Magnitude of variation

For strategic health authorities (SHAs) in England, the rate of liver transplants from deceased donors per million population (pmp) ranged from just under 8 to 13, a variation of 1.6-fold. The highest rate is in the North East SHA.

Variation in the liver transplant rates among SHAs may indicate:

- › differences in the prevalence of liver disease;
- › variations in the rate of referral to transplant centres;
- › differences among centres in the way organs are allocated to recipients on a transplant list.

Options for action

Selection for a transplant list once referred is carefully monitored.

To ensure that individuals in all SHAs have equal access to a transplant centre for prompt assessment of their liver disease, guidelines for referral to a transplant centre are currently being updated by the British Association for the Study of the Liver and the British Society of Gastroenterology, in conjunction with the NHSBT.

NHSBT are also coordinating an attempt to develop a universal allocation process, identical in all transplant centres.

RESOURCES

- › Information concerning transplant activity by centre and nationally. <http://www.uktransplant.org.uk/ukt/statistics/statistics.jsp>
- › Information concerning the process for allocation of liver donor organs. http://www.uktransplant.org.uk/ukt/about_transplants/organ_allocation/liver/liver.jsp

 **See what Right Care is doing about liver disease on page 32**