Orygen
The National Centre of Excellence in Youth Mental Health

Clinical practice in knowledge translation

Research to practice: knowledge translation in youth mental health

Introduction

A significant gap exists between the latest research evidence and what is occurring in clinical practice in the field of youth mental health. Over a long period, many have expressed aspirations towards bridging the research–practice gap and highlighted the importance of doing so.[1–3] Yet, efforts to take 'what works' from research and apply it in clinical practice often end up facing numerous barriers.

This clinical practice point offers a knowledge translation framework for youth mental health. It will guide you through the different steps of the process and offer supportive advice for challenges that may be encountered in translating research evidence into clinical practice.

Why is knowledge translation needed?

The field of youth mental health is undergoing a period a rapid and significant change.[4] Growth in research has led to new theories, approaches, and treatment models. There are examples of critical approaches towards successfully translating research into practice, but a number of challenges have also been identified.[5] Use the best evidence to provide the greatest opportunity for young people to have optimal health in their transition to adulthood.

Clinicians often feel overwhelmed by the task of translating knowledge generated from research into their services,[6] despite their eagerness to implement best practices.[7] Managers and clinicians can feel ill-equipped and unsure how to proceed when challenges arise.

> "I'm too busy to find the evidence"
>
> "There's too much research and it's contradictory"
>
> "Help! What do I do?"

Comments by clinicians and managers that reflect the challenge of knowledge translation

The framework described in this clinical practice point provides practical support to address these concerns. It also aims to support services and managers and clinicians to use research-based knowledge to develop and improve practice.

Key features of knowledge translation

Knowledge translation is the practice of incorporating research-based information into clinical practice.[8] This process is multi-faceted, and over 100 different terms have been used to describe different aspects of knowledge translation.[9] The Canadian Institutes of Health Research[10] offered an influential definition of knowledge translation that underscores a number of features, including that it is:

- An ongoing or iterative process.
- A process that involves collating and synthesising evidence.
- Not just about taking information in, but also associated with the dissemination or exchange of information.
- Aimed at converting insights from research into effective real-world practices.
- Fundamentally linked with ethical practice.

What is a knowledge translation framework?

The following knowledge translation framework aims to assist clinicians and services who work with young people experiencing mental ill-health in applying best practices in their unique setting. This framework can be described as a process model,[11] in that it provides professionals with stages or phases to work through. The benefit of a process model is that it offers a step-by-step model of knowledge translation that can be readily implemented in real-world settings.

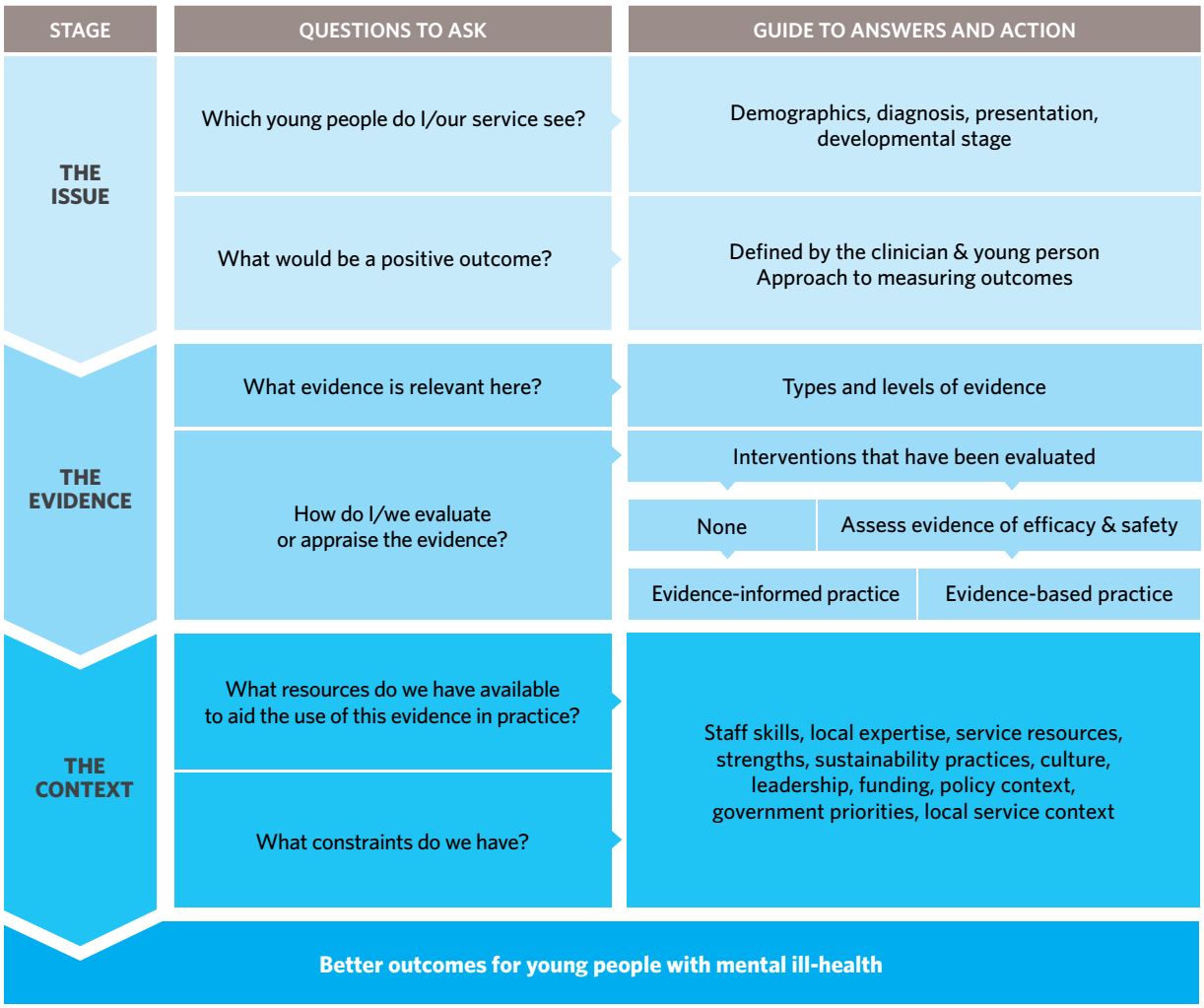
The framework has three stages

1. the issue
2. the evidence
3. the context

The reasons for using the framework can include:

- achieving better outcomes and lives for young people.
- understanding where to build skills to improve services
- using existing resources most effectively
- attracting funding for evidence-based practices

A knowledge translation framework for youth mental health



The 3 steps of knowledge translation

1. Define the issue

The process of knowledge translation begins with attention to young people, who are the focal point of support efforts. This is consistent with broader principles of patient-centred care. It is important to spend sufficient time clearly thinking about and characterising the young people who are being served in your particular setting. This can include factors such as:

- Age
- Developmental stage
- Cultural background
- Linguistic background
- Family context
- Presentation
- Mental health diagnosis
- Stage of illness
- Geographical setting

The process of specifying or characterising assists in ensuring that the evidence being applied will ultimately be relevant to the young people who are receiving support. It is also important to recognise the diversity in your cohort or service to understand their needs. This process can also help guide appropriate adaptations of best practices to specific contexts (see 3. Tailor to the context).

If you are unsure about which young people you are seeking to support, consult with existing datasets, relevant stakeholders, or young people to clarify this point.

In the 'define the issue' stage, clearly specify what outcome would be considered a positive one.

Defining successful outcomes

An increased focus on quality improvement has led to an emphasis on the importance of routine outcome measurement, which involves capturing indicators of client progress across multiple time points in order to evaluate the effectiveness of interventions.[12] But what is a positive outcome from mental health treatment?

In the 'define the issue' stage, clearly specify what outcome(s) would be considered positive. This can assist with:

- quality improvement and program evaluation
- providing feedback to clinicians that can inform treatment plans and decisions
- providing a shared goal and aid communication between clinicians and young people.

Ideally, both the definition of a positive outcome, and moving from a definition to specific measures of outcome, will incorporate perspectives from young people, their families (where appropriate) and clinicians, as well as objective measures of outcomes. Each service should select an approach that is applicable and feasible in their context. Consider incorporating:

- Young People: client perspectives can assist in defining what a positive outcome means. Young people can also provide feedback in the format of ratings on their experience of care, level of engagement, and their progress towards desired outcomes.[13]
- Families: they play a key role in youth mental health as carers, key stakeholders, and advocates. They can often provide valuable input on outcome measurement, complete measures themselves, and assist young people to complete measures.
- Clinicians: clinicians can be trained in terms of completing more complex measures of psychopathology and functioning and also have experience in differentiating between developmentally typical presentations and more concerning behaviours.
- Objective measures: where possible it is advised to incorporate objective measures that may include behavioural or functional outcomes, such as school or work attendance. It can also be beneficial for services to consider broader objective measures around issues like employment and engagement with education (e.g. 'days out of role'), service use (e.g. number of sessions attended or types of clinicians consulted in an episode of care), and mortality rates.

2. Assess the evidence

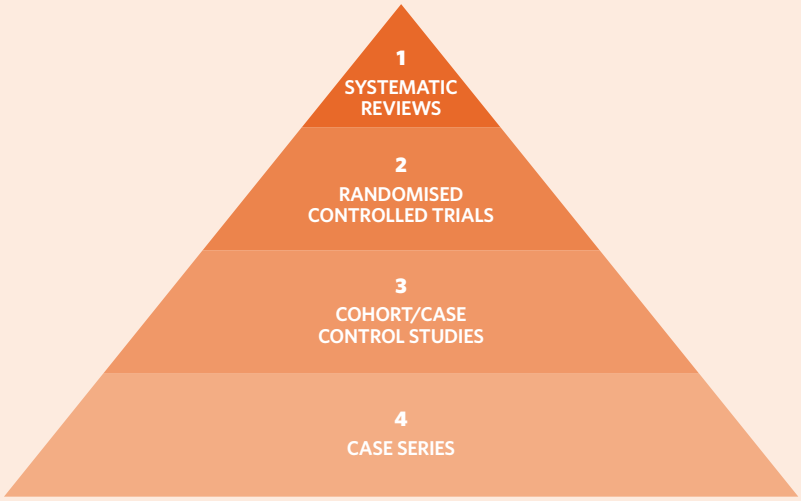
Youth mental health research continues to grow at a rapid pace and it can be overwhelming for busy clinicians or service managers to know where to start. Let's work through a few points that you might use in finding the relevant evidence. Orygen also has a quick reference guide to evidence translation that offers more detailed guidance for refining your question and locating, appraising, synthesising, and applying evidence.

Where do I find evidence?

Primary research studies and reviews are generally published in academic journals. One of the markers of quality is that the journals are peer-reviewed, which means that the work has been independently evaluated for quality by academic peers. Here are some of the places you can find evidence:

- PubMed is a high quality and broad database of individual studies and academic research. It offers flexible search tools and simple tutorials to identify relevant research.
- The Cochrane Database of Systematic Reviews is a high quality source of evidence summaries. It has the benefit of being freely accessible in Australia, using rigorous guidelines for assessing evidence and study quality, and having structures in place to ensure that review are regularly updated with the latest evidence.
- Google Scholar offers a user-friendly interface that will be familiar to many users. Although it is easy to use, it is important to note that it can integrate non-peer-reviewed research, books, preprints and conference presentations, and this may or may not suit your purpose.

Levels of evidence – NHMRC



Australia's National Health and Medical Research Council (NHMRC) has developed guidelines on levels of evidence.[14] These levels help you weigh up different types of evidence against others.

Level 1: Systematic reviews of randomised controlled trials

These are articles that contain explicit rules for selecting studies in a manner that reduces bias. These studies often use a technique called meta-analysis where findings are aggregated across multiple studies in order to yield a more precise estimate of the effect of an intervention and factors that influence its effectiveness. This rigorous selection process and aggregation of studies mean that systematic reviews are considered the highest level of evidence.

Level 2: Randomised controlled trials

These are studies where young people are randomly allocated to either receive treatment, or at least one other condition, which might be another treatment or a control group. This 'experimental' design allows for comparisons of outcomes between the groups, and the random allocation increases confidence that any observed differences in outcomes are associated with the treatment itself, and not other factors related to a bias in the sample or treatment groups.

Level 3: Cohort or case control studies

Cohort studies follow populations across time, whereas case control studies compare individuals with and without a certain condition.

Level 4: Case series

Series of individual cases that are described. These are considered to be of value, but are considered a lower level of evidence as they can be based on a single individual or a small group, and findings therefore may not generalise well to other contexts.

When finding and evaluating your evidence, other factors to consider include:

- Quantity of studies: All things being equal, evidence is more compelling if it comes from multiple studies across independent research groups, rather than single studies or only one specific research group.
- Quality of studies: Higher quality studies are of greater value as evidence than lower quality studies. There are established protocols for assessing the quality of the design of studies in particular settings.[15] Additionally, there has been growing recognition of the importance of pre-registering both research trials and systematic reviews so that the analysis is based on pre-specified criteria and not adapted after the study results are known.
- Size of effect: One simple point is that larger intervention effects are more persuasive than small effects. There is also a difference between statistical significance and clinical significance. Statistical significance relates to differences that can be detected using statistical analysis, whereas clinically significant change is about whether an intervention makes a meaningful difference in a person's life.
- Qualitative evidence: This relies on language based descriptions rather than numerical data and statistics. Qualitative research can be particularly useful in advancing knowledge of new or emerging issues – that warrant more detailed or in-depth consideration than quantitative studies might allow – and for better understanding the experiences and needs of clients.[16,17]

Where can I turn for help with this process?

Orygen's knowledge translation webinar takes you through how to find evidence that's relevant to your specific practice. There are also some resources specifically developed for youth mental health clinicians and services:

- Orygen's Evidence Finder Tool allows you to search for evidence based on presenting problem, stage of illness, intervention, and publication type.
- Orygen Evidence Summaries and Research Bulletins.
- headspace has offers a number of resources on the latest research and evidence on youth mental health.

Evidence is more compelling if it comes from multiple studies across independent research groups rather than single studies or only one specific research group.

Evidence-based practice or evidence-informed practice?

There are different ways to apply knowledge from research in clinical practice depending on the quality and relevance of the evidence. Here are the two main ways for doing this.

Evidence-based practice (EBP)

When the research evidence is:

- of high quality
- of sufficient quantity
- has been investigated in the relevant population
- demonstrating that there are practices that work.

This provides a strong rationale for implementing evidence-based practice, that is, applying the best evidence from research in your setting. This approach isn't simple 'following the recipe' – it can also involve integrating clinical expertise, client preferences, and clinical circumstances.[18]

Evidence-informed practice (EIP)

But how do you proceed when there isn't clear evidence from research that can guide practice? For example, what if the diagnostic group you are working with lacks an empirical research base, or there are features of your client population's age, cultural background, or context that have not been sufficiently addressed in research?

In this case, the knowledge translation task is about adapting the available evidence to your context. An evidence-informed practice approach aims to ensure that services are based on three key pillars:

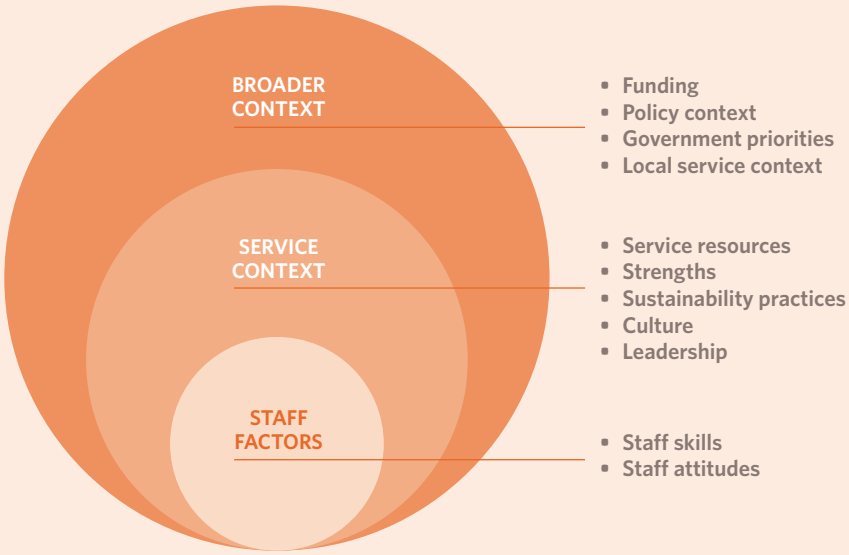
- Research evidence: Although there may not be randomised controlled trials of treatments relevant to your setting, are there principles from other research or services that you can apply in your setting?
- Practitioner experience and judgement: Practitioners with experience working in your context can bring their collective wisdom to bear in designing appropriate services, and adapting research insights to your particular setting.
- Youth and family preferences: Young people and families are recipients of mental health services, but are also key allies in shaping the services.

3. Tailor to the context

Now that you have a clearer picture of the issue at hand and the state of the evidence in the area, it is important to rigorously assess that specifics of your service context and how that may impact the knowledge translation process. Put simply, this means asking the question: *How is this going to work in my specific context?*

We understand that knowledge translation is about bringing evidence to a 'real world' setting, where bringing about changes to practice can be challenging. Each context will bring unique challenges and opportunities, however, it is useful to consider the following factors in order to sensitise yourself to relevant issues and help guide pathways forward.

Contextual factors in knowledge translation



The following elements can be considered both in terms of available resources and in terms of constraints.

> **TIP** Try and identify at least one area of strength and weakness at each of the three levels.

Staff factors

- Skills: What professional backgrounds, clinical experience, training history, and expertise do your clinical staff have?
- Attitudes: What attitudes and beliefs do your staff have regarding evidence-based practice and knowledge translation activities? Are these consistent across staff or varied?

Service context

- Resources: What resources are available to your organisation? This could include human resources, physical resources, financial resources, clinical resources, and information resources.
- Strengths: What features of your service can you capitalise on as particular areas of competency, strength, and expertise?
- Sustainable practices: What structures, policies, and procedures are in place to ensure that organisational and practice changes are sustained meaningfully over the long term?
- Culture: Organisations develop team values, behavioural norms, social contexts, and general climates that can impact clinical practices significantly. In what ways might your organisational culture impact knowledge translation?
- Leadership: What leadership structures and practices are in place?

Broader context

- Funding: What overall funding does your service have? Is funding available for specific roles, programs, or interventions?
- Policy context: Do specific policies guide what practices can be implemented?
- Government priorities: Do government priorities impact opportunities and challenges in knowledge translation?
- Local service context: What other services exist in the local community, and how does this affect the direction that your service takes?
- Not all of these factors will be relevant in all cases. However, broadly speaking, these are the types of issues that may be encountered or should be considered when working to incorporate evidence into practice.

From knowledge translation to implementation

Translating the best evidence into clinical practice is an ongoing process. Challenges can arise in defining the issues, finding the evidence, and applying it to your context. Beyond this, there is the challenge of making sure that changes that are implemented are supported by systems to ensure their sustainability. This clinical practice point offers some background in synthesising and applying research in your setting. Orygen has also developed an introduction to applying implementation science in youth mental health, which can help build on this document by providing advice on implementing meaningful and sustainable changes in organisations and health systems.

Despite the considerable challenges involved, working through the knowledge translation process offers the prospect continually improving our services, using resources most effectively, and attracting funding for evidence-based practices. Most importantly, this process ensures that we are providing young people with the best possible care.

Each context will bring unique challenges and opportunities.

References

1. Bauer MS, Damschroder L, Hagedorn H, Smith J, Kilbourne AM. An introduction to implementation science for the non-specialist. *BMC Psychology*. 2015;3(1):32.
2. Graham ID, Logan J, Harrison MB, Straus SE, Tetroe J, Caswell W, et al. Lost in knowledge translation: time for a map? *Journal of Continuing Education in the Health Professions*. 2006;26(1):13–24.
3. Ward V, House A, Hamer S. Developing a framework for transferring knowledge into action: a thematic analysis of the literature. *Journal of Health Services Research & Policy*. 2009;14(3):156–164.
4. Malla A, Iyer S, McGorry P, Cannon M, Coughlan H, Singh S, et al. From early intervention in psychosis to youth mental health reform: a review of the evolution and transformation of mental health services for young people. *Social Psychiatry and Psychiatric Epidemiology*. 2016;51(3):319–326.
5. Forman-Hoffman VL, Middleton JC, McKeeman JL, Stambaugh LF, Christian RB, Gaynes BN, et al. Quality improvement, implementation, and dissemination strategies to improve mental health care for children and adolescents: a systematic review. *Implementation Science*. 2017;12(1):93.
6. Chaudoir SR, Dugan AG, Barr CH. Measuring factors affecting implementation of health innovations: a systematic review of structural, organisational, provider, patient, and innovation level measures. *Implementation Science*. 2013;8(1):22.
7. Aarons GA. Mental health provider attitudes toward adoption of evidence-based practice: The Evidence-Based Practice Attitude Scale (EBPAS). *Mental Health Services Research*. 2004;6(2):61–74.
8. Sudsawad P. *Knowledge translation: introduction to models, strategies and measures*. Southwest Educational Development Laboratory, National Center for the Dissemination of Disability Research Austin, TX; 2007.
9. Curran JA, Grimshaw JM, Hayden JA, Campbell B. Knowledge translation research: the science of moving research into policy and practice. *Journal of Continuing Education in the Health Professions*. 2011;31(3):174–180.
10. Canadian Institutes of Health Research. About Knowledge Translation [Internet]. 2009 [cited 21 May 2018]. Available from: http://www.cihr-irsc.gc.ca/e/29418.html
11. Nilsen P. Making sense of implementation theories, models and frameworks. *Implementation Science*. 2015;10(1):53.
12. Kwan B, Rickwood DJ. A systematic review of mental health outcome measures for young people aged 12 to 25 years. *BMC Psychiatry*. 2015;15(1):279.
13. Edbrooke-Childs J, Wolpert M, Deighton J. Introduction to the special section on implementing feedback from outcome measures in child and adult mental health services. *Administration and Policy in Mental Health and Mental Health Services Research*. 2016;43(3):277–278.
14. Merlin T, Weston A, Tooher R. Extending an evidence hierarchy to include topics other than treatment: revising the Australian 'levels of evidence'. *BMC Medical Research Methodology*. 2009;9(1):34.
15. Higgins JP, Altman DG, Gøtzsche PC, Jüni P, Moher D, Oxman AD, et al. The Cochrane Collaboration's tool for assessing risk of bias in randomised trials. *British Medical Journal*. 2011;343:d5928.
16. Freake H, Barley V, Kent G. Adolescents' views of helping professionals: A review of the literature. *Journal of Adolescence*. 2007;30(4):639–653.
17. Gulliver A, Griffiths KM, Christensen H. Perceived barriers and facilitators to mental health help-seeking in young people: a systematic review. *BMC Psychiatry*. 2010;10(1):113.
18. Powell BJ, Proctor EK, Glass JE. A systematic review of strategies for implementing empirically supported mental health interventions. *Research on Social Work Practice*. 2014;24(2):192–212.

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