Understanding Productivity:
Delivering Productivity in the NHS

aspire

Without understanding there is no *foundation*

There is a lot of misunderstanding about productivity in the NHS and this has the effect of discouraging healthcare professionals and managers. A lot is currently being written about productivity [1] in the NHS and these are very insightful papers providing a lot of useful guidance. They also provide some confusion and somewhat macro-level and theoretical perspectives.

Some simple myths can be dispelled early on.

Productivity is often seen as about more effort and in common parlance more sweat, in effect as some nurses and other practitioners have put it 'making people rush indeed even run between their patients / appointments'. This sort of thing will happen where there is no understanding of productivity.

Productivity means balancing the input effort in an acceptable ratio to an output standard. On the one hand therefore if we make more effort we are increasing the input side and thereby reducing the ratio of output.

More importantly if we rush or pressurise the input side we may produce more waste, including quality, and thereby reduce productivity.

A Productivity indicator is a calculation based on standards that reflects reasonable expectations of performance. A Reasonable Expectancy is a performance standard that can be consistently delivered by an experienced practitioner performing the core tasks of the service / activity under consideration.

More confusion

There are two other areas of confusion arising from recent pronouncements and commentary.

- Macro-level Analysis versus micro level Action
- Theoretical calculation of Benefit versus Realised benefits

Macro-level Analysis

At the macro-level we tend to see financial analysis with some basic operational backdrop. We may have the overall country or organisation spend per patient or cost per global transaction or cost per event etc.

These analyses while interesting and probably technically correct do not purchase upon the reality of the patient- clinician transaction. Macro analysis tends to obscure if not forget that value is a real thing delivered by real activity in conjunction with real patients needs. Total costs of the NHS per event / patient / employee do not give us anything of substantial use to the clinician-patient transaction. There are too many cost elements to understand and many of these are possibly / potentially irrelevant to the patient transaction.

Often these items refer to overhead configuration, cost of money and resource allocation efficiency within the organisation. Most clinicians and their colleagues will have no impact on these items.

Unfortunately this kind of thinking has dominated and still dominates the thinking in the and around the NHS. It is along way from this type of analysis to making healthcare more effective and efficient or making the patients feel better.

Other sectors, organisations and businesses with a longer track record in productivity start with the customer and design their solutions to make impact on the customer's definition of value. More importantly these organisations design productivity as a management *process* in which the *supervisor or team leader* makes the decisions that deliver value to the customer within acceptable unit cost and quality standards. The senior management are subsequently driven to enable this supervisory cohort to succeed as this is the source of all the operational success.

In the NHS it is a hard lesson yet to be learned that senior management do not add value to the patient. They can add value to the organisation and therefore can indirectly add value to the patient. Unfortunately the information culture of the NHS is command and control oriented. Productivity is a research topic for the NHS not a core management skill and knowledge area.

[1] LIST- Ham 2010, Kings Fund, McKinsey, Meridian,

Theoretical Benefits

A second theme is that we can spend a lot of effort getting the metrics agreed but not make any impact on results. Results are often left to the moment after the analysis is finalised.

The results should come first and then the analysis should be undertaken to identify learning that can be fed back into the practitioners. Improvement is led by the evidence of the practitioners and the patients. Analysis is for analysts and improvement is for patients and practitioners. Analysis can add value to practitioners but not by getting in the way or holding up service progress. Improvement in the NHS is littered with delay and complexity.

Many analysts make what is in effect a quite simple equation into complex constructs in the pursuit of 'accuracy or rigour'. Meanwhile patients are presenting to GP's or in A&E. The QIPP is a good example of this. It is a very solid sounding idea and contains desirable objectives. However after 1 year we are still talking about QIPP and the plans that will be put in place.

Even respected analysts such as Professor Ham propose that QIPP must be an SHA led programme when the evidence is in front of him that this has not made one difference in 1 year. This is a 'getting ready to get ready' style and is anathema to improvement.

In our external productivity world front line staff would be asked to get involved and make a difference that day [Kaizen]. Benefits are real and can only be realised in the clinical transaction.

A major failing of this traditional thinking is to create confusion around different types of benefits.

The recent and very useful Kings Fund paper[2] on improving productivity makes glaringly unhelpful observations / suggestions which no doubt DH and SHA's might agree with but however add complexity and misunderstanding.

In discussing Strategies for improving productivity the paper suggest that there are options that may see reduced costs OR increase quality and some with actual cash savings. The suggestion is that these are options or that only one of these elements can constitute a productivity improvement. This kind of thinking is rife in the NHS.

All productivity improvement must

- Reduce unit costs
- Maintain quality
- Release resources

Any initiative that does not achieve these is not a productivity improvement. It is the lack of real life experience in this thinking that creates the illusion that theoretically we can have different forms of productivity gain. It maybe that Kings Fund did not intend this interpretation but the critical thing is how managers use and deploy these ideas.

This kind of thinking sees keen interim managers unilaterally cut resources blind to the impact on capacity and attainment of workload volumes.

It is suggested that a productivity initiative may increase quality. This may be desirable but strictly speaking it is not an improvement in productivity.

If quality has to rise because previously it was below standard then this is indeed an improvement but quality is not increased but merely compliant with standard. Quality may be more consistent but it is not increased. If quality is increased we have a different product or output which is not comparable to the baseline. This is indeed a common error in NHS and adds complexity while reducing productivity.

Any initiative that purports to be a productivity gain must change the ratio of the input and output in favour of the output. This means a reduction in the input resources per unit of output. It probably also means less unit cost of producing or delivering the service.

As a consequence any such initiative must release resources from the previous baseline pool. This can mean cash release but may also mean re-invested resources. If these resources where 'reinvested' in the same business / service etc then that service must achieve greater output volume to substantiate the improved productivity.

Here is where a lot of managers make the error of theoretically changing the productivity equation but failing to achieve any real gain. There must be a real change in the relationship between the input volume and the output volume.

If there is no extra demand volume then there is no real productivity gain. Unless resources are physically removed or at least re-allocated to

[2] Improving NHS Productivity: Appelby, Ham, Imison and Jennings, The Kings Fund, 2010

another budget there is no possibility of improved productivity.

If resources are re-allocated to another budget the same issue arises in that these resources now need real demand volume to justify their use. Unless somewhere there is additional demand the NHS as a whole has gained nothing irrespective of where the released resources have been allocated.

This is another very common error made by NHS in that one team / department / ward etc can alter its productivity but the overall operating unit sees not overall change in productivity. This is simply 'moving the chairs around on the Titanic syndrome'.

Quality

There are some critical points about Quality in the productivity context

1. productivity does not reduce quality
2. quality needs to be defined in a measurable way
3. quality measures need to be customer based
4. quality is a range within which a consistent standard is met
5. quality is an approximation of the desired state

Productivity does not reduce quality! Any initiative that reduces customer quality cannot improve productivity.

For productivity to succeed there must be a clear definition of what constitutes quality and this needs to form part of standard definitions needed to build the productivity system.

The delivery of what the patient wants is core to the success of productivity. One cannot achieve this by diluting the patients expected results. Actions are taken to cheapen services by cutting out elements or constraining aspects of delivery but this is a reduction in the quality part of the output and as such a reduction in productivity. It can be the case that we produce too much quality in our delivery and can reduce it without impacting of patient value.

What is productivity?

Broadly we can say it is

1. a ratio not an absolute
2. relates input volume / activity to output volume / activity
3. it maps activity with time to align with cost
4. it requires definitions of input and output quality standards

Simple global equation

Total productivity =

Output quality & quantity / Input quality & quantity

As the healthcare economy is a complex set of inputs and outputs across geographical and organisational settings this equation is multi-layered to reflect different relationships in different parts of the patient pathway.

If we consider that Fig 1 maps the basic pathway we see a pathway of a patient who may use the primary and secondary care sectors. The patient enters the system and is progressed along it like any production order or client receiving a service.

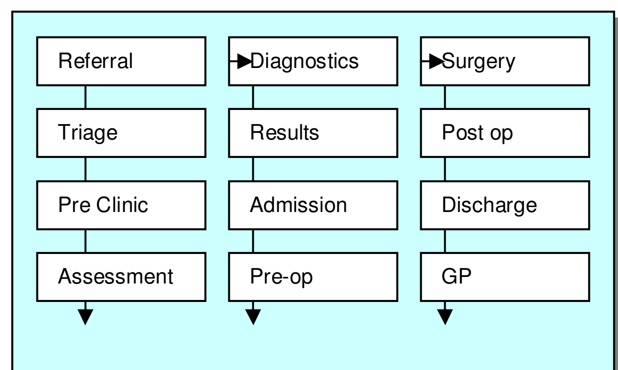

Fig 1

The productivity of the healthcare sector is delivered within and between each of these segments. Within and between each there are diverse routines and procedures with different levels of skill input and different levels of output achievement. Variation within and between each

segment and each location and on each day or shift creates a pattern of performance from which we may learn about the reality of productivity and the potential for improvement. The lesson for each provider is particular to them. This is the same if you are making hamburgers or cars or running hotels. None of these settings can be precisely the same as another.

The detail of variation cannot be envisioned from DH or from SHA / PCT's or the NHSII as they cannot purchase upon the granularity of the real input output relationship. What we get from DH or SHA/ PCT level is financially driven targets which may or may not be aligned with realistic productivity performance.

Macro level metrics are synthetic metrics that reflect real circumstances overall. The average patient time for community nurses in London is non existent except as an abstracted figure. Only each of the 31 services has real performance patterns from which a target could be set. Executives and support services need to accept that the productivity of the NHS will be what is actually produced by the myriad organisations and services that make up the real service.

You cannot simply create a new a desirable overall target without understanding how and if each provider can get there.

Productivity Pattern Matrix

In pursuing productivity we can achieve a pattern of outcomes that mean we achieve what we set out to do [effective] and we produce the number of outputs with the number of inputs [efficient] we intended.

High Effective/Low Efficient	High Effective / High Efficient
Low Effective/Low Efficient	High Effective/Low Efficient

The reality for our organisation is that we will produce varying results on this matrix according to the make up of our populations, our installed asset base and our skill set. This will also vary according to the services under consideration.

Each organisation and service will compare more or less favourably with any particular benchmark. Best practice appears to be the new terminology, averages are out. We would prefer Best Demonstrated Practice [BDP] as this reflects what has actually been delivered. We would also posit that it must be a cumulative performance in that it is consistently demonstrated. Therefore a cumulative [minimum 13 weeks rolling average] Upper Quartile is the most favoured benchmark position to aim for.

If we are to enter into a comparative regime then we need to ensure that apples are being compared with apples. This means that the use of metrics and the productivity systems need to accord to exactly the same methods.

It is likely that Toyota and Ford for example use the same metrics. It is unlikely however that they have taken the time to compare these under any great level of analysis. The broad 'work hours per car produced' is a common metric for comparison purposes in the auto sector. However none of the cars in Toyota range compare exactly with those in the Ford range. Like wise British Airways and Ryanair will produce statistics for load factors or average ticket price and ticket price per passenger kilometre flown. BA can carry more passengers on some routes, have similar load factors and could even have the same ticket price per passenger kilometre flown. However its overall cost base is completely different and therefore what is comparatively similar in productivity terms can be and is very profitable for Ryanair but loss making / less profitable for BA.

Customer metric versus Producer Metrics

Whether it is cars or air travel or healthcare the customer [patient] has a determining influence on success. Many producers of services and products have been through the learning curve to accept that the 'customer is right' and their view of service and or value for money needs to be addressed. The healthcare sector is loaded down with metrics, all of which have indeed a part to play in the effective delivery of services. But not all are of immediate concern to the patient.

This subject challenges healthcare practitioners particularly as they are professionally oriented to take the superior position of knowledge.

Professional people in work can tend towards over engineering and produce multiple iterations, they can tend to re-invent the wheel, they can often want each event to be unique. These are not 'bad' attributes but often vital to the problem solving skills and tasks they pursue. However they are not often conducive to productivity and consistent quality. Indeed they are the major source of variation, rework and delay.

Lessons

Whatever the details of the new configuration of the NHS a la the White Paper Equity and Excellence the achievement of productivity goals remains the same. Some basic points can be made in summary

1. productivity is not a set of metrics and tables but is rather a dynamic measure of the actual achievements of the unit or service in question
2. the centre does not deliver value to the patient and cannot therefore deliver productivity
3. productivity is a patient based metric and as such must be managed by those delivering the value to the patient
4. balancing the books is not appropriate for a productivity improvement regime, as it promotes the wrong kind of thinking which is about internal compliance rather than patient service
5. variation is not simply a technical attribute but also an expression of waste and poor process and service control
6. productivity is a living breathing and dynamic activity that requires teamwork and common processes

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