

## Understanding the problem

In an earlier session, we discussed how *identifying a problem* was the first step in your TRIP journey. This sounds straightforward, but in our experience clinicians are often focused on *solutions*, rather than problems. We often come with good ideas that we are sure will make our work easier or our patient's outcomes better. But if we have not understood the problem properly, our solution may not reduce the evidence-practice gap, it might waste time and energy and may even lead to new problems.

So what is a problem? The Oxford dictionary defines it as “a matter or situation regarded as unwelcome or harmful and needing to be dealt with or overcome”. Clinicians encounter problems every day working in complex systems: we might see inefficient systems, poor communication, and conflicting priorities. These problems might be things like “there are too many referrals on a Friday” or “there are too many old people coming into hospital”—things that are unwelcome to us as individuals or services because they do not fit a preconceived picture of our service. But whose problem is it? How many referrals or older presentations are there, and what would be the *right* number? What harm is the problem creating? And importantly, what does evidence say?

In this session, we will talk about how you define and quantify your TRIP problem, perhaps thinking more about it as “a question raised for inquiry, consideration or solution”. This step is really important for several reasons:

1. To be sure that it really is a problem, and to prioritise against other problems
2. To start to understand what is driving the problem
3. To provide a baseline measurement so that you can tell if your TRIP project resulted in an improvement

To understand the problem, let's ask ourselves 4 questions:

1. Whose problem is it? What does it look like for different people? This question makes you consider multiple perspectives: it's often good to start with patients and carers; staff; and managers/systems. It helps you think about stakeholders in your project, and invites their perspectives.
2. How big is the problem? How many people does it affect, and how big is the gap between evidence and practice? This question helps inform prioritisation against other problems
3. What harm is created? This question considers likely consequences of the identified gap for patients or the healthcare system, and can estimate the impact of successfully addressing the gap. This also helps inform how much you should invest in a solution
4. Why is the problem there? This question starts to unpick the barriers and enablers to implementing the evidence-based practice

We talked previously about how your problem may come from two directions: either new evidence, guidelines or standards or a perceived clinical problem. Let's use an example from each of these perspectives, beginning with new guidelines.

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Delirium is now recognised as an important cause of hospital-associated harm in new national safety and quality standards in Australia. Guidelines recommend early screening for cognitive impairment and use of a validated delirium diagnostic tool in those screening positive. The problem is that hospitals are not routinely using these screening tools. A common solution would be to put a tool onto a new form in the ED and mandate its use by nurses and doctors. Will this solve the problem? How might we understand this problem?

1. Whose problem is it? What do consumers and carers think about cognitive screening? Likely the Australian Commission undertook interviews or focus groups with consumers and carers before introducing the standards, or there may be other publications and reports you could review. Which staff are involved and do they think screening is important? This might include nurses in the ED and the wards who undertake other admission screening; medical and psychiatric staff who diagnose delirium; occupational therapists and psychologists who do cognitive assessments. And what do local managers think...do they see a problem with risks, accreditation, or costs of care? We could explore these different perspectives through interviews or surveys. Surveys can be an efficient method but may not expose issues we have not considered when developing the survey; interviews or focused discussions take more time but are likely to be more help in understanding underlying reasons, as discussed below.
2. How big is the gap? We could draw inferences from published data, which is usually reliable but may not apply directly to our setting; or collect our own, which may be more convincing to our stakeholders but will cost more in time and effort. Or we can use a mixture. For example, the literature suggests that delirium occurs in at least 30% of older medical patients but is diagnosed in a minority of these. If we got delirium coding data for older medical patients and only 10% had delirium coded we can be pretty confident there is a substantial gap. This would also provide useful baseline data for measuring improvement; if we implemented structured screening and assessment we would expect coded cases to increase towards 30%.
3. What is the harm? From the consumer perspective, patients are at risk if healthcare staff do not identify they have cognitive impairment, so they can tailor their communication and care to meet their needs, and protect them from hospital complications. If healthcare staff do not recognise delirium they will not seek the underlying cause, and serious illness may be missed. These things are quite hard to measure objectively (e.g. by chart audit), but patient or carer stories can be powerful tools. From the manager's perspective, failing to document cognitive impairment may lead to under-coding and decreased revenue which could be readily estimated by casemix staff.
4. Why is the problem there? We could understand more about why staff have not previously used cognitive assessment tools through unstructured discussions, or through structured approaches like the '5 Whys' or 'fishbone' (Ishikawa) diagrams. Reasons might be lack of education or training in cognitive impairment, too many competing assessments, believing it is not their job, believing no one will look at the result, believing it will not change care, or even previous experience where introducing screening didn't work out. Mandating a form in ED may address one of these obstacles (believing it is not their job) but others will need quite different solutions.



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That example started with a new evidence-based guideline. This time let's start with a clinical problem. There have been several serious bleeding incidents related to intravenous heparin in the hospital including one contributing to a patient's death. The problem is poor anticoagulant control in patients on heparin infusions despite readily available point of care decision tools for prescribing. A proposed solution is an anticoagulation stewardship service where an expert clinician reviews every patient on heparin each week-day.

1. Whose problem is it? This is a problem for patients because poor control can lead to serious complications, but also because monitoring requires extra blood tests. Good prescribing and monitoring requires close collaboration between medical, nursing, pharmacy and laboratory staff who all have different roles and expertise, and so they may tend to blame other members of the team when things don't work out. Again, it may take time to understand these different perspectives.

2. How big is the problem? This would require an understanding of how many people were on heparin infusions at any time. This might be easy to extract if you have an electronic prescribing system, but otherwise might require manual tracking over a period of time. It is likely there will be some services with high use (e.g. cardiology) and these might be sensible areas to target for measuring use and for developing and trying out solutions. If you were collecting a snapshot of heparin use, it would be useful to capture some characteristics of the patients (e.g. reason for heparin prescription and other bleeding risks).

3. What is the harm? A preventable patient death is a high impact event, even if it is infrequent. However, to get a balanced overall picture of harm you might examine reported bleeding complications using hospital coding data, or compare adverse events with other similar hospitals through benchmarking such as Health Roundtable.

4. Why is the problem there? In addition to getting perspectives from the many players involved in heparin prescription and monitoring, it may be helpful to directly observe what happens in practice through detailed case audit. For example, if high heparin levels occur only when staff deviate from decision support guidance then effective strategies might be better education, or restricting prescribing through rules. But if they often occur despite good adherence to the guidance, the solution might be modifying the guidance for particular patients or settings. Similarly, if most of the problems occur after hours, a week-day expert service is unlikely to be a useful solution to this problem.

In summary, a range of methods can be used to define and understand your problem—identifying the size, impact of and reasons for your evidence-based gap. This can inform your solution design. In the next webinar we will show an example of where a good idea was put in without understanding the problem. Of, course sometimes these innovations do work, because we often have intuitive understanding of a problem through our immersion in practice. But when things are more complex, spending time understanding our problem to plan a logical solution can be a useful investment to increase the chance of success, minimise the risk of getting key players offside, and minimise the risk of unintended consequences.