Developing standards for Quality Indicators

Heather Dawe, - Head of Clinical Indicators NHS IC
What are quality indicators?

‘What is good Phaedrus, and what is not good – need we ask anyone to tell us these things?’

Robert M Pirzig

Zen and the Art of Motorcycle Maintenance

• Quite apart from the challenges of trying to define it philosophically, measuring quality is a very hard thing to

• Over the past 20 years in healthcare, clinical outcome indicators have become increasingly accepted as a proxy measure for the ‘quality’ of clinical care

• The development of clinical outcomes indicators is an extension to the development and utilisation of statistical process control in manufacturing industry that began in the 1930s
What can clinical indicators be used for?

- Clinical indicators can be used to monitor the quality of outcomes using statistical process control charts.

- Funnel plots and VLADs charts are two examples of control charts. Generally speaking, a funnel plot displays indicators cross-sectionally and a VLADs chart displays indicators sequentially.
How are clinical indicators developed?

- The development and systematic generation of clinical indicators is an instance of a **business intelligence framework**
- Operationally collected data is re-used – value is added
- Under the watchful eye of people who understand the business, large databases are processed and analysis applied
- The outputs are products that can be used to inform strategy, decision making, planning and performance monitoring

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How are clinical indicators developed?

• In our instance, a multi-disciplinary team of system architects, statisticians, service and project managers and data analysts work together...

• ... with clinicians to ensure the indicators make sense

• We typically work with national data – HES, PROMs, Clinical Audits...

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Reporting indicators nationally

• Business intelligence in industry: re-using operational transactional data for analysis for performance management and business planning purposes

• The same concepts apply to Business Intelligence in the NHS

• As interoperability of systems is enabled by shared national data standards, shared data standards also facilitate the development of analyses, statistics and indicators at a national level

• To ensure consistency and replicatability of national indicators, we are working to develop *indicator standards*

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What are Indicator Standards

- Indicator standards define the end-to-end data processing required to construct an indicator from its base data.
- The base data itself has been defined by the data standard controlled by the Information Standards Board (ISB) and flows through NHS operational systems.
- Some indicators require complex statistical processing, others are very basic requiring minimal arithmetic processing, there are plenty in between.
- The Indicator Standard is the complete methodology, a specification – following it will enable anyone (with the data) to construct the indicator.

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Why do we need indicator standards?

• Indicator standards enable us to compare apples with apples

• They facilitate the local replication of national indicators and vice versa

• Importantly, they also help to avoid the issue where the same indicator produced by two different organisations differs, for no reason discernable reason

• HSMR: Dr Foster and CQC reporting different numbers led to significant confusion across the NHS that was widely reported in the media
Why do we need indicator standards?

• As the transparency agenda drives openness and the wider release of healthcare data, the market will be freer

• There should be more stimulation to further innovate healthcare intelligence products for the NHS

• However, what use will it be if one company says a hospital’s mortality rate is X and another says it is Y – who should we believe?

• Standardised, specified indicator methods that are themselves open, transparent and useable by all will ensure that $X = X$ no matter who is reporting it
Over the last 18 months, the Information Centre has been working to develop the ‘pipeline process’ on behalf of the National Quality Board.

We are now using the pipeline process to assure the indicator methods that underpin national quality indicators such as those underpin the NHS Outcomes Framework, the Commissioning Outcomes Framework and the Summary Hospital-level Mortality Indicator (SHMI).

It has been designed and implemented to have rigour and to ensure that all stakeholders of national indicators can input into indicator development.
Indicator Assurance Pipeline Process

• Anyone and everyone can use the pipeline process – we are currently working with DH, NICE, NHS North West and teams internal to the IC to develop national indicators

• We are also working with University Hospitals Birmingham to assure indicators developed locally up to a national level

• All indicators approved by the IAPP will be NQB approved quality indicators

• The methodologies underpinning all of these quality indicators will be completely open and transparent – published by the Information Centre for all to access and use

• The SHMI is one of the first real tests of this process
Summary Hospital-level Mortality Indicator

- The SHMI is a new national indicator that has been designed to be a high-level indicator of mortality in acute trusts
- It will be published by the IC in late October 2011
- The development of the SHMI has been challenging – it has brought together experts with differing views and has essentially asked them to agree on one method
- One of the main intentions for the development of the SHMI has been to work to ensure consistency in the reporting of mortality rates in the NHS irrespective of who is doing the reporting
- The full indicator specification is published by the IC for all to access, review and feedback, and the methodology subject to continuous improvement using the framework of the IAPP

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How can ASSIST assist?

• Firstly, if you have indicator methods or ideas for indicator methods you would like to take through the pipeline please contact us

• We are now working to further develop the peer review pool that is a very important part of the pipeline process

• ASSIST members (healthcare informaticians) vary in their skills – from IT infrastructure to analysts and statisticians and all things in between

• We need to ensure we have more representation from NHS Informaticians in our peer review pool to ensure that we have a thorough sense-check

• The establishment of an indicator method encompasses all of the business intelligence framework discussed earlier
How can ASSIST assist?

• Specialist knowledge that would be helpful includes:- clinical coding, data structures, data sources, data analysis, statistical modelling, taxonomies

• If you are interested and would like to be involved please contact

  pipeline@ic.nhs.uk

• We will send you a short questionnaire that will enable us to determine when and for what it will be best to contact you

• We do not expect this to be onerous for you – infrequent contact when it is most relevant given your skill set

• An opportunity to help to get national quality indicators as relevant to the real-world NHS as possible

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In summary

• Quality indicators (clinical indicators) are being increasingly used to monitor the implementation of national policy (NHS Outcomes Framework, Commissioning Outcomes Framework, SHMI...)

• One of the main intentions of transparency is to open up more widely the healthcare intelligence market and to stimulate innovation

• The benefits of this will be less keenly felt if people spend all their time arguing over which is the correct indicator rather than using the indicator to monitor and improve the quality of care

• Indicator standards help to avoid this – open, transparent and assured methodologies help to increase the trust and therefore the focus on quality improvement