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British In Vitro Diagnostics Association

Innovate UK

Three simple tests could save the NHS at least £6.9 billion

Amid NHS upheaval in the search for savings, are we missing a huge opportunity by overlooking tried and tested in vitro diagnostic tests?

The NHS is one of the UK's most cherished institutions. Most of us will have used its services at some point in our lives. Each of us can count on it when we're sick or injured, through pregnancy and birth, towards the end of life, or even simply to check our teeth.

This year marks the 70th birthday of the NHS - a time to celebrate its achievements and the dedicated staff who keep its wheels turning. Yet, there is increasing concern about the future of the NHS, and particularly its funding. In fact, experts have forecast an annual shortfall in NHS funding of at least £22 billion by 2022, and financing the NHS is now one of the most debated issues in UK politics. Perhaps this is no surprise, given that the NHS has been so successful in improving our health over the decades. As a population, we are living longer but this means our healthcare needs are increasing faster than NHS resources. Patients are being affected by the NHS's financial problems, and there is no more chilling a reminder of this than the 'crises' in A&E departments each winter.

The inevitable question is, how do we maintain universal access to high quality NHS services, when demand and costs continue to rise?

If the NHS is to be sustainable in the long-term, then it must make investments which give the highest benefit to patients. The NHS itself recognises this and has opted to 'transform' its services. This has been done in part by restructuring the NHS and changing the way that organisations are funded. In the new system, hospitals and GPs will need to take more responsibility for the population's health and well being, rather than simply treating people when they are ill. This is not an easy or straightforward task and is causing an unprecedented upheaval to services across the country. But is there a more obvious route to cutting costs? Could the wider use of modern diagnostic tests save money and improve patient care? The answer is yes. There are numerous in vitro diagnostics (IVDs) on the market which are used in a small number of hospitals or clinics but if used elsewhere would result in huge savings to the NHS.

What are in vitro diagnostics?

Put simply, IVDs are tests performed outside of a person's body, using samples such as blood or urine. They test for infection, detect conditions or monitor a person's health to help cure, treat, or prevent disease. Some IVDs are designed for use in the laboratory, whilst others can be used in GP clinics, pharmacies or even by the patient at home.

IVDs benefit patients because they offer an accurate, convenient and less invasive way to diagnose and monitor conditions. This means patients receive timely and appropriate treatment and, in some cases, can avoid the need for invasive tests, unnecessary medication or hospital admission. All these benefits make IVDs convenient and safe for patients. They are also good for the NHS as they can often reduce staff time and costly hospital appointments, allowing resources to be diverted elsewhere.

There are currently hundreds of IVDs available. Many are recommended by NICE, the government body that evaluates diagnostics, pharmaceuticals and treatments. There is strong evidence that using some tests could save the NHS significant sums of money whilst also benefiting the patient, yet there is no mandate or dedicated funding for their use. Most GP practices, hospitals, and pharmacies already use some IVDs and 70% of clinical decisions are made using the results of an IVD. However, there can be long delays before new IVDs become available to patients. In fact, there are many IVDs which are not widely used despite evidence of their value and recommendation by NICE.

We looked at three IVD tests which, if properly used, could save the NHS a combined total of £6.9 billion over the next five years.

Rapid assessment of patients with suspected heart attack

The first IVD is the high sensitivity cardiac troponin test. It can be used to rapidly diagnose or rule out heart attack in patients attending A&E with chest pains. This means people can either be discharged more quickly, freeing up capacity in A&E, or correctly treated for heart attack in hospital. In the UK, at least 3% of A&E attendances are for chest pain symptoms, indicating that many patients could directly and indirectly benefit from this test. If all A&E departments used this test, the estimated savings would be £6.8 billion over five years. Introducing the test is challenging for A&E departments as it requires changes to well established protocols and a very fast turnaround of results from the hospital laboratory. Close collaboration between hospital departments and champions within a hospital are key to implementing the changes needed to successfully adopt this test.

Ruling out pre-eclampsia in pregnancy

Another IVD which has the potential to save the NHS money and benefit patients is a test that helps doctors rule out pre-eclampsia in pregnancy. Pre-eclampsia can be incredibly dangerous for women and their babies. An IVD which measures the levels of placental growth factor (PGF) allows pre-eclampsia to be ruled out if the test is negative. This means women can return home and receive antenatal care locally, rather than having to attend hospital every day for monitoring. A study published in 2013 showed the benefit of the test for patients, and health economists estimate that using this test in all NHS maternity units in England could reduce costs by £22.4 million over the next five years, with further savings possible in the rest of the UK.

Ruling out irritable bowel syndrome

The third IVD is the calprotectin test, an IVD which differentiates between irritable bowel syndrome (IBS) and less common, but more serious, inflammatory bowel diseases (IBD) such as Crohn's disease. Usually, if a GP suspects IBS or IBD based on a patient's symptoms, they refer the patient to hospital for a colonoscopy. This is an invasive and unpleasant procedure which carries its own risks and is more costly. The calprotectin test can be used in a GP surgery by a nurse or doctor or in a local lab using just the patient's stool sample, with results provided in less than a minute. IBS is very common, and it's been estimated that use of this test by all GP surgeries in the UK could save the NHS at least £65 million over five years by reducing unnecessary referrals. There are a number of hurdles to local adoption of this test such as existing contracts with providers and no clear reimbursement for GPs who are financed separately from hospitals. Good local collaborations, the engagement of key stakeholders, and advice from specialist gastroenterologists appear key to the successfully implementation of this IVD.

These are just three examples of how IVDs can lead to improvements both for patients and for the financial sustainability of the NHS. They are already on the market and recommended by NICE, it is now a question of the NHS making them more widely available and using them properly.

They are, however, merely the tip of the iceberg. There are other currently available IVDs not being used to their full potential by the NHS and, as the IVD industry continues its incredible advances in new technology, further tests are on the horizon. Adopting new technologies can be challenging and disruptive for the NHS – it's not normally as simple as replacing one test for another. Implementing changes within the NHS can be hampered by lack of awareness and because upfront costs are deemed too expensive. Separate funding to distinct areas of the health system can mean that there is little incentive to invest if the spending is in one area, but the savings are in another. Unlike pharmaceuticals, recommendation by NICE does not make the use of an IVD mandatory.

Failure to tackle these obstacles wastes a valuable opportunity for the NHS and its patients. However, there is some progress being made - the government recognises that the NHS can be slow to adopt new technologies and has recently launched the Accelerated Access Collaborative programme. With this progress in mind, healthcare bosses and policy makers must now follow through on ensuring that these and other cost-saving IVDs are no longer overlooked by the NHS, in its 8th decade and beyond.

There are many resources online if you're interested in finding out more about the value of IVDs.

- The potential NHS savings estimated by NICE IVDs and other technologies
- The Value of IVDS article from the British In Vitro Diagnostics Association
- NICE's Accelerated Access Collaborative

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