Early intervention and prevention data and outcomes

Rapid review of international approaches

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Context

Theme 1 of the Mental Health Strategy 2021-2031 is 'Promoting mental wellbeing, resilience and good mental health across society'. The two specific actions which are focused on promotion and prevention are:

"Action 1. Increase public awareness of the distinction between mental wellbeing, mental ill health and mental illness, encouraging public understanding and acceptance of how life can impact upon mental wellbeing, and recognition of the signs of mental ill health and mental illness. Using public mental health education and effective awareness raising methods, increase public knowledge of the key measures that can be taken to look after mental wellbeing, increase understanding of mental ill health, and encourage public discourse and dialogue to reduce stigma.

Action 2. Create an action plan for promoting mental health through early intervention and prevention, with year on year actions covering a whole life approach, reaching from infancy to older age. The action plan must consider groups disproportionally affected by mental ill health who often struggle to access early intervention services and seek to reduce stigma associated with mental ill health." (Department of Health, 2021, p. vii).

A Steering Group, for this theme in the Strategy, was established by the Department of Health in 2022, and it is led by the Public Health Agency. The *Early Intervention and Prevention Plan 2022-25* was published later in 2022 and it included eight specific actions. Action 1 was to "Establish a system to ensure, leadership, connectivity and collective impact, at both regional and local levels, for early intervention and prevention in the context of the MHS" (Department of Health, 2022, p. 8). This included a number of specific structures including "A Data and Outcomes group for early intervention and prevention to be established to ensure equal priority with service provision in the MHS Outcomes Framework, to develop datasets specific to early intervention and prevention, to co-ordinate the sharing of outcomes from other relevant areas, and to monitor effectiveness of this plan."

This action makes the important connection with the related and parallel development of a Regional Mental Health Outcomes Framework that was required under Action 34 of the Mental Health Strategy 2021-2031. That work focused on outcomes for mental health service users and carers but it also highlighted the need to consider those outcomes in the context of population level data and outcomes.

The Data and Outcomes Sub-Group was established in June 2023 and is chaired by Oscar Donnelly. As part of the Sub-Group, a Working Group was then set up to support the Sub-Group, including by exploring international best practice in data and outcomes for mental health early intervention and prevention.

Rationale for a rapid review

A rapid review of the literature was therefore commissioned to help explore a range of international approaches to data and outcomes relevant to early intervention and prevention. A key focus was on exemplars where wider population level data, service activity data and the outcomes of services are aligned, or at least presented or considered together.

Methodology

The rapid review was designed in consultation with the Data and Outcomes Working Group. The membership of the Working Group is:

- Oscar Donnelly, Chair of the Data & Outcomes Sub Group
- Sinead Malone, Mental Health Early Intervention & Prevention Planning Manager, Public Health Agency
- Richard Bucklee, Administrative Support Officer, Public Health Agency
- Katie Blair, Senior Health Improvement Officer, Public Health Agency
- Nicole Bond, Office of the Mental Health Champion
- Melanie Brown, Senior Planning Manager, Public Health Agency
- Gavin Davidson, Queen's University Belfast
- Shari McDaid, Mental Health Foundation
- Mische McKelvie, Health Intelligence, Public Health Agency
- Valerie Maxwell, Children's Services Planning Manager, Strategic Planning and Performance Group, Department of Health
- Catherine Millman, Health Intelligence, Public Health Agency

It was agreed to focus the rapid review on a number of specified countries:

- Australia
- Canada
- Denmark
- Germany
- New Zealand
- Republic of Ireland
- Scotland

For each country the aim was to explore three key questions:

- How has the approach to data and outcomes been developed?
- What data and outcomes are included and reported?
- Are there any implications for Northern Ireland?

The rapid review was completed by Gavin Davidson, Professor of Social Care, Queen's University Belfast, and Claire McCartan, Senior Researcher, Regional Trauma Network, IMPACT Research Centre, Northern Health and Social Care Trust.

Australia

Process of developing the approach to data and outcomes

Australia provides an excellent example of a national approach to collecting data about mental health and measuring outcomes at both population and service levels. The initial focus was specifically on data and outcomes associated with mental health services but in 2023, the first wellbeing framework was launched by the Australian Government and in 2024 the National Mental Health Commission produced, for the first time, a report card to provide an overview of mental health and the mental health system in Australia.

The need for the routine assessment of outcomes was identified in the National Mental Health Strategy in Australia in 1992 and there is now a very well established and developed Australian Mental Health Outcomes and Classification Network.

The process began with the initiation of a research and development programme designed to identify measures that were feasible to use in routine clinical practice with adult service users. A small number of measures were selected to trial (Andrews 1994, Stedman 1997), with a similar process used to identify outcomes and measures for the child and adolescent mental health population (Bickman et al 1998). This led to the Mental Health National Outcome and Casemix Collection (NOCC) of measures in August 2002 which was then implemented progressively by the states and territories of Australia. This work was further developed by the National Mental Health Information Development Expert Advisory Panel in 2013 which also identified further non-mandatory measures which were recommended across domains. Several criteria were used to underpin the development of the domains, keeping the consumer/service user and clinicians at the forefront:

1. Be meaningful and understood by consumers, carers, clinicians and service managers.
2. Be worth measuring: the domain represents an important and salient aspect of the consumer's health that can be used to:
   i. inform decision making by the consumer and the clinician about care and treatment;
   ii. provide information that may support service comparisons through benchmarking;
   iii. assist in monitoring the outcomes of care at a broader population level;
   iv. engender a culture of research and service evaluation within mental health services that supports reflection on practice and future development.
3. Be relevant and measurable for diverse populations and age groups.

A broad consultation process was commissioned, inviting feedback across states and territories, face-to-face consultations and online staff surveys. A review of the published literature was also undertaken. As in New Zealand, a Technical Advisory Group was formed to ensure technical requirements were considered such as the psychometric properties of the measures under consideration and that the overall objective were being met. The National Mental Health Information Development Expert Advisory Panels provided ongoing input.

One of the primary objectives was to encourage routine use of the selected outcome measures. To this end, significant investment has been directed to the training and ongoing support to encourage understanding of the importance of, commitment to and compliance

with outcome measures as a central part of clinical practice and service improvement. The 2013 summary report demonstrated low levels of compliance in some areas, as little as 3% rising to around 50% in other areas.

The focus identified the need to support staff/services to recognise the role that outcome measurement plays across different objectives:

- Improving practice and service management
- Clinical use – to support clinical reviews and support collaborative care planning
- Informed use of benchmarking to improve quality
- Develop a culture of research and evaluation
- Inform the use of casemix to understand the role of variation between agencies in costs and outcomes

The review process also identified areas for consideration:

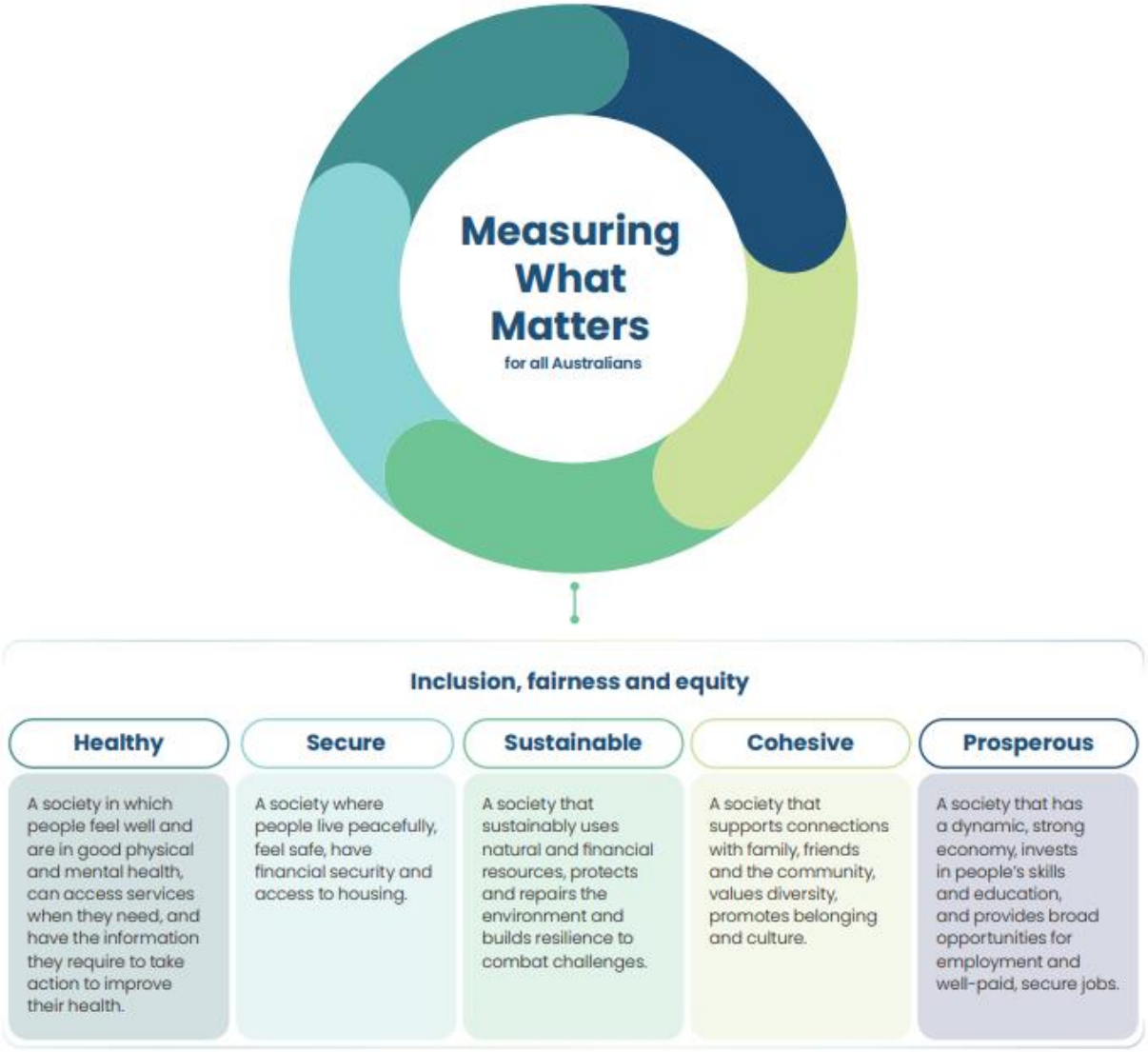
1. Some questioned the value of some of psychometric properties and their value in demonstrating changes over time, some requiring a larger evidence base to support their use.
2. Some felt that there was duplication relating to their own organisation's systems and procedures.
3. Concerns were raised about the cultural appropriateness of some of the measures, particularly for the Aboriginal and Torres Strait Islander peoples. The reliability and validity of mental health outcome measures in culturally diverse populations has been discussed elsewhere in the literature.
4. Clinical reported measures are more likely to be completed, further support is required to promote client completed outcomes.
5. Surveys of staff and consumers also highlighted practical issues that required consideration. These included thinking about the setting for collecting data, reviewing the frequency of data collection and specialist services that may currently be beyond the scope of the review. Appropriate measures for young people transitioning into adult services was another area for consideration.
6. Support for the use of the family suite of HoNOS was well supported as well as compliance with Kessler-10 plus (K-10+) as these demonstrated highest uptake, allows for normative population comparisons, used widely across other health care services, is short. Continued used of the SDQ was also strongly recommended for child and adolescent services.

In 2023, the Australian Government launched *Measuring What Matters* Australia's first wellbeing framework. It was developed based on research and two phases of consultation which included 280 submissions and more than 65 meetings. The Framework is underpinned by the importance of inclusion, equity and fairness, and has five main themes:

- "Healthy: A society in which people feel well and are in good physical and mental health, can access services when they need, and have the information they require to take action to improve their health.
- Secure: A society where people live peacefully, feel safe, have financial security and access to housing.

- Sustainable: A society that sustainably uses natural and financial resources, protects and repairs the environment and builds resilience to combat challenges.
- Cohesive: A society that supports connections with family, friends and the community, values diversity, and promotes belonging and culture.
- Prosperous: A society that has a dynamic, strong economy, invests in people's skills and education, and provides broad opportunities for employment and well-paid, secure jobs." (p. 4). These themes are presented in **Figure 1** below from p. 11 of the Framework.

Figure 1. Measuring what matters for all Australians



These themes are supported by 12 dimensions and 50 key indicators. The indicators were selected for having "consistent, comparable and reliable data, including logical alignment with available indicators already captured through existing strategies and plans." (p. 4)

What data and outcomes are included and reported

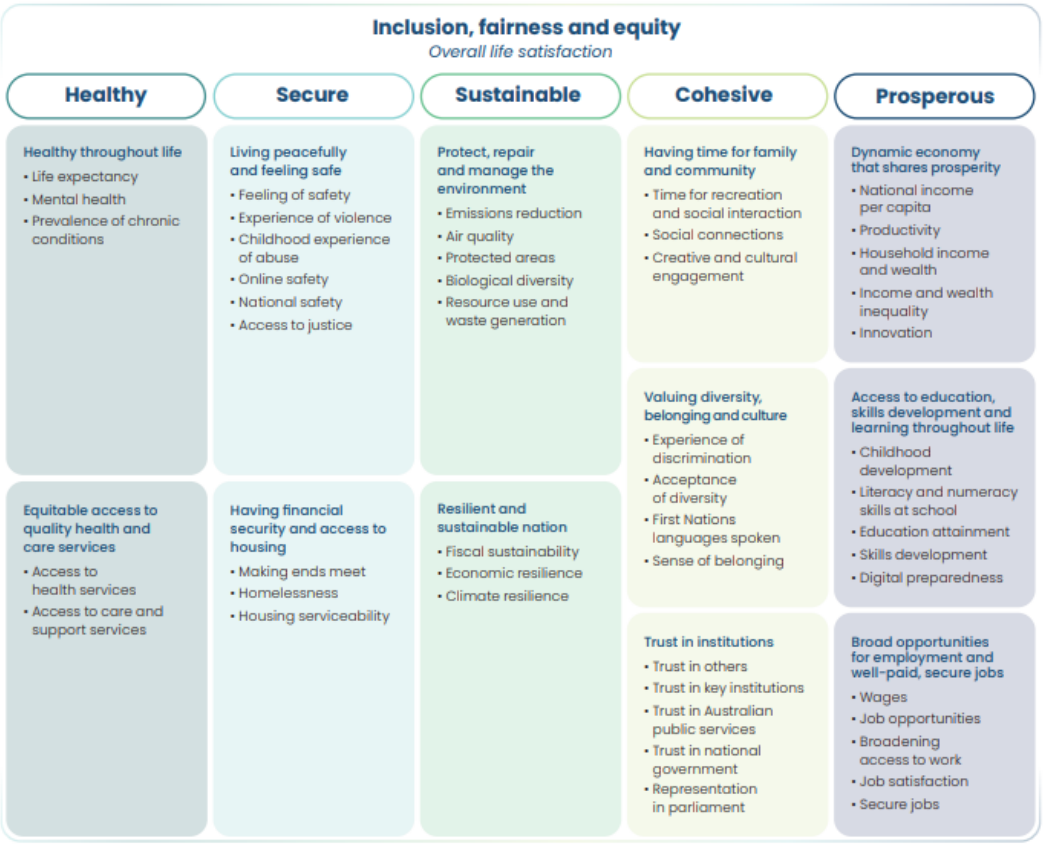
The specific measures included in the NOCC are:

- Health of the Nation Outcome Scales (HoNOS);
- Life Skills Profile 16 (LSP-16);
- Health of the Nation Outcome Scales for Children and Adolescents (HoNOSCA);
- Health of the Nation Outcome Scales 65+ (HoNOS65+);
- Resource Utilisation Groups – Activities of Daily Living Scale (RUG-ADL);
- Children's Global Assessment Scale (CGAS);
- Mental Health Inventory (MHI);
- Behaviour and Symptom Identification Scale 32 (BASIS-32®);
- Kessler-10 Plus (K-10+);
- Strengths and Difficulties Questionnaire (SDQ);
- Factors Influencing Health Status (FIHS); and
- Focus of Care (FOC).

There are three different consumer measures reflecting different ones in across different states/territories in Australia.

In *Measuring What Matters*, there are 50 indicators and, in this review the focus is on mental health, but the Framework includes a self-reported life satisfaction measure which is relevant across all its themes and is summarised in **Figure 2** below from p. 16 of the Framework:

Figure 2. Overall life satisfaction



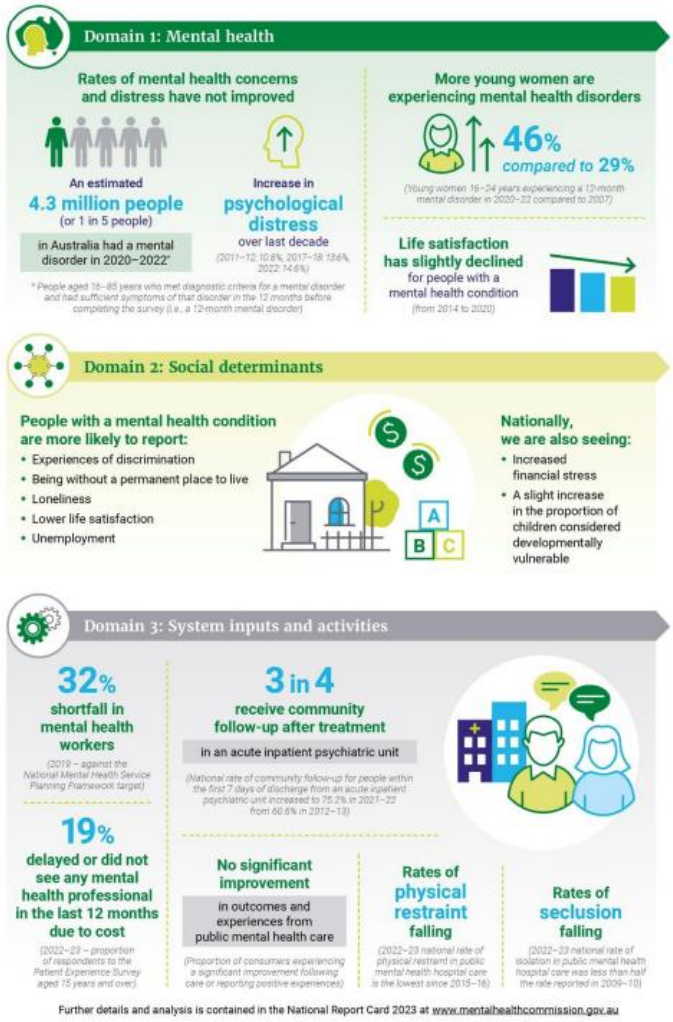
In acknowledgment of the complexity involved, there are no rankings or weights by themes, dimensions or indicators.

The key indicator of mental health is the proportion of people who experience high or very high levels of psychological distress as measured as part of the Australian Bureau of Statistics' Health Survey which includes the Kessler Psychological Distress Scale Plus (K10+) which importantly, is also part of the NOCC.

In 2024, the National Mental Health Commission in Australia produced, for the first time, a *National Report Card 2023* which aims to monitor the performance of Australia's mental health system. It has three broad domains:

- "Domain 1: Mental health – the status of key mental health and wellbeing outcomes for people with lived experience of mental health concerns.
- Domain 2: Social determinants – the broader social factors that have an impact on mental health of people in Australia, as well as the whole of life outcomes for people with lived experience.
- Domain 3: System inputs and activities – the performance of system activities that impact mental health outcomes for people in Australia." (p. 3)

Figure 3. Snapshot of Report Care 2023



Implications for Northern Ireland

- In Australia the same measure of mental health (Kessler 10+) is used at both population and service level enabling direct comparison
- The use of the Health of Nation Outcome Scales (HoNOS) enables international benchmarking between some countries, especially England, Australia and New Zealand
- In Australia, it does seem to have been helpful to have a combination of clear leadership at the policy level and at the operational level (through the Australian Mental Health Outcomes and Classification Network)
- The consumer, or service user, voice has been an important aspect of the development of the approach in Australia
- It has also been informed by the relevant research literature and the combination of all relevant perspectives does seem important
- The need to consider the context, including the cultural context, is repeatedly reinforced
- Careful planning and ongoing training and support are needed to ensure people understand the importance of the data and how to collect it. This will promote the quality of the data
- It is also necessary to consider developing a data warehouse to store and aggregate the data
- The data should be regularly analysed and reported in accessible ways
- The National Report Card provides a good example of bringing the key domains together in an accessible format – mental health, social determinants and system inputs and activities.

Canada

Process of developing the approach to data and outcomes

The development of the framework was identified as a need by Canada's Mental Health Strategy, *Changing Directions, Changing Lives,* (Mental Health Commission of Canada, 2012) in order to enhance data collection on mental health. The Positive Mental Health Surveillance Indicator Framework (PMHSIF) provides information on positive mental health outcomes and associated risk and protective factors.

The process began with a review of the literature and an environmental scan to provide a theoretical basis for the framework, identify potential positive mental health outcomes, risk and protective factors (Oprana et al., 2016).

Once a list of risk and protective factors were compiled, a consultation process with mental health experts, other government partners and non-governmental stakeholders were involved in prioritizing these indicators, along with identifying the most appropriate measurement approaches for each indicator. This led to the development of a conceptual framework of positive mental health and its determinants comprised of 5 outcome indicators and 25 determinant indicators across 4 domains: individual, family, community, and societal level. These are presented in **Figure 4** on the next page.

Figure 4. Development process for Positive Mental Health Surveillance Indicator Framework

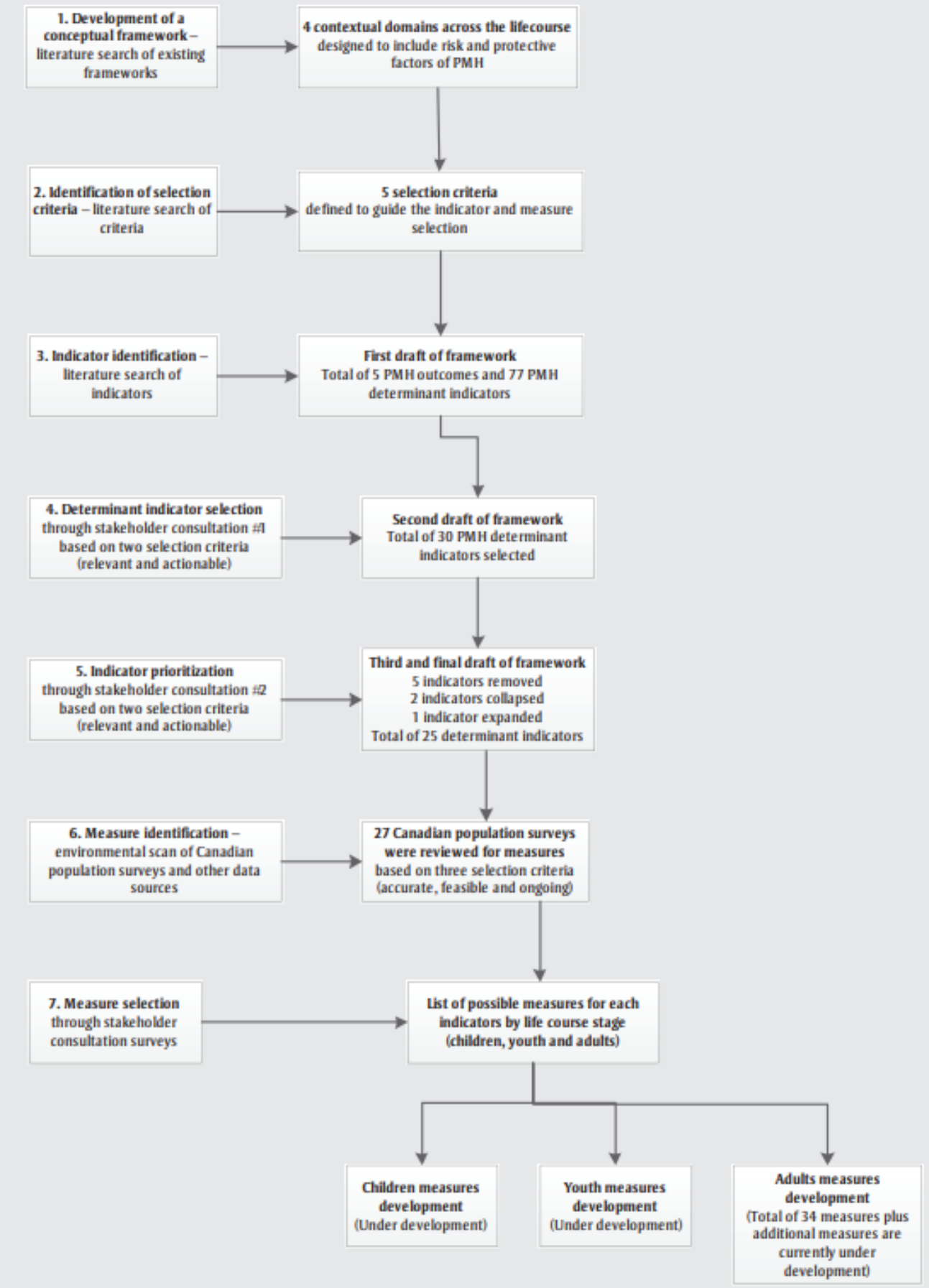


Figure 5. Positive mental health conceptual framework (Oprana et al., 2016, p. 3)

What data and outcomes are included and reported

Adult and youth versions have been produced and a child version is being developed. The PMHSIF contains a core set of indicators grouped by positive mental health outcomes: Self-rated mental health; Happiness; Life satisfaction; Psychological wellbeing; and Social wellbeing. It also includes four key domains: Individual determinants; Family determinants; Community determinants; and Society determinants.

One of the attractive aspects of the Canadian system is the interactive data tool available online and general availability and accessibility of their statistics and publications https://health-infobase.canada.ca/positive-mental-health/data-tool/.

Data are gathered from a range of sources: Canadian Community Health Survey (CCHS); Canadian Community Health Survey – Mental Health (CCHS-MH); Canadian Health Measures Survey (CHMS); Canadian Health Survey on Children and Youth (CHSCY); Canadian Income Survey (CIS); Canadian Student Tobacco, Alcohol and Drugs Survey (CSTADS); Canadian Alcohol and Drugs Survey (CADS); General Social Survey (GSS); Health Behaviour in School-Aged Children (HBSC); Survey on COVID-19 and Mental Health (SCMH).

Implications for Northern Ireland

- The Canadian approach demonstrates the importance of drawing on existing data sets and survey protocols to maximise data availability.
- Data accessibility and interactivity appear to be easy to use.
- Quick stats publications are produced regularly in adult and youth versions.

Denmark

Process of developing the approach to data and outcomes

In 2022 Denmark agreed a 10 year plan for mental health (Sundhedsministeriet [Ministry of the Interior and Health], 2022). The action plan was based on recommendations by the Danish Health Authority (2022, p. 16) which suggested: "To strengthen evidence-based knowledge and development across professional areas and sectors, it is recommended that research on mental disorders be strengthened through implementation of the existing research strategy. In addition, improved access to and use of data should be prioritised. At the same time, strong professional environments should be developed to support uniform professional development and documentation of services through guides, guidelines and databases on quality of care."

There are five main areas of focus in the action plan as summarised by Healthcare Denmark (2023) and illustrated in **Figure 6** (from p. 13) below.

Figure 6. Five areas of focus in the Danish Mental Health Action Plan

What data and outcomes are included and reported

There are a number of sources of data on mental health in Denmark as summarised by Statistics Denmark (2022):

- "Den Nationale Sundhedsprofil 2021" is a national health profile (in Danish), which includes information on stress – with data for 2010, 2013, 2017 and 2021
- Psykiatrifonden is the Danish mental health fund and provides general figures on mental health problems in the population
- The Danish Health Data Authority provides data on patients, medication and admissions to psychiatric hospitals
- Vidensråd for Forebyggelse (the Danish Knowledge Council for Prevention) has produced two reports on the mental health of children aged 0-9 and on children and young people aged 10-24

Implications for Northern Ireland

- A key characteristic of data in Denmark is the ability to link individual data across databases. In 2022 the Danish Government launched a new national data portal at https://datavejviser.dk/. Although still being developed, it may provide further suggestions for how mental health data can be presented in the context of wider society.

Germany

Although the focus of the German government's wellbeing indicators extend well beyond mental health outcomes, their approach recognises the importance of wellbeing in the wealth and progress in economic, social and environmental progress and measuring progress across these domains and one which incorporates the views and perspectives of their citizens.

Process of developing the approach to data and outcomes

The 2013 Coalition Agreement between the three main political parties in Germany, led by Chancellor Angela Merkel, placed citizen participation as a central element of policy development and as a result the consultation process to develop their new wellbeing strategy was designed to involve as many citizens as possible.

The 2015 process involved a number of stages involving over 15,500 people over a period of 6 months:

- Series of 203 dialogue events throughout Germany targeting seldom heard groups e.g. street children, organisation for deaf people, unemployed youth.

Dialogue events lasted on average 3 hours and discussion centred on two questions:

  - What is important to you personally in life?
  - What constitutes wellbeing in Germany for you?

- Postcard and coupon campaigns posed the same questions and invited people to submit responses online or by return post.

- These data were analysed using text mining software to develop main categories and themes across the various data sources. Seventeen main categories were generated in this process.

Figure 7. The 17 main categories of the national dialogue

What data and outcomes are included and reported

The 'Wellbeing in Germany – what matters to us' initiative conducted a national consultation to agree a definition of wellbeing. 12 dimensions (46 indicators) were agreed to describe and measure wellbeing in Germany and are updated regularly.

Table 1. German national wellbeing dimensions and indicators

Domain	Indicator
Healthy throughout life	Life expectancy at birth
	Prevalence of obesity
	Number of residents covered by a GP
	Quality of care (no data available currently)
	Ratio of self-reported health & income
Good work & equitable participation	Unemployment rate
	Employment rate
	Standard & non-standard employment
	Real net wages & salaries
	Job satisfaction
Equal educational opportunities for all	Persons who have completed at least vocational training or university entrance qualification
	Early school leavers
	Educational mobility between parents & children
	Participation in further education
Having time for family & work	Comparison of actual & preferred working hours
	Childcare enrolment rate
	Reduced working hours for care
	Commuting time

A secure income	Net household income
	Gini coefficient of income
	Gini coefficient of wealth
	Risk of poverty rate
	Old-age dependency ratio
Living a life in security & freedom	Fear of crime
	Actual crime
	Hate crime & politically motivated crime
	People's trust in local policing
At home in urban & rural areas	Ratio of rental costs to net household income
	Travel time to educational, service & cultural facilities
	Broadband access
Standing together in family & society	Life & family forms (family structure)
	Help from others
	Civic engagement
	Membership in sport clubs
Strengthening the economy, investing in the future	Real gross domestic product per capita
	Investment rate
	National debt ratio
	Public & private expenditure on research & development
	Time required to start a business
Preserving nature, protecting the environment	Air quality
	Biodiversity & environmental quality
	Energy productivity
Living freely & equally before the law	Voter turnout
	Perceived ability to influence politics
	Guarantee of eight selected fundamental rights
Acting the global responsibility & securing peace	Global & national greenhouse gas emissions
	Public expenditure on development co-operation as a percentage of gross national income
	Global corporate responsibility (no data available currently)

Figure 8. Wellbeing in Germany (Federal Government, 2020)

Implications for Northern Ireland

- Good health and wellbeing has to be considered in the context of social and economic wellbeing, and environmental harm/benefits – being able to tie in other important indicators beyond health outcomes provides a much richer and valid picture of wellbeing
- Taking a population level, holistic approach also recognises the interdepartmental responsibilities for providing the right context for health and wellbeing to improve including meeting the essentials for family life, reducing poverty and exclusion, improving access to green spaces, exercise, clean air etc.
- These outcomes consider working hours, income security, income inequality as well as educational outcomes, measures of social mobility, social support, civic engagement and participation in sport. An environmental focus is also considered central to quality of life.
- A similar approach has been adopted by Wellbeing Wales, demonstrating an ambitious approach to measuring progress

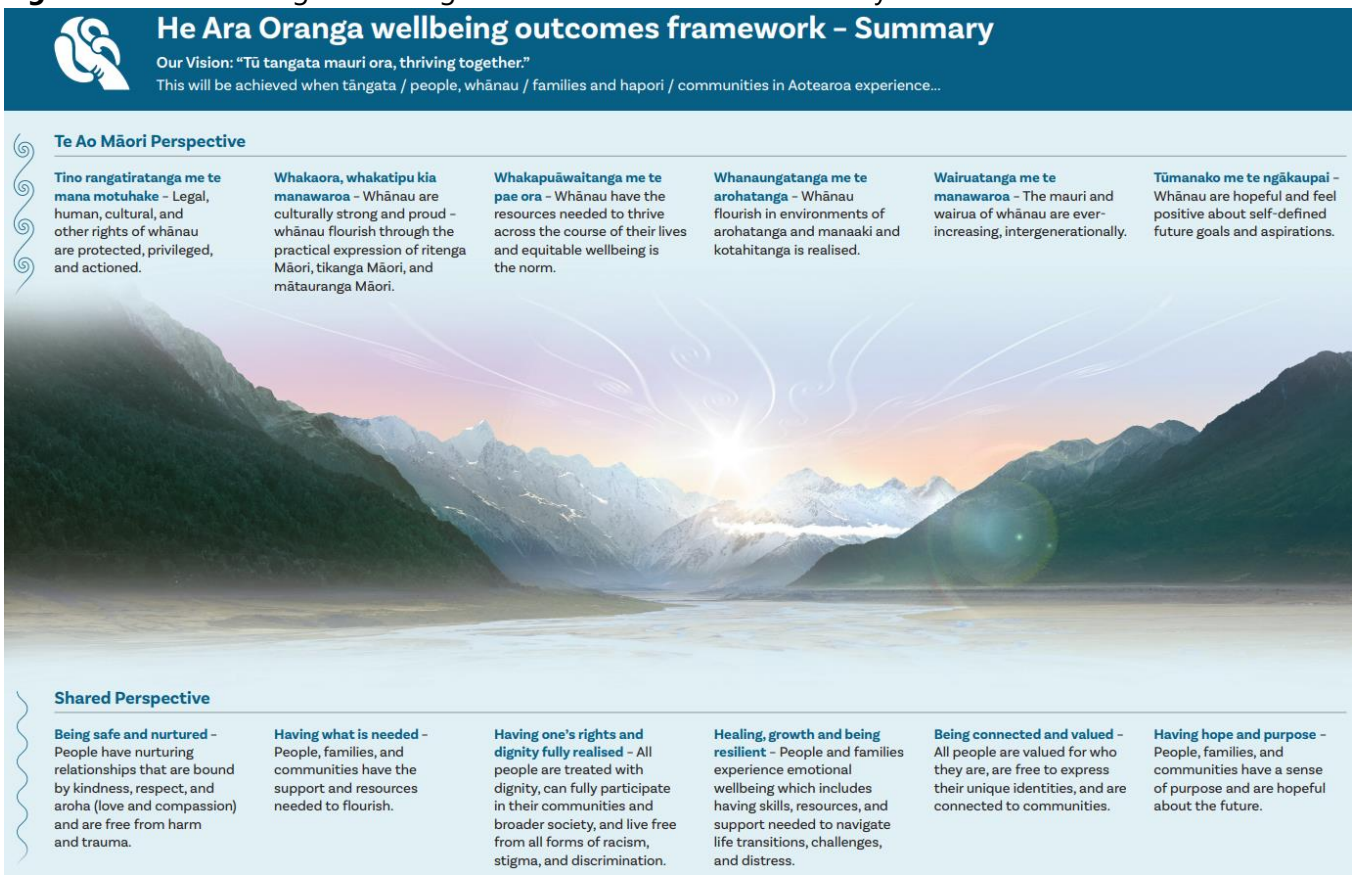
New Zealand

Process of developing the approach to data and outcomes

New Zealand's Mental Health and Wellbeing Commission used a three-phased approach to develop their He Ara Oranga Wellbeing Outcomes Framework, identifying six domains that contribute to a person's wellbeing and 'what people need to be and feel well':

- Being safe and nurtured
- Having what is needed
- Having one's rights and dignity fully realised
- Health, growth, and being resilient
- Being connected and valued
- Having hope and purpose

Figure 9. He Ara Oranga wellbeing outcomes framework – summary



The three phases, conducted over a period of one year (April 2020-January 2021), consisted of:

Co-define phase

- This two-month phase began at the start of Covid-19 lockdown and meant that the consultation had to be conducted online

- A consultation document was circulated to around 50 stakeholders (including consumer/lived experience groups, NGOs, service providers, think tanks, academics) to garner views on:
    - Defining mental health and wellbeing
    - Identifying existing models and frameworks to inform the work
    - A vision for an outcomes framework
    - Identify the domains of wellbeing
    - Identify what people wanted in an outcomes framework
- 40 respondents including written responses and/or Zoom discussions

Co-design and consultation process

- To develop the conceptual framework:
    - A targeted consultation document was shared with over 150 groups and organisations and named individual stakeholders
    - Engaged with government agencies and service providers via dedicated seminars to share the purpose and development of the framework and ask for feedback on the conceptual design
    - Conducted focus groups with Māori, Pacific peoples and people with lived experience
    - Ran an online survey
    - Analysed written responses to the consultation document

Data phase

- Once the framework was drafted, the Commission undertook a stocktake across sectors to identifying what data were available to measure and monitor the performance of the framework
- Two technical advisory groups were established:
    - One focused on mental health and addiction service-level data
    - One on population level data
- This approach relied on developing a common language to ensure definitions used in the advisory groups were consistent in understanding and application
- A data stocktake of current sources of data linked to wellbeing outcomes at both mental health/addiction level and population level was conducted and used to develop a 'long list' of existing measures.
- Over 100 data sources and 420+ measures were identified for the population level indicators.
- It was more challenging to identify appropriate data sources and measures for mental health/addiction where there were significantly less existing, common or collection at scale data sources. Only 13 sources and 237 potential measures were identified in the initial scoping exercise.
- The data long list was mapped against the 12 outcome domains, and short list made.
- Information gaps were identified – these included:
    - Lack of Maori outcome data which was a concern given the higher prevalence and levels of inequality in mental health outcomes;

- Lack of information on other priority groups where data was either not collected, or collected in a limited/ad hoc way;
- Mental health/addiction service level data mainly focused on specialist services and less well designed for monitoring wellbeing outcomes. They also tend to be developed for clinically oriented assessment or screening. Capturing change/improvement can be difficult as sometimes data is only collected at entry into a service;
- Mental health/addiction measures aren't often strengths-based but focus on deficits;
- Frequency of data collection is important – some very useful data is gathered so infrequently that it is of little use;
- Access to data can be a challenge – data may not be stored nationally or there may be delays to gaining access;
- Primary care wellbeing outcome data is a gap, plans for significant investment are in place to address this;
- A lack of data were available from Emergency Departments despite the large number of people attending for mental health problems.

Figure 10. Stepped approach to develop population indicators and measures for He Ara Oranga wellbeing outcomes framework

What data and outcomes are included and reported

The first Aotearora New Zealand Health Status Report was published in 2024 and reports on data from a range of sources to provide 'a national view of the health status of the population.' The report informed the development of the New Zealand Health Plan 2024-2027.

The outcomes are divided into different domains, providing a clear description of the population, context, risk factors and health outcomes across a range of different domains.

Table 2. Reporting outcomes

Population	
Age & ethnicity	
Projected population	
Māori health priorities & aspirations	
Pacific people	
Asian, Middle Eastern/Latin/African (MELAA) & other culturally & linguistically diverse communities (CALD)	
Migrant & refugee populations	
Context	
Socio-economic status	
Rurality	
Income, education and employment	
Housing	
Environmental factors	Air quality
	Water quality
Climate change	Rapid-onset climate events
	Slow-onset impacts
Social factors	
Violence & crime	
Exposure to key preventable risk factors	
Smoking	Tobacco
	Vaping
Nutrition, physical activity & body weight	
Alcohol use	
Illicit drug use	Cannabis
	Amphetamines
	MDMA (Ecstasy)
	Opioids
	Other drugs
Health outcomes	
Overall health	Life expectancy
	Contributors to the gap in life expectancy Māori & Pacific people compared with others
	Total mortality
	Avoidable causes of mortality
Maternity & early years, child health & youth health	Births
	Infants & children
	Young people
People living with chronic health conditions	CVD
	Stroke
	Diabetes
	Respiratory disease
People with cancer	Cancer mortality

	Cancer registrations
	Cancer survival
	Cancer screening
	Cancer hospitalisations & treatment
	Infections & cancer
People living with mental distress, illness and addictions	The burden of mental distress, illness & addiction
	Oranga hinengaro[1] in adults
	Oranga hinengaro in youth
	Oranga hinengaro & population risk groups
	Suicide & self-harm
	Mental health impacts of the COVID-19 pandemic
	Service utilisation
	Self-reported service utilisation & unmet need
	Seclusion & compulsory orders
Disabled people	Services & funding
Chronic pain	Musculoskeletal disorders, arthritis, gout
	Headache
Injury	
Pandemic infectious diseases	Long COVID
Sexual health	
Older people	
Health services	
Community healthcare	Ambulatory sensitive hospitalisations (ASH)
Oral health	
Public health	
Prison health services	
Hospital-based care	Emergency departments
	Outpatient services
	Admitted patients
	Telehealth
	Hospital quality & safety

Data are drawn from multiple sources and reflect the number of agencies that contribute to more comprehensive approach to informing service improvement (See Appendix 1 for a list of sources).

Further work is underway to facilitate cross government/agencies work, this is beginning with a line of sight assessment between services and population level indicators.

Statistics New Zealand has been developing an integrated health data system since the 1990s. The Te Tāhū Hauora/Health Quality and Safety Commission lead on the monitoring and reporting of quality and safety in health and disability services, which includes a key focus on the consumer voice. The Commission works with clinicians, providers and

[1] Mental wellbeing from a Māori perspective

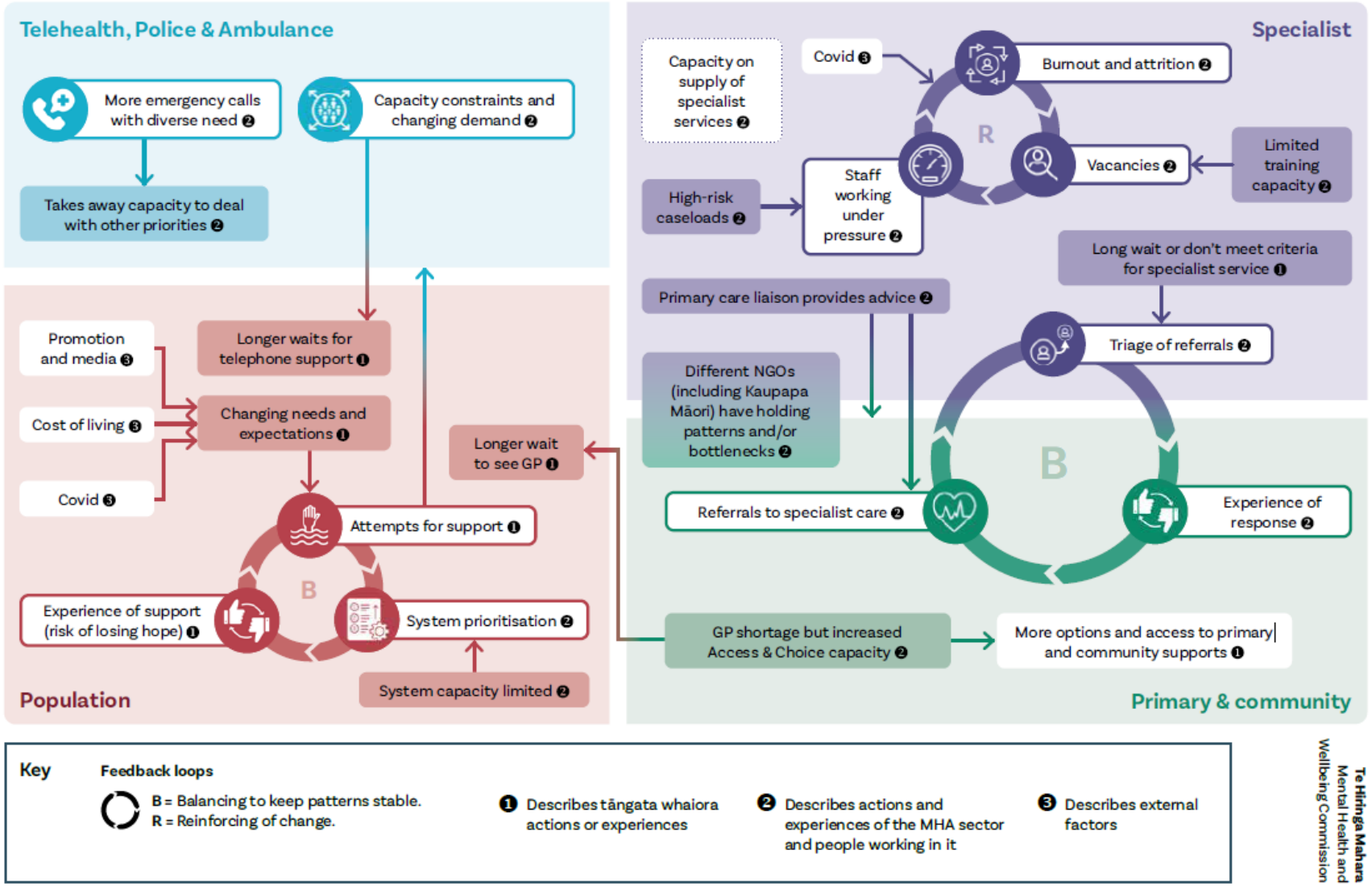
consumers to improve services, reduce harm, encourage innovation and achieve financial savings across the sector.

Te Hiringa Mahara/Mental Health and Wellbeing Commission's first monitoring report for mental health and addiction services was published in 2024. *Kua Tīmata Te Haerenga/The Journey Has Begun* reports on access and options to mental health and addiction services and provides a powerful narrative, combining quantitative and qualitative data, to present the major developments and shifts in demand and delivery in services and by incorporating many different perspectives across the sector profiles a more nuanced understanding of the changing patterns of need and service access, challenges and priorities for change. Their data highlighted key areas for change:

- Access to primary and community services has increased
- Access to specialist services has decreased
- Increasing pressure on specialist services were due to workforce challenges and a need to focus on those with higher needs
- Systems need to be strengthened to meet the needs and aspirations of Māori
- Young people need to be a continued focus
- There is a need to accelerate change

One of the striking elements of the report is the use of infographics to highlight their findings.

Figure 11. High-level visual picture of access to mental health and addiction services



Implications for Northern Ireland

- The first Aotearora New Zealand Health Status Report provides an excellent international example of how population and service level data can be presented together to provide a meaningful overview that can be monitored and explored over time
- It is useful to identify priority groups, especially those who may often be under-represented or excluded from surveys, to ensure representative data can be captured at the population level
- An important part of the process in New Zealand was to identify all potential, existing data sources to prevent duplication and also identify any gaps
- The frequency data are collected is also an important consideration
- How to measure change in wellbeing can be challenging, often data is collected at service entry
- Data needs to be available in formats that are accessible and useful
- The consumer, or service user, voice is central to service evaluation and monitoring and senior leadership lived experience roles are visible across organisations

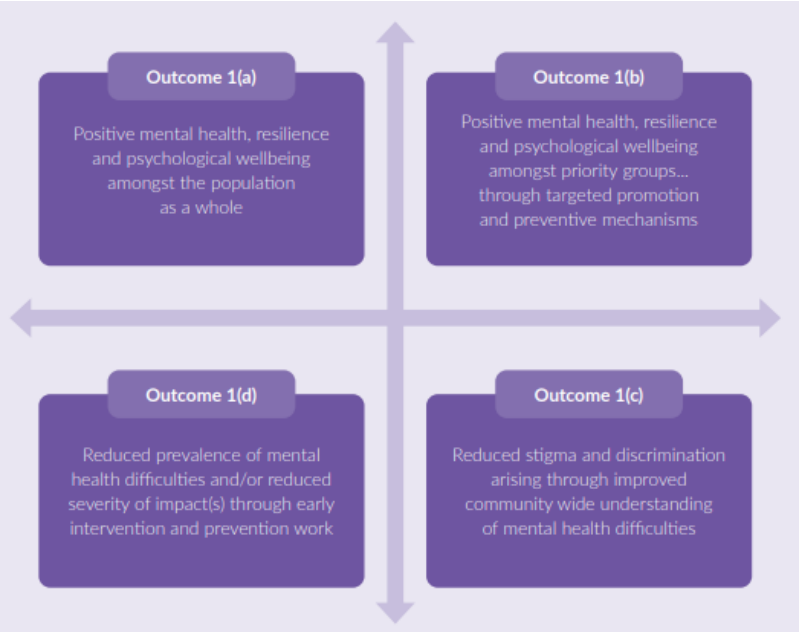
Republic of Ireland

Process of developing the approach to data and outcomes

There are a number of key components to the approach in Ireland. At the population level, the annual, representative, *Healthy Ireland Survey 2023* (Healthy Ireland, 2023) provides an overview of population health and associated data including on mental health.

The Department of Health's (2020) *Sharing the Vision - A Mental Health Policy for Everyone* provides the policy context. It includes a number of outcomes focused on mental health promotion, prevention and early intervention as summarised in **Figure 12** below from page 24 in *Sharing the Vision*.

Figure 12. Mental health promotion, prevention and early intervention outcomes



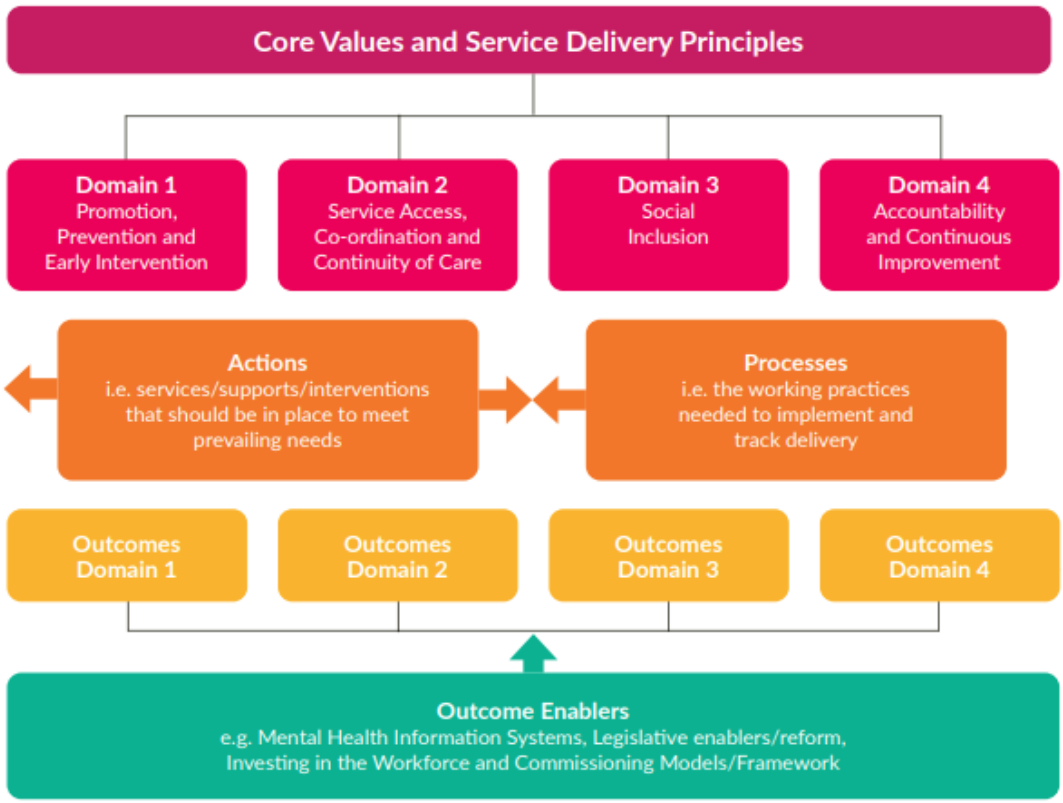
It also highlighted the importance of a lifecycle approach which acknowledges "that the foundations for mental wellbeing are established before birth and that much can be achieved through interventions and supports to build resilience and improve wellbeing throughout childhood, the teenage years and on into adulthood and later life. As a result, greater emphasis on promoting mental health and building resilience at all stages in the lifecycle is required and should include tailored approaches for priority groups deemed to be at risk." (p. 26)

As part of the policy implementation process, the Vision for Change Overview Group established an outcomes subgroup. Based on a review of the literature of approaches to mental health outcomes in other jurisdictions, the outcomes subgroup developed a discussion paper drawing on examples from 5 countries (England, Scotland, Canada, Australia and New Zealand) which were considered to have a well-developed mental health outcome infrastructures. They proposed there should be a number of key domains:

- Social inclusion and recovery
- Prevention and early intervention
- Access, coordination and continuity
- Quality improvement and innovation
- Measuring and reporting progress

This was further developed in the Health Service Executive and Department of Health's (2022) *Implementation Plan 2022–2024* which provides the organising framework for Sharing the Vision as illustrated in **Figure 13** below from page 13 in the *Implementation Plan*.

Figure 13. Organising framework for Sharing the Vision



The Mental Health Commission also provides an annual report which is a more traditional overview of data on mental health services.

What data and outcomes are included and reported

The annual Healthy Ireland population level survey includes some indicators of mental health. In the 2023 survey the main areas covered were: general health, smoking, alcohol, health messaging and information related to alcohol, health service utilisation, mental wellbeing and social connectedness, antibiotics, drug prevalence and suicide awareness.

Mental wellbeing was measured using a measure of positive mental health and a measure of negative mental health. The specific measure of positive mental health was the Energy and Vitality Index which involves four questions about the person's positive mental health over the previous four weeks. The questions explore the extent the person has felt: full of life; calm and peaceful; had a lot of energy; and been a happy person. Each is scored using a six-point scale from 'all of the time' to 'none of the time'.

The measure of mental health problems was the Mental Health Index (MHI-5) which involves five questions about the past four weeks. The extent the person has felt: downhearted and blue, worn-out, tired, so down in the dumps that nothing could cheer them up and been a very nervous person.

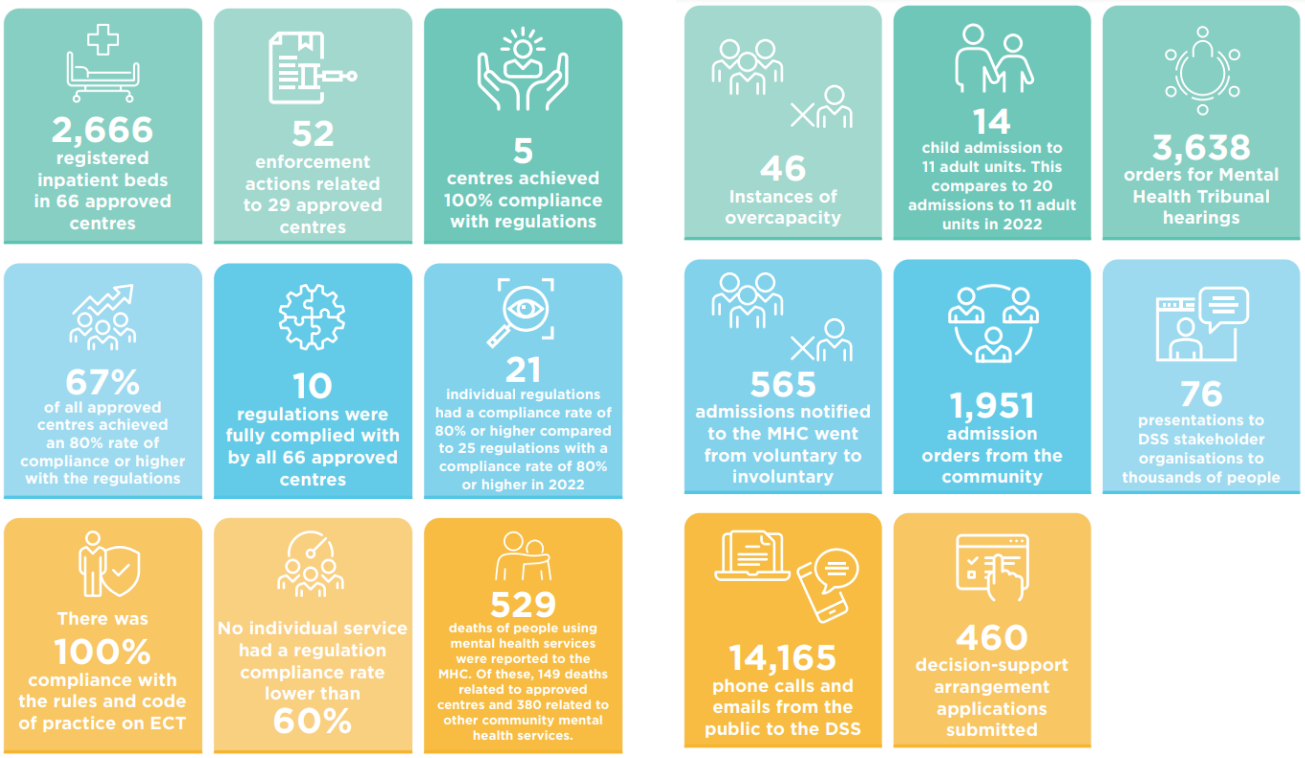
Data is also collected on: quality of life (from very good to very poor); mental health consultations including whether they were helpful or not; social connectedness; loneliness; social groups; and close personal contacts.

The *Sharing the Vision Implementation Plan* includes a number of specific actions relevant to outcomes including:

- "A National Population Mental Health and Mental Health Services Research and Evaluation Strategy will be developed and published, with resources and plans in place to support research projects.
- The implementation of a national mental health information system will be in progress.
- Mental health service resources will be allocated based on need within the population." (p. 15)

The Mental Health Commission's 2023 annual report provides very helpful service level data which is also summarised in **Figure 14** below from pp. 6-7 of the report.

Figure 14. Key indicators



Implications for Northern Ireland

- Developments in the Republic of Ireland seem to be at a similar stage of development to Northern Ireland and so there may be an excellent opportunity to align at least some indicators of the relevant social determinants and of mental health to facilitate comparison and joint learning
- The use of infographics does seem to be an excellent approach to providing an overview of key data in an accessible format.

Scotland

Process of developing the approach to data and outcomes

In Scotland there is a National Mental Health and Wellbeing Outcomes Framework (Scottish Government, 2023). Public Health Scotland have led the process of developing the mental health indicator sets (2022a) for both adults (2022b) and for children and young people (2022c). The indicator sets include both mental health outcomes and the relevant social determinants at individual, social, community and macroeconomic levels. This work has been informed by a multi-agency advisory group which consists of local and national policy makers, practitioners and individuals. The aim is to, wherever possible, to use existing data but the process of development was not limited to that so some indicators are currently aspirational.

Public Health Scotland (2022a) have provided some detail about the development process:

"Whilst a concise indicator set has strength in helping identify a narrow set of priorities in what is an extremely complex system, there is also merit to having a set that is broad enough to faithfully capture the wide range of factors that influence mental health at individual, community and structural levels. As such, a balance was sought between brevity and comprehensiveness. In practice, this involved reducing overlap between the indicators as far as possible, whilst retaining determinant indicators across socioecological domains, loosely following the Dahlgren and Whitehead model of the social determinants of health.

Prioritisation of indicators was performed on the basis of expert and community input through a series of workshops. Each group was asked to prioritise determinants with the largest effects on mental health outcomes. These groups were also asked to focus on factors that might be particularly common across the population and on social determinants that are most amenable to change. Indicators' usefulness at national and local levels was also taken into account, for instance those that might be subject to floor or ceiling effects were avoided." (pp. 7-8)

There were a number of key aspects of the process of development:

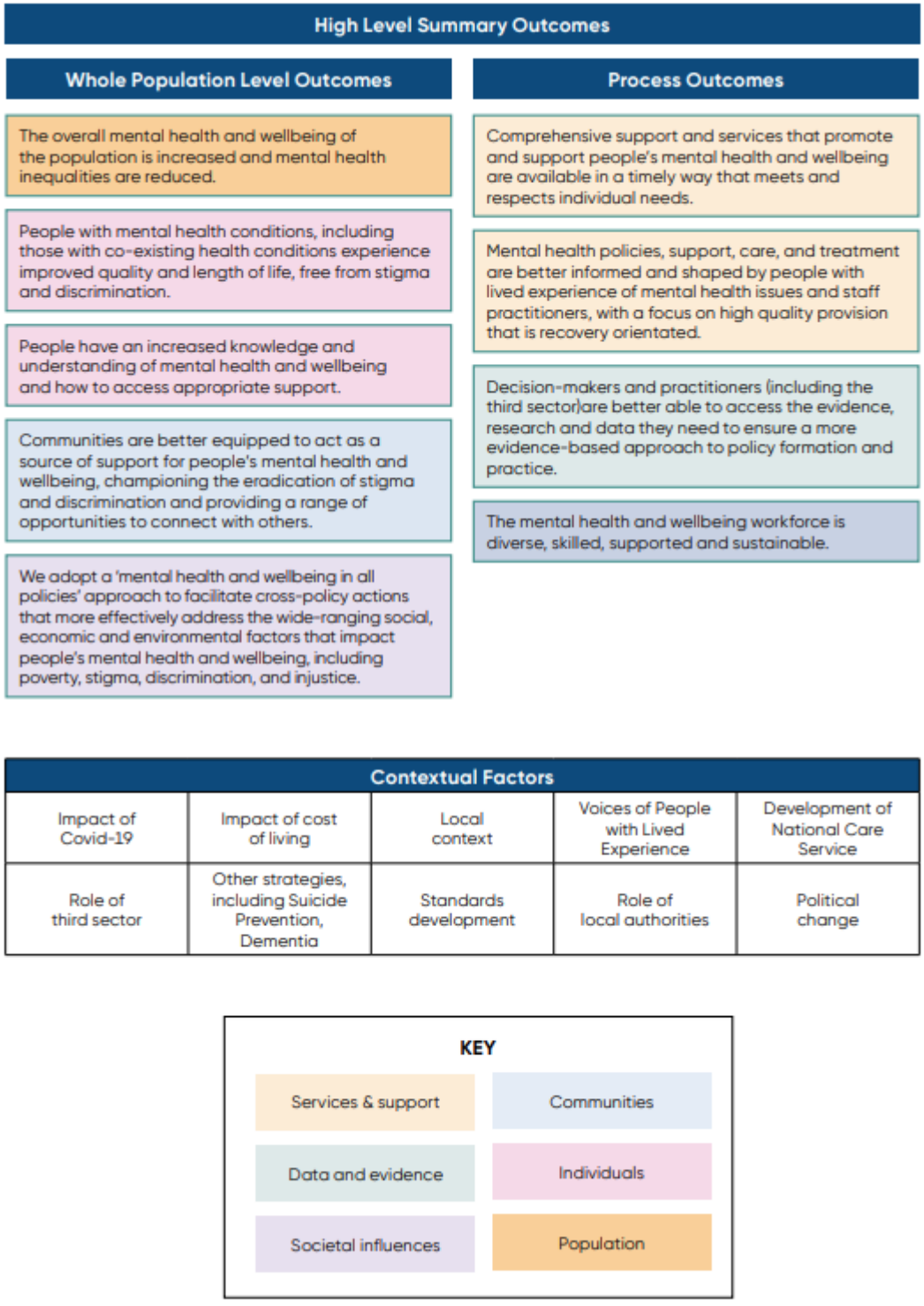
- A draft framework was developed including both mental health outcomes and relevant social determinants
- Key, existing data sources were assessed to identify relevant data, potential new indicators and gaps
- Existing Scottish national indicator sets were also scoped
- Evidence reviews were assessed to consider new indicators and priorities
- Experts were also consulted about possible new indicators and priorities
- Two groups of topic experts (adults, and children and young people) were organised
- Two community input sessions were arranged
- The statistical relationships and overlap between similar indicators and assessments were also explored.

Action 38 of the Mental Health Strategy 2017-2017 (NHS Scotland, 2017) also identified 6 quality dimensions of mental health services which are: Timely; Safe; Person centred; Effective; Efficient; and Equitable. Further detail of those was provided in a report, *Mental Health Quality Indicators: Background and Secondary Definitions* (Scottish Government, 2018). It stated that "The QI profile is primarily a tool for monitoring and improving service quality. It will be complemented by a Mental Health Strategy Framework of data illustrating population mental health and wellbeing, strategic impact and parity of esteem between physical and mental health. The QIs set no new targets and build on data that are already available. Application will be to secondary mental health services. Primary care and third sector organisations can choose to use the indicators to evidence quality should they wish." (p. 1)

What data and outcomes are included and reported

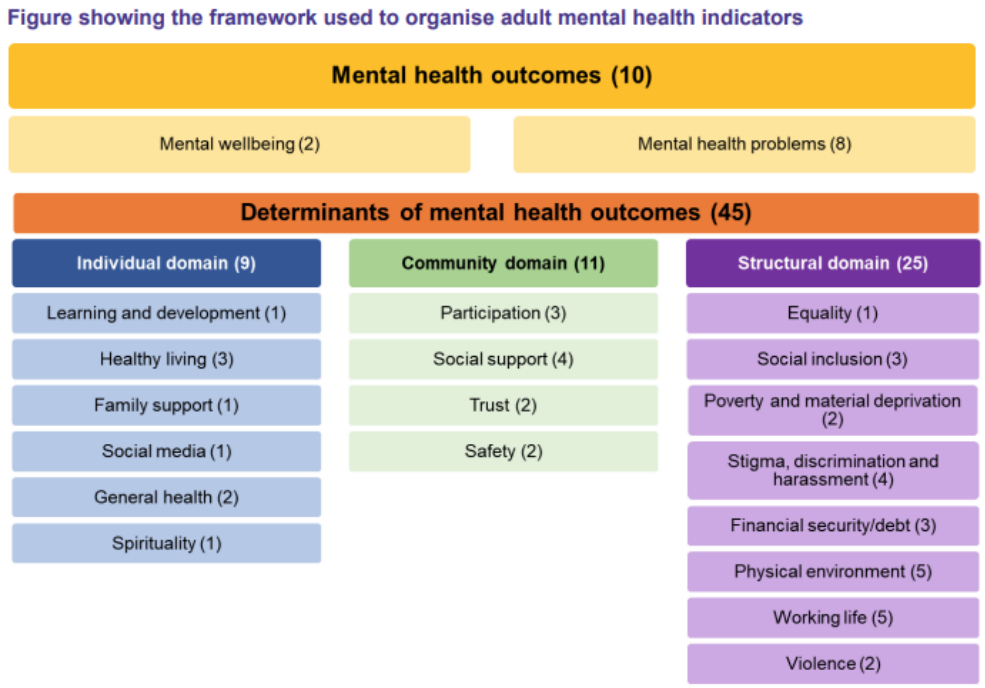
The National Mental Health and Wellbeing Outcomes Framework provides a summary of what outcomes are cover in **Figure 15** below which is from page 3 of the Framework.

Figure 15. National Mental Health and Wellbeing Outcomes Framework: High Level Summary Outcomes



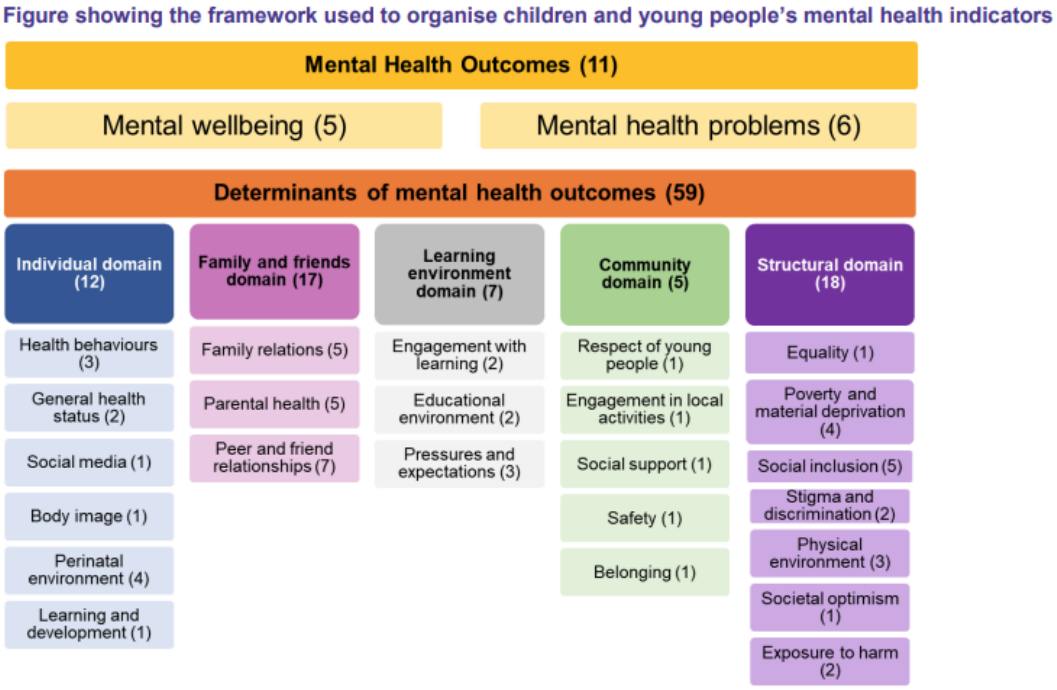
Public Health Scotland (2002b) provides more detail on the adult mental health indicators including at the individual, community and structural levels. These are summarised in **Figure 16** below from page 4 of the adult indicators report.

Figure 16. Adult mental health indicators



Public Health Scotland (2022c) also provides an overview of the children and young people's mental health indicators which is illustrated in **Figure 17** below from page 4 of the children and young people's indicators report.

Figure 17. Children and young people's mental health indicators



Public Health Scotland had identified the need for an indicator about mental health stigma in the Adult Mental Health Indicator set and the Mental Health Foundation agreed to facilitate discussions about this and produce a report on developing such an indicator. The report concluded by proposing the use of the Reported and Intended Behaviour Scale (RIBS), which includes eight questions, although it was acknowledged that some single item questions could also be considered fi the RIBS scale was too large (Mental Health Foundation, 2023).

Implications for Northern Ireland

- Similar to the suggestion about the Republic of Ireland, there is an opportunity to align some indicators with Scotland and also learn from their process of development.
- It is very helpful that Public Health Scotland have provided detail on the process of developing their indicator sets.
- The development of two indicator sets raises the question of whether this is necessary to do and, if so, how the children and adult data can be best aligned, including to explore the context of families.

Key implications for the process of developing the approach to data and outcomes

There is a remarkable consistency across countries about the mental health indicators that are selected. Table 3 below summarises some of the key indicators.

Table 3. Summary of possible indicators

	Examples of possible indicators
Social determinants	Deprivation Housing and living conditions Child care and family support Education and employment Access to leisure, green spaces, arts
Population level outcomes	Mental wellbeing and mental health problems Life satisfaction/quality of life Suicide/self-harm Attitudes, stigma, discrimination Wellbeing at work
Resources and inputs	Funding for mental health prevention & promotion Funding for mental health services Mental health workforce
Service level activities and processes	Inpatient care Support in the community Service user experience Carer experience
Service level outcomes	Mental and physical health Social functioning and inclusion Recovery and quality of life Carers' wellbeing and outcomes

In general there tends to be a combination of the social determinants of mental health (including protective factors) and indicators of mental wellbeing and mental health problems. There are also a number of international exemplars for the process of developing a positive and inclusive approach to data and outcomes:

- The development processes in Scotland, Canada and New Zealand are described in detail in the literature and provide helpful guidance.
- It is important to include all relevant perspectives, especially groups that may often be under-represented, on what should be included and prioritised and this may require a combination of different approaches to involving people.
- Although the perspectives of all the relevant people are central, what is included in the approach to data and outcomes should also be informed by the relevant evidence on the determinants of mental health, the key issues and the effectiveness of responses.
- In selecting and prioritising the indicators and data there will be difficult decisions about what should be included but it is essential to ensure that the approach is feasible and accessible enough to be useful to policy makers, service providers and the public.
- It is important to have data for all ages. In some countries there are separate approaches for children, adults and older adults. There may be important age specific indicators but where possible it would be important to try to align data across ages to ensure a systemic, lifecourse approach can be facilitated.
- The process of development should be considered an ongoing process so there should be a planned process of review.

Key implications for the approach to data and outcomes

The international exemplars also provide some guidance for the approach to data and outcomes:

- There are some recent and positive examples, including from Australia and New Zealand, of presenting population level data, service activity information and service level outcomes together which is ideal for understanding the complexity of the issues and processes involved.
- Design, including infographics, can help facilitate access and understanding of the relevant data.
- There are a number of examples of dashboards which provide regular and accessible data relevant to understanding mental health in a country.
- There is an opportunity to select indicators, where possible, which can be compared across time and between countries to facilitate comparison and learning.
- Existing data should be prioritised but there may be some gaps that should be highlighted even if they cannot be immediately addressed.

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Appendix 1

Table 1. Data sources for He Ara Oranga Wellbeing Outcomes Framework

Population level data		**Data frequency**
Ministry of Health All diagnoses are classified using ICD-10-AM		
Mortality Data Collection	Death certificates completed by medical practitioners, post-mortem reports coroners' certificates, & death registration forms completed by funeral directors. Supplementary data provided by public hospitals, National Cancer Registry etc.	Detailed info on causes of death available to 2018. Total number of deaths recorded, takes time to code data for analysis. Mortality data for 3-5 years used at times to provide sufficient numbers for analysis.
National Minimum Data Set (NMDS) (Hospital Discharge Data)	Day cases (>3 hours treatment) Patients who die in hospital after formal admission	Updated continuously
National Non-Admitted Patient Data Collection (NNPAC)	Outpatients	
	Emergency Department attendance	
National Cancer Registry	Register of people who develop all types of cancer, except basal and squamous cell skin cancers	Established in 1948, again takes time to code data for analysis.
Programme for the Integration of Mental Health Data	Provision of secondary mental health, alcohol and other drug services funded by the government and includes data from all the District Health Boards and some NGOs. Does not include data from primary mental health care services.	
Virtual Diabetes Register	Anonymised register using data from community laboratory testing claims system, community pharmaceutical dispensing claims system & NMDS & NNPAC data	2021
Survey Data		
New Zealand Health Survey (NZHS)	• Smoking, diet, physical activity, alcohol & drug use • Health status including self-reported physical & mental health status & prevalence of selected conditions (e.g. diabetes) • Utilisation of health services • Demographics (e.g. age, gender, ethnicity & income)	Annual national face-to-face survey 2013/14-2021/22.
Quality of Life Survey		Survey of 18+ years across 9 Council areas in 2022 (*N*=7,518), response rate 21%

Census & Demographic Data	Limited health information but includes social & economic information used for estimating health determinants	Every 5 years
	Birth registrations	
Health Quality & Safety Commission		
Atlas of Healthcare Variation	Individual conditions & clinical groups	
Quality & Safety Markers	Mixture of process & outcome measures focused on improvement in 4 safety priorities: falls; healthcare associated infections; surgical harm; & medication safety.	
Health & Quality Safety Indicators	Safety, patient experience, effectiveness, access/timeliness, efficiency & equity.	
Prevention Quality Indicators	A set of measures which, when combined with hospital in-patient discharge data, reveal meaningful information about the quality of care for ambulatory sensitive conditions.	