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I am a general practitioner by background, and have led a programme of research (supported largely by NIHR and CRUK grants) for over 20 years based on identifying **who** should be offered testing for cancer and secondarily, **how** they should be tested for cancer. I was the clinical lead on the NICE cancer diagnostic guideline, NG12, which was published in 2015.

I will only comment on the Diagnostics part of the request, as this is my area of expertise. It has two overarching commitments, which the explanatory PDF expands to 16 sub-questions.

Q1. A faster diagnosis standard (FDS) from 2020 to ensure most patients receive a definitive diagnosis or ruling out of cancer within 28 days of referral from GP or from screening

This commitment replaced the metric relating to being seen for a 2-week wait (2WW) appointment within a fortnight. It captures most of the diagnostic journey from GP referral to eventual diagnosis (or diagnosis of 'not cancer' – a valuable patient-centred aspect). It thus brought in for measurement previously omitted delays in performing the definitive diagnostic test, such as bronchoscopy or biopsy.

Whilst 28 days has no particular evidence base, it was aspirational. The median diagnostic interval[1] was 90 days in 2001-2, 77 days in 2007-8;(Neal, Din et al. 2014) and for similar symptoms 51 days in 2006-15, though 64 days post-2015.(Price, Spencer et al. 2020) This apparent worsening since 2015 is slightly misleading: In 2015, NICE's NG12 brought in many 'new' symptoms, whose diagnostic intervals improved considerably. However, since 2015, diagnostic intervals *overall* have not improved much (though many more patients are using the 2WW pathway, and being diagnosed by this preferred route).

The 28-day faster diagnosis standard was welcomed by the cancer clinical community. However, COVID has rendered interpretation of 2020 and 2021 figures very difficult, as there were dramatic falls in GP attendance early in 2020, with commensurate falls in 2WW numbers, which have only recovered for some specialities. Furthermore, some specialities, particularly colorectal, were clearly already struggling to deal with the increased demand of 2WW referrals, which were increasing by ~10% p.a. before the onset of COVID. For colorectal services, this has been partially ameliorated by the widespread introduction of faecal immunochemical testing (FIT), with colonoscopy reserved for FIT-positive patients. On the reasonable assumption that FIT-negative patients very rarely have colorectal cancer, then this faster diagnosis standard should have improved in recent months. It is highly probably that FIT usage by secondary care will remain the norm, 'solving' one of the most problematic FDS specialities.

Therefore, post-COVID and post –FIT most specialities should be able to achieve reasonable FDSs. This is good news, as there is now – for the first time – good evidence of the harms from diagnostic delay from a modelling study. As a very broad overview, one week's delay in a symptomatic patient leads to 1% worse survival.(Sud, Torr et al. 2020)

[1] Diagnostic interval is the time between first presentation to primary care with a symptom of your cancer to eventual diagnosis. This is not the same as the 28-day standard (which begins with 2WW referral). The difference is the primary care interval which captures time between first presentation and the decision to refer.

Q2. By 2028 the proportion of cancers diagnosed at stages 1 and 2 will rise from around 50% now to 75% of cancer patients

This target was also welcomed by the cancer community. At the same time it was seen as very aspirational, perhaps unachievable. Even if probably unachievable, it served a very useful purpose in making explicit the need for early diagnostic services to produce a diagnostic shift.

2.1 It did have different relevance to different groups. Some cancers have extremely few early stage diagnoses (pancreas being the classic example) while others have already high percentages diagnosed at an early stage. In my experience, this has not translated into any one particular cancer site being advantaged (or disadvantaged) by the target.

2.2 It's very early to know if this commitment had had an effect, over and above the slow secular improvement in early stage at diagnosis that was present at the time of the commitment. This slow improvement was probably attributable to multiple causes, especially additional diagnostic activity by both GPs and specialists. COVID has also made interpretation of 2020/2021figures extremely difficult.

2.3 Despite the ~330,000 new cancer diagnoses each year it will be quite difficult to spot regional variations in change in stage at diagnosis – and even if they can be identified, safely attributing them to a cause will be difficult.

2.4 -2.9. This is a highly meaningful metric, and very specific. It has genuinely energised the cancer community (despite our view about its likely achievability). If achieved it would avert thousands of cancer deaths annually.

References

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