

Core Outcome Sets: What they are and why they are important

How are healthcare interventions & treatments tested?

To ensure that interventions and treatments are effective and safe, researchers need to look at the effects they have on patients. Researchers do this by measuring 'outcomes'. Outcomes are variables measured during clinical trials that demonstrate whether an intervention or treatment was effective. For example, in a study of how well a prostate cancer treatment works outcomes might include:

- Overall survival
- Progression free survival
- Sexual, bowel and urinary function

A core outcome set is an agreed standardised group of outcomes that researchers should measure and report if they are conducting a clinical trial in a particular disease area.

Why are core outcome sets important?

Evidence synthesis is a term used to describe the method of comparing, contrasting and combining results from individual trials. The combined results are then interpreted within the context of the overall evidence. However, different studies looking at treatments for the same condition often measure different outcomes. For instance, imagine two studies on how to treat prostate cancer.

- Study A - researchers measure overall survival as an outcome
- Study B - researchers measure progression free survival as an outcome

When the two studies are finished, we cannot compare or combine their results because they have used different outcomes. Like comparing

apples to oranges, this makes it nearly impossible to give a conclusive recommendation about the effectiveness of the intervention or treatment, since the evidence can't be properly combined.

How are core outcomes agreed?

Deciding which outcomes should be core requires a great deal of research and discussion. Core outcomes have to be relevant to patients, carers and health professionals. People working on core outcome sets need to make sure that this expertise is used to agree on the core outcomes. To do this they often use 'consensus methods'. Consensus methods are surveys, meetings and discussions where the opinions of relevant experts are drawn together.

Find out more about how the PIONEER core outcome sets for prostate cancer were developed here.

How are core outcome sets used when they have been agreed?

When a core outcome set has been agreed the hope is that researchers will use it in all studies for a particular condition, adding in other outcomes if they wish. For example if every prostate cancer study used the same core outcome set, their findings could be compared and combined correctly. In the long run, this will improve the quality of information about which treatments work and which don't and help people make better choices.

Source: [COMET Initiative](https://www.comet-initiative.org) | Read more at www.comet-initiative.org. For resources relevant to patients, patient organisations and researchers involving patients in their core outcome set work: www.comet-initiative.org/Patients