



# Data – the root of all...good?

**Nostrapharmus suggests that the drug community will share a single data set across research, development, marketing, safety and more**

Increasingly the ability to store, manipulate, and query vast quantities of data is enabling us to perform key business and medical analysis, without need for much of the leg work of old.

Not only is it easier than ever to structure and query data, but the advent of data mining has opened up new opportunities to learn from a wider range of data and from older, unstructured data.

The computer age has prepared us well for this new era. Data has been captured in digitised form for a few decades. As time has progressed, the data set of every business in the sector has grown. This data, newly generated data, and everyone else's data, now present the chance to unearth new knowledge, hidden within the depths of the hard drive.

## **The company opportunity**

The imperative is already in place, to leverage the data you have from the development and subsequent commercial use of your products, to anticipate patient safety issues, and to recognise when patient safety issues are manifesting. This is clearly good for patients, but it is also unquestionably good for business; demonstrating a responsible attitude to your ultimate customers, whilst protecting, and even enhancing reputation.

The research benefit is also in evidence; asking the data where there are correlations between recent successes and historic failures can highlight extra indications to pursue.

In development, historic interaction of different drug types can be scrutinised when designing trials. This to improve safety, but also to enable more focused targeting of trial populations and investigator briefings.

## **The industry opportunity**

The business and medical analysis we can already perform would have been impossible or prohibitively expensive just a few years ago. Availability of data from regulatory agencies, WHO, and healthcare providers has already enabled detailed market analyses, more effective safety and clinical reviews. Where data has been provided to researchers, their resulting meta analyses have, on occasion, revealed previously unobserved trends and, as a result, raised the bar for the internal analyses of the Pharma companies themselves.

Let us consider the opportunity presented by such an integrated single data set. Opportunity which would exist not just for the industry, but also for patients, healthcare funders and regulators alike. Examples of what can be found should the data set reach critical mass:

- Understanding market size
- Spotting demographic/health trends
- Recruitment for clinical trials
- Early detection of safety issues
- Vastly improved capacity for observational trials



# Data – the root of all...good?

- Linkage of molecular form to clinical function

## **The challenge**

The challenges of course are not small in number, and the competitive threat introduced through the sharing of much of the data will be a major concern for all of the commercial contributors across the pharmaceutical and healthcare sectors. However, in much the same way as clinical trial data is shared across industry systems, patient treatment and outcomes information could be shared with no impact on confidentiality, or breach of data protection laws.

## **The way forward**

Healthcare and clinical data standards will need to be developed and agreed, data exchange agreements established, and repositories set up. The pharmaceutical world is already overloaded with complex safety data exchange agreements. These are often out of date compared with new regulations and a nightmare to maintain. Surely the vision of a single, standardised data pool would not only provide hugely enhanced functionality, but it would also be incredibly efficient.

Ultimately, the data should indeed become available for free. As the human genome data has triggered innumerable research programmes, and open source has provided a vast library of free applications, wouldn't the availability of a vast end-to-end pharmaceutical and healthcare database generate incalculable benefits for the management of human disease?

## **The inevitable**

Nostrapharmus says 'within 20 years, a global community of pharmaceutical companies and healthcare providers will share a single data set across research, development, marketing, safety and more. This data set will link research data with outcomes information to enable an end-to-end view from molecular structures to clinical outcomes.'

For further information please contact Nostrapharmus at [nostrapharmus@wcigroup.com](mailto:nostrapharmus@wcigroup.com)