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Brokering Innovation Through Evidence

Interpretation of regulatory framework stands in the way of NHS use of cheaper therapy for eye conditions



Eye injection drugs recommended by NICE cost the NHS up to £447 million a year, but could be replaced by an unlicensed drug costing as much as ten times less. Use of the licensed drugs has increased three-fold over the last five years, with some parts of England treating five times as many patients as others.

The recommended treatment for several eye conditions that lead to blindness is regular injection of anti-vascular endothelial growth factor (anti-VEGF) into the eye. This reduces new blood cell growth and damage to the retina, minimising sight loss. Use of

this treatment has vastly increased since 2008, when it was first recommended.

The licensed drugs, ranibizumab and aflibercept, are expensive, but bevacizumab, a cheaper and equally effective alternative, isn't licensed for eye conditions in the UK. It is only licensed for cancer treatment.

Ranibizumab costs up to £550 per injection and aflibercept is up to £800, while bevacizumab is £50-£100. The company that owns ranibizumab also owns bevacizumab, so there is no commercial incentive to seek a licence for the cheaper alternative to be used in eye treatments.

NICE only recommends drugs specifically licensed for a particular use, making it difficult for clinicians to use anything else.

What we did

We used hospital attendance records to explore the use of anti-VEGF eye injections across England, from 2005/06 to 2014/15, adjusted for age, sex, ethnicity and deprivation.

This allowed us to compare injection rates in different geographical areas with a different mix of patients.

What we found and what this means

In 2014/15, £447 million was spent on ranibizumab and aflibercept nationally, equivalent to the annual budget of a large clinical commissioning group.

Purchasing high cost anti-VEGF drugs places a large and increasing strain on the NHS, affecting the ability of the NHS to provide care for other patients.

The use of these injections has increased three-fold over the last five years.

Areas with high injection rates treat five times as many patients as those with low injection rates, and provide more doses per patient, even after adjusting for population size and characteristics.

Inequalities in access in different areas have only slightly reduced over the last few years. This inequality cannot generally be explained by differences in commissioning policies and is more likely due to variations in local clinical practice.



What next?

Use of the more cost-effective bevacizumab could save the NHS many millions annually, and help reduce inequalities in access. But politicians and regulatory bodies do not support NHS managers and clinicians who want to use bevacizumab.

This has led to the unusual situation where the NHS is paying for more expensive therapy than in the US.

Ideally, this should change at a policy level. But in the absence of a change in policy, it is important that services are organised to deliver care efficiently, for example through the use of nurse-administered injections, and reduced admission to inpatient hospitals for eye injections.

Read the full paper

A longitudinal study to assess the frequency and cost of antivascular endothelial therapy, and inequalities in access, in England between 2005 and 2015

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This research was a collaboration with the University of Bristol and Queen's University Belfast.

Find out more

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