COMMENTARY

Distributed intelligence — a different model for primary care

In any complex system, information is collected, stored and acted on at many levels. If an organisation is going to be effective, these stocks of knowledge and flows of information have to be in the right place. In large organisations like the NHS, long-term strategic decision-making tends to be done at higher levels, where power tends to be more concentrated and widely disparate information can be collected and refined. Short-term tactical decision-making tends to be distributed to the periphery. Drawing the line between what is strategic and tactical in the right place is critically important and the more complex the periphery, the more of that decision making should be widely distributed.

In their article Gilles *et al* say that the NHS, 'fails to understand general practice [which is] small, dispersed, and often engaged with local communities.'[1] That is the point I want to address here.

USAF Colonel John Boyd developed a concept in the 1960s and 1970s for cold war era fighter combat that is helpful. His view was that fighter pilots would win dogfights if they could go through the loop of observation, orientation (and analysis) decision making, and action (OODA), more effectively than the enemy. Better OODA loops by fighter pilots became the goal of fighter design, pilot training, and every other decision process throughout Fighter Command. (OODA loops higher up the organisation were simply aimed at making pilot OODA loops more effective).

Later in life Boyd argued that driving power to the edge was critical to survival and success for most, large complex and adaptive organisations operating in uncertain, dynamic environments. The organisation's guiding imperative had to be to make edge teams as effective as possible. Objective-driven incentives should be used to influence resource requests and guide these edge team decisions, rather than resource allocation and method driven commands. In plain English, agree what they should do and then give them the support and the resources to do it.

In health delivery, the fighter pilot's type of responsibilities are shared between the primary healthcare delivery professionals and the person whose health is at issue. Together, they constitute the edge team. Knowledge of disease tends to be concentrated in the professional healthcare members of the team. Knowledge and control of the local terrain is more evenly distributed since the person at issue usually knows more about lifestyle and other environmental health determinants and can influence the course of disease through their engagement and determination.

Appropriate edge team composition and leadership shifts through a person's life. Normally, it is mostly just the person at issue — or their parent, in the case of minors — a team of one, supported by an informational and consultative network of public information, friends and family. As circumstances change, optimal team composition shifts to more participation from formal health services all the way through to circumstances where, of course, the team needs to be dominated by specialists.

In this vision of things, the GP's role is key. In many circumstances, that role is to be an effective team member — student, technician, facilitator, trainer, and guide. In other circumstances, that role is to lead — listening, directing, motivating, and setting the tone. Critically, the role can also include being a judge when changes in circumstance warrant a change in team dynamics or composition and when additional resources need to be deployed.

For health care to be effective in an environment of social and cultural change, of changes in medical knowledge, technology and disease, power has to be driven to the edge of the organisation. Edge teams have to be supported with the resources, the information and the intelligence they need to execute the best possible OODA loops. The distribution of intelligence has to be focused on sustained edge team effectiveness that lasts from birth to death.

In this dynamic environment, GPs are central: they have to be motivated toward excellence and empowered to understand, nurture, support and lead ever-changing excellence in those teams. The NHS has to learn to trust its GPs again.

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