Introduction

As with any change in the National Health Service (NHS), the new contract for General Medical Services (GMS) offers both opportunities and threats, and for the first time payment will be related to quality of performance.\(^1,2\) It is recognised by many that information technology (IT) is essential to delivery of care and also to record the information needed to facilitate payment.\(^3\) In this paper we set out to construct a framework with which to examine the relationship between clinical competency and informatics competency. This framework is a means to focus discussion about performance measurement in primary care around the two axes of clinical and informatics competency. We then go on to discuss the implications for clinical governance and informatics training.

The new GMS contract cannot be delivered without the correct use of IT. The contract makes this clear and includes a promise of 100% funding for IT as well as a training programme that the primary care organisation (PCO) must 'manage and properly fund'.\(^1\) This situation means that in order to demonstrate clinical competence, through the Quality and Outcomes Framework, informatics competencies must be present; IT is the medium through which the data are recorded and clinical systems act in a supportive role for the care given.

As representatives of clinical governance and informatics we spent much time discussing how our two dimensions of competency relate to each other. We avoided the futile debate around whether the Quality and Outcomes Framework is an attempt at making important things measurable or merely making the measurable important, since the indicators lie beyond our control. However, we recognised that the juxtaposition of technology and business strategy in the new contract would possibly have unforeseen consequences for both of us.

The model

We simplified the distribution curve for both informatics competencies and clinical competencies into possession of those skills to a significant amount or a poor amount. Although one could argue that a normal distribution curve would apply in both clinical skills and informatics skills, it could equally be argued, a priori, that as clinicians our performance should be on an asymmetrical curve: tending towards excellence. Further support for an asymmetrical curve stems from the fact that general practitioners (GPs) are recognised as being amongst the most IT literate
clinicians in the NHS and therefore their competency curve for informatics should also be skewed towards excellence. This discussion is irrelevant since the curves will vary for any given population dependent on past experience, education and development, with other confounding factors such as age and funding availability influencing computerisation. It could be argued that years since qualification may well be the confounding factor for clinical competency, but the all-pervading nature of technology in our daily lives is, we believe, more likely to be an age-related phenomenon. An area for research in the future might well be the nature of these distribution curves. Whether bimodal, skewed or perhaps bell-shaped, the distribution will influence resource allocation between clinical competency training and informatics training.

Placing the competencies in informatics and clinical skills in a simple two-by-two matrix produces the diagram shown in Figure 1. In each quadrant of the diagram resides one of four classes of clinicians, dependent on their mix of informatics and clinical competencies.

Stars
The divisions in quadrant A we think of as the organisational ‘stars’; these clinicians will prosper under the new GMS contract since they are clinically able to generate the relevant information in support of the Quality and Outcomes Framework, and furthermore their good clinical practice is combined with the relevant informatics skills to record this information.

Nerds
The clinicians in quadrant B possess less good clinical skills with which to generate data, but their informatics skills ensure that the data so generated is captured to the maximum, thus ensuring their survival under the new contract. Unfortunately good informatics competencies can only achieve so much, and then there will come a point at which clinical governance needs to step in and help these clinicians develop their clinical competencies in order to deliver on their Qualities and Outcomes Framework. Already some of our colleagues have privately expressed concerns about the possibility of ‘gaming’ by clinicians who record data to the maximum benefit without the clinical benefits being realised by the population for which they care.

Luddites
The clinicians in quadrant C have good clinical skills but unfortunately their lack of informatics competencies means that they are not able to collect the relevant data for the new contract. These clinicians would have been described as Luddites in the past, and although one humorous colleague suggested that they should be renamed ‘liabilities’, we disagree: their clinical skills are good, and they are no more a liability than a poor clinician, except in terms of income generation under the new contract. It is for this reason that we still attach the affectionate label of ‘Luddite’. The task of meeting the needs expressed by these clinicians regarding their informatics skills is firmly that of the informatics service, where it exists as a separate entity, and the education, training and development department where no informatics service exists.

Black Holes
The clinicians in quadrant D pose a challenge to both clinical governance and informatics services. They possess neither the clinical skills to practise care that will generate the relevant data for performance purposes, nor the informatics skills to capture such data. It could be argued that these are the clinicians who deserve the appellation of ‘liability’. We argue that perhaps it is less damaging to think of them as ‘Black Holes’, inasmuch as many resources can be swallowed up with little output visible.

Migration
It is this last quadrant that poses the greatest difficulty for both informatics and clinical governance; it is our a priori hypothesis that clinicians in this quadrant will choose to admit to poor informatics skills as the root of their problem rather than poor clinical skills.
Clinicians are by default expected to possess clinical skills, a feature of medical practice predating the new contract, and as such are less likely to admit to any shortcoming in the clinical field. The matrix would suggest that there will be a migration from Black Hole to Luddite. In short: clinicians who need clinical support will be denied that support by assessment of informatics competency in isolation.

Resource impact

If a clinician is recognised as having an informatics training need, without recognition of their clinical competencies, they will almost certainly undergo further informatics training. After this training, the clinician will have two options: one is to admit that the training has worked and the reason for any continued poor performance in the Quality and Outcomes Framework is poor clinical competency; the second is to maintain that their clinical skills have always been good and that in fact the informatics training has not remedied the situation. Clinicians who choose the latter path will inevitably be subject to retraining, further investment in training time, further staff to help with their data load and possibly even massive investment in changing GP clinical systems to attempt to provide an interface which captures their information more fully. Given that any primary care trust has only a finite budget for informatics education, training and development, it would follow that the decisions to invest the scarce resource of training should be made wisely and with the aim of producing the maximum benefit for the resource invested.

This does not mean that physicians in quadrant D should not receive informatics training; however, it does mean that if their training is delivered solely by the informatics department, and solely with a technological focus, the possibility exists that those who would benefit most from clinical assistance and development through the process of clinical governance would find themselves in the cul-de-sac of IT/informatics-based training. It could be suggested that informatics and IT training is not the remit of the clinical governance department. We believe that our a priori model suggests that attempting to separate informatics competencies and clinical competencies is folly in the same way as separating mind and body.

Gathering evidence

The validation of our model can only occur when physicians are assessed within the paradigm of both competencies. The GP appraisal process is under way and within our health community informatics competencies are starting to be addressed through the General Practice Information Maturity Model tool and its associated competency assessment system.5,6 It will be necessary for this information to be pooled in order to avoid our predicted migration. We would like to see production and usage of valid tools to assess clinical and informatics competencies. Only then can the nature of our distribution curve as clinicians be compared with that of informatics competencies.

Conclusion

The effect of this model within our health community and beyond has yet to be fully understood. It would appear that assessment of either clinical competency or informatics competency by itself will result in potential mismanagement of clinicians and resources. As clinical skills are the core function of clinicians, the overall assessment must remain in the hands of the clinical governance teams, but we would argue that specific informatics competency assessment must not be allowed to stand outside clinical governance. Those responsible for measuring the success or failure of both the new GMS contract and that of its implementing clinicians must be fully clear about the informatics competencies required.

REFERENCES


CONFLICTS OF INTEREST

None.
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