Uptake of NICE-appraised medicines across the NHS

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Steve Chaplin discusses the findings of the Health and Social Care Information Centre statistical report into the use of NICE-appraised medicines in England

Prescribing of some medicines recommended by NICE is unexpectedly high or low and there is unexplained variation in the use of others according to the fourth statistical report from the Health and Social Care Information Centre (HSCIC). As in previous years, the data suggest there are problems with implementing NICE technology appraisals – though it may not be entirely clear what those problems are.

Estimates and variation
As previously, the report compared the observed and predicted use of some NICE-approved drugs to give an estimate of adherence to its guidance. For the first time, the analysis adds a Quality, Innovation, Productivity and Prevention (QIPP)-style description of variation in prescribing between CCGs and area teams – an approach that is more reliable given the uncertainties of the data.

The ratio of observed to predicted use is difficult to interpret. While some have claimed these statistics show the NHS is too slow to prescribe innovative medicines, the HSCIC has always cautioned against over-interpretation. Multiple indications for a drug, multiple treatment options for an indication, lack of local prevalence and incidence data, cross-boundary treatment, individual choice and the lack of data on medicines delivered via homecare introduce uncertainty into the estimate of prescribing frequency. Yet it has so far been impossible to provide a measure of uncertainty, such as confidence intervals. That’s why the HSCIC describes its statistics as experimental: it is not possible to say that a drug with lower than expected use is being underprescribed, much less why.

By contrast, unexplained variation is an indicator of inappropriate prescribing and has been used in QIPP analyses for some time. It does not show that high- or low-prescribing CCGs are right or wrong, or even whether all CCGs should be prescribing at a rate somewhere in the middle. But excessive variation does suggest a failure in the process of implementing NICE guidance.

Estimated vs predicted use
HSCIC used this approach to examine the uptake of 10 drugs or groups of drugs (see Table 1). Of these, figures for antivirals for hepatitis C could not be calculated because patient numbers could not be estimated reliably. Twenty-two drugs were excluded because of the difficulties of obtaining reliable data.
Of the nine drugs for which this approach could be used, observed use was close to expected use (ratio within 0.05 of unity) for four, counting ranibizumab (Lucentis) by one vial per patient, low for four (counting ranibizumab by one vial per dose) and high for two. There were relatively few patients eligible for the two drugs recommended to treat glioma and this would be expected to increase the uncertainty of the estimate.

It may be difficult to know what these figures mean but it is clear from an analysis of variation in the ratio of observed-to-expected use that something is wrong somewhere. The ratio varies 20-fold for liraglutide (Victoza) and exenatide (see Figure 1), five-fold for drugs to treat Alzheimer’s disease, four-fold for long-acting insulins and ranibizumab, and almost three-fold for trastuzumab (Herceptin).

### Unexplained variation

The report includes an analysis of prescribing variation for 18 groups of drugs. These data also show marked differences up and down the country in both primary- and secondary-care prescribing. For example, rates of prescribing drugs to treat attention deficit hyperactivity disorder in adolescents and children vary by a factor of four, with little change over a three-year period.

In the prevention of osteoporotic fractures, use of denosumab (Prolia) varies 10-fold and that of teriparatide (Forsteo) even more so, yet there is very little variation when the bisphosphonates, raloxifene and sodium ranelate (Protelos) are included in the analysis. In some CCGs, the ‘Z’ drugs account for 50–80 per cent of primary-care prescribing of hypnotics but for only 25–40 per cent in others.

Prescribing of the novel oral anticoagulants (NOACs) apixaban (Eliquis), dabigatran (Pradaxa) and rivaroxaban (Xarelto) has increased greatly since NICE recommended their use to prevent thromboembolism after knee or hip replacement, and as alternatives to warfarin in patients with atrial fibrillation. But it is apparent that some CCGs are much more enthusiastic than others and, regardless of indication, some areas of the country appear to be virtually ignoring the NOACs.

### Conclusions

NICE was conceived partly to rid the NHS of postcode prescribing. This report shows that it has not happened. It remains too difficult to derive meaningful conclusions about the absolute uptake of drugs deemed cost effective by NICE but it is evident that many CCGs and area teams are, by and large, suiting themselves about whether to prescribe them. This should not be a surprise when successive service reorganisations have increased the independence of CCGs and hospital trusts and spending cuts have increased containment pressures. There is clearly some way to go before we can say that treatment under the NHS is fully patient centred.

### Reference


### Declaration of interests

None to declare.

Steve Chaplin is a writer who specialises in writing on therapeutics.