

## Knowledge Management in World Class Commissioning

Knowledge Management (KM) is a key plank for the development of World Class Commissioning (WCC). In order to support WCC, Commissioners will need to base decisions on sound information and evidence. They will need access to a wide range of data, information and evidence which can be analysed, synthesised and used to undertake risk assessments, provide predictive analysis and enable modelling of health outcomes.

The range of data and information which will be required to support this process will be drawn from a wide range of sources. Commissioners will need to have tools and techniques for gathering data and information from both hard and soft sources, and to inform decision making. Managing and capturing a vast array of diverse sources will be key to success, and Knowledge Management will be key to enabling this process.

But data collection in isolation is often meaningless. PCTs will need to know what information they want, and why. To be meaningful, KM must relate to fundamental organisational objectives.

World Class Commissioning is about understanding and responding to the health needs of the local population. To do that, it is first essential to understand that the healthcare system treats people, not *average* people. In terms of knowledge management (particularly in relation to the early stages of the commissioning cycle) that means recognising the value of being able to gather individualised data about the healthcare uptake and needs of your population.

It is not necessarily difficult to collect data that can be mined down to an individual level. The secret is in understanding how to combine different 'islands' of data and then 'funnel' that combination of data through an appropriate algorithm to come up with meaningful information.

Here are some islands of data which already exist about an individual:

- Age, sex
- Address
- Acute treatment received
- GP visits

By themselves, these data don't tell you very much, but when you combine them and put them through an algorithm you might be able to come up with useful information which can then be used in another application to determine the likely future needs of that individual.

An analogy would be finding out your BMI. You need to know your height and your weight – two separate pieces of information. But when you put both pieces of information into an algorithm, it calculates your BMI, which is a better guide to your relative health than either piece of information in isolation. We call these Drill Down Applications.

Once you know your BMI, you then need to know what to do with the information you've received: what does it mean in terms of where you should go from here? Should you lose weight or put weight on? If you need to lose weight, what's the best way of going about it in your particular case (ie depending on your variation from the ideal/norm). This requires a Decision Support System, which will give you ideas on exactly what to do next.

An example of how disparate data need to be brought together to create an accurate and meaningful picture of what is happening.

PCT	Non-Acute Spend Per Patient	Acute Spend Per Patient	Pharmacy Spend Per Patient
X	6000	4600	200
Y	4500	8600	400
Z	7000	1500	1200

Although PCT Z is higher on two counts, it has succeeded in reducing exposure to the most expensive of the three cost centres: acute care. To gain a really clear picture, you need to add two further columns of data, as follows:

PCT	Non-Acute Spend Per Patient	Acute Spend Per Patient	Pharmacy Spend Per Patient	Patient Outcome Score	Patient Satisfaction Score
X	6000	4600	200		
Y	4500	8600	400		
Z	7000	1500	1200		

The addition of these two pieces of information allow you to measure whether the approach actually worked and, also important, whether the patient found the approach acceptable (if they continue to live, but in great pain and disability, that might score as an outcome but not as a satisfied patient!).

One example of a Drill Down Application (this one from Humana) is an SIV – a Settlement Invoice Validation.

Currently all PBCs and other healthcare providers send data to a central body on all treatments carried out, according to a list of codes. PCTs draw down the data related to treatments provided to patients within their population, and pay the healthcare providers according to a tariff which relates to the codes.

SIV is a web-based application which allows a PCT to interrogate these data to establish any inconsistencies or inaccuracies. These can then be investigated to find out if the charges are appropriate. In the US, the cost saving of using SIV instead of manually reviewing the data is of the order of magnitude of 100 – ie 8c per transaction instead of \$8. On top of this, the data collected from an SIV is siphoned off into a person-centred data warehouse which means that the PCT is constantly adding to its knowledge of the local population, with high granularity and the ability to gain truly sophisticated perspectives and insights.

The importance of effective data collection to a PCT is not only in its internal functions of commissioning appropriately and efficiently. It also enables the PCT to gain a unique perspective on what's happening which in turn allows it to help its suppliers become more effective both within their own role and within the overall strategy for health delivery to the local population. This ensures that the PCT is adding value to the health market and fulfilling its role in maximising the health outcomes within its jurisdiction.