Wales Centre for Public Policy
Canolfan Polisi Cyhoeddus Cymru

# Measuring the impact of integrated preventative and early intervention services: a rapid evidence review and qualitative analysis

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# Contents

# Summary


- This report synthesises evidence from a rapid evidence review and qualitative research on the development, use and feasibility of measures and tools to assess the preventative impact of integrated prevention and early intervention services in health and social care.
- The rapid evidence review includes 27 sources: 6 studies were conducted in the UK, 8 in other European countries, 7 in USA, 2 in Australia, 2 in Hong Kong, 1 in Canada, 1 in Japan.
- 8 studies reported on the development of measures; most described a mixed methods process of co-production and cycles of testing and refinement of measures with a range of stakeholders.
- 53 measurement tools and frameworks were reported and grouped as: conceptual frameworks (8), outcome frameworks (4), evaluation frameworks (3), toolkit (1), validated scales and single measures (37).
- The majority of studies reported prevention-relevant impacts, such as better management of long-term conditions or better connections with services, rather than specific preventative impacts, such as mortality or morbidity.
- 14 participants from policy, practice and academia were interviewed.
- While there is a wide range of tools and frameworks available, a one-size-fits-all approach may not be suitable to measure preventative impact across a range of services focused on different outcomes and needs.
- Interviewees emphasised the importance of co-production and the crucial step of defining what successful prevention looks like for each service or intervention, developing a definition that was meaningful to all stakeholders
- Service users' (and family/ carers) voice should be a key consideration in measuring prevention.
- Stakeholders stressed the importance of identifying mechanisms by which preventative outcomes could be reached, and any linked interim outcomes that could give early indications that the intervention or service was likely to be progressing as it should.
- Burden on staff and services needs to be carefully considered when implementing a new tool, particularly for third sector organisations who may have low capacity, funding or access to data.

# Introduction

This report provides an overview of the findings of a rapid evidence review and qualitative research on measurement of the preventative impact of integrated prevention and early intervention strategies (services and interventions) in health and social care services.

## Background and context

The complex challenges facing the health and social care sector in Wales, which include increasing numbers of people with long-term health conditions, health inequalities, and workforce and hospital pressures, have directed the 2021-2026 Welsh Government to establish an Integrated Community Care System (ICCS) to provide Regional Partnership Boards (RPBs) with a comprehensive blueprint for transforming how health and social care is delivered across Wales.

The ICCS involves a shift towards integrated and preventative care approaches.

> **Integrated care** aims to create a seamless pathway between health and social services, enabling better coordination and support to deliver person-centred care.
>
> **Preventative care** aims to identify and address health issues at their earliest stages, before they develop into complex issues that require hospital-based care, and is often delivered within a person's home or community.

Despite a clear legal and policy framework to deliver preventative and integrated health and social care in Wales, set out in the ICCS blueprint (Figure 1), the Social Service and Wellbeing (Wales) Act 2014, and the Wellbeing of Future Generations (Wales) Act 2015, measuring the impact of preventative and integrated approaches remains challenging due to a lack of robust measurement tools and frameworks.

To address this, the 2021-2026 Welsh Government asked the Wales Centre for Public Policy to provide evidence on the extent to which existing measurement tools and frameworks can effectively evaluate the impact of integrated prevention and early intervention services, to support work to implement an ICCS across Wales.

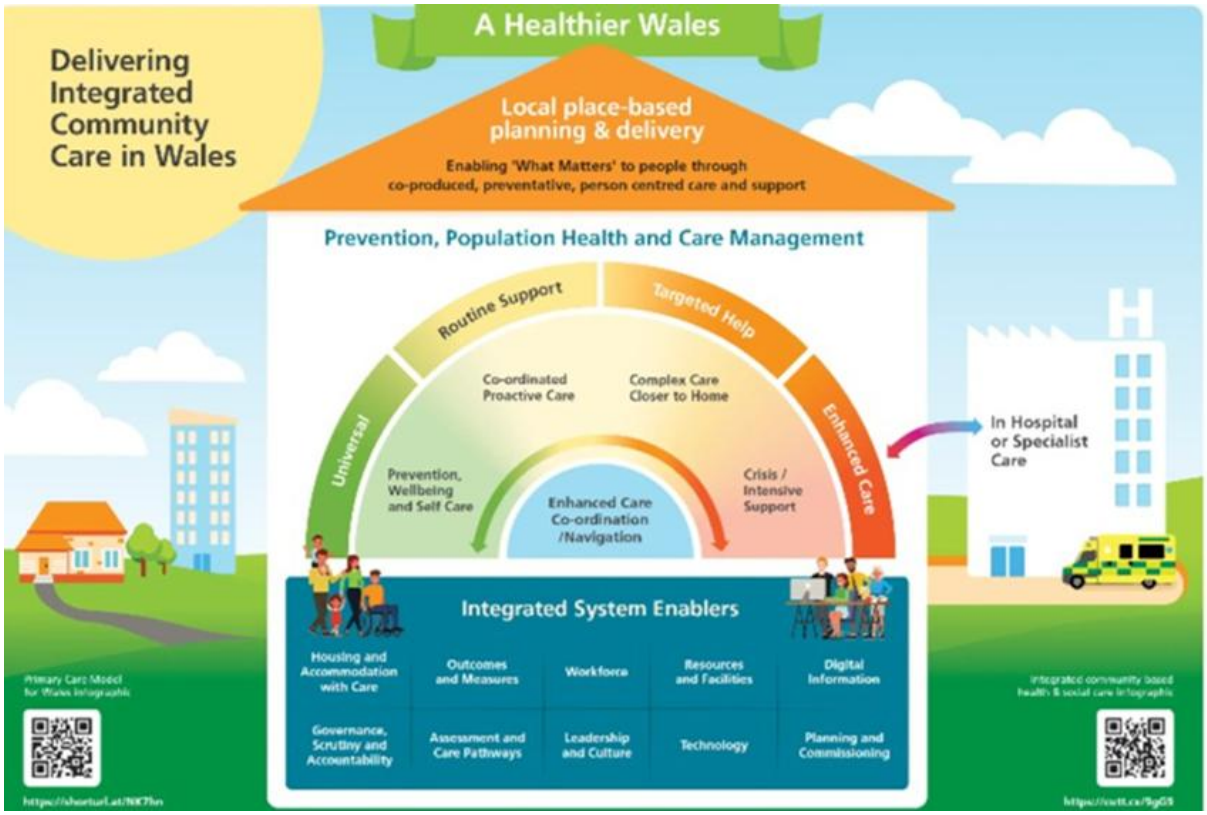


Figure 1: ICCS Blueprint

## Definitions and glossary

**Integrated prevention:** For the purposes of the review we developed a working definition of integrated prevention[1]: Jointly planned, owned and delivered health and social care interventions that help people access services, maintain and improve their wellbeing, and prevent or delay the onset or escalation of care and support needs.

**Integration:** The coordinated delivery of health and social care services with the goal of improving outcomes, efficiency and patient experience.

**Prevention and early intervention:** Proactive measures to address potential health issues before they escalate into more serious problems, focusing on supporting individuals and families to maintain wellbeing and independence.

[1] This definition was developed with input from the 2021-2026 Welsh Government

**Primary/ upstream prevention:** Targeting entire populations with support before problems set in.

**Secondary/ midstream prevention:** Targeting identified problems and preventing escalation.

**Tertiary/ downstream prevention**: Where interventions target urgent, existing issues.

(from Verity et al., 2021 & Llewellyn et al., 2022)

## Objectives:

To conduct a review of measurement tools and frameworks for assessing the preventative impact of integrated prevention in health and social care.

To contribute to the blueprint for the Integrated Community Care System (ICCS) in Wales by supporting the development of shared measurement frameworks to measure the impact of the ICCS.

## Research questions

- How have measurement tools for assessing the preventative impact of integrated prevention and early intervention services and interventions in health and social care services been developed elsewhere?
- How are measurement tools and frameworks being used in the UK and internationally to evaluate the impact of prevention and early intervention in integrated health and social care? Which of these show promise in supporting an integrated approach to measuring the impact of prevention and early intervention in health and social care?
- How could existing evaluation tools, methods and approaches support the development of shared measurement frameworks for integrated prevention and early intervention in health and social care in Wales?

A systematic review of reviews (Kelly et al., 2020) categorises measurement tools into three categories:

- Structures – where a measure reflects attributes of the healthcare services, for example, the adequacy of facilities and equipment or staff to patient ratios;
- Processes – where a measure reflects the way systems work to deliver desired outcomes, such as patient waiting time;

- Outcomes – where a measure assesses impact on the patient or system, such as reduced length of stay, or patient experience. Outcomes are subdivided into system, health and patient/carer outcomes.

At an early stage in the development of the rapid evidence review it was decided to focus on Outcomes, rather than Structures or Processes, and only on those outcomes that directly reflect individual patient or service user experience and/ or could be collected at an individual level.

# Rapid evidence review

The overall methodological approach was a rapid, focused review, using EPPI-centre methodology[2]. Detailed methodology is presented in Annex 1. Data synthesis took a narrative approach, using the research questions as overall grouping categories. A PRISMA (Page et al., 2021) flow chart was used to illustrate the study selection process for the rapid evidence review. Measurement tools and frameworks were tabulated, and the text reported if/ how they had been used to measure preventative impact. The results of the study selection process are presented in Figure 2 in Annex 2. In total, 4671 records were screened, with 4325 excluded at the title and abstract stage, 335 retrieved in full for detailed screening and 27 were included in the rapid review.

6 studies were conducted in the UK, 8 in other European countries, 7 in USA, 2 in Australia, 2 in Hong Kong, 1 in Canada, and 1 in Japan.

8 of the 27 included studies reported the development of measures, while all 27 reported on the tools themselves and how they had been used to measure preventative impacts of integrated early intervention or preventive services. A total of 53 tools were reported, grouped into the following categories: conceptual frameworks (8), outcome frameworks (4), evaluation frameworks (3), toolkit (1), validated scales and single measures (37).

[2] **Rapid evidence assessments of research to inform social policy: taking stock and moving forward in: Evidence & Policy Volume 9 Issue 1 (2013)**

## Review Findings: Development of measurement tools

*How have measurement tools for assessing the preventative impact of integrated prevention and early intervention strategies (services and interventions) in health and social care services been developed elsewhere?*

The development processes of eight tools were reported. Most of the articles described a mixed methods process of co-production and cycles of testing and refinement of measures with a range of stakeholders. Some described the use of logic models, theories of change or implementation frameworks, while some recommended the development of core outcome sets, domains and measures.

The tools were:

**Outcomes framework for the Special Educational Needs and Disabilities (SEND) Alliance model** (Allard & Mitchell, 2025) – an integrated whole system alliance and outcome-based accountability framework for children and families with SEND (UK). Preventive impact outcomes reported to have been measured with this tool include (prevention/ reduction of) A&E attendance for self-harm (28% less likely to attend in Rochdale compared to national average), and a reduction of 14 children being admitted to tier 4 CAMHS in the last two years.

**Health and social care platform** (Baird, 2016) – a dashboard developed to measure the impact of Scottish Integrated Care Partnerships. Although this conference abstract did not report a specific application of the tool in monitoring preventive impacts, it did report that the tool includes a measure of system impacts (cost and activity) of an individual's use of services, as well as positive feedback that the tool helps users to understand how clients move within and across a health and social care setting – something (client pathway) that was identified in the qualitative study as very useful in understanding what successful prevention means. A specific outcome mentioned, that may be of use for measuring preventive impact, was acute inpatient non-elective costs.

**SUSTAIN-EU evaluation framework** (Barbaglia et al., 2016) – developed to evaluate integrated care models for older people living at home with multiple health and social care needs. Baseline assessments of each integrated care initiative (interviews and workshops) were conducted to determine how well the initiatives provide patient-centred, prevention-oriented, efficient, and safe care services. Semi-structured interviews with key informants investigated different characteristics and contextual factors (e.g., policies, leadership, innovation, sustainability, resilience, among others) to identify strengths and weaknesses, as well as potential areas of improvement. Although this paper only reported the protocol and not the application of the framework, it did report a 'Prevention orientation' domain which included the

following indicators: Perceived control in health care (PCHC); Care plan template to collect the proportion of older people receiving a medication review; Advice on medication adherence; Advice on self-management and maintaining independence; Perceptions and experiences.

**Social Prescribing Scheme Assessment Model** (Carrera-Noguero et al., 2025) – an evaluation framework developed for social prescribing schemes in primary healthcare in Spain. The framework contains 91 criteria: 14 are outcome criteria which assess (improved) quality of life in the context of chronic conditions, autonomy, coping, emotional and social wellbeing, and reduction in healthcare usage, which are generally seem as measures of preventive impact. A mixed methods approach was applied to its development, including 5 nominal group discussions with 48 national stakeholders, followed by a thematic analysis to identify key challenges and opportunities which, with a literature review, was the foundation of a two-round Delphi survey with 130 participants.

**NASEM framework** (Carroll et al., 2024) – the National Academies of Sciences, Engineering and Medicine 2019 conceptual framework, adapted to measure the impact of regional health connectors working across systems (USA) (McCauley et al., 2021). The framework has five elements: Awareness (activities that identify the social risks and assets of defined patients and populations); Adjustment (activities that focus on altering clinical care to accommodate identified social barriers); Assistance (activities that reduce social risk by providing assistance in connecting patients with relevant social care resources); Alignment (activities undertaken by health care systems to understand, organise and deploy existing social care assets in the community to positively affect health and social outcomes); Advocacy (activities in which health care organisations work with partner social care organisations to promote policies that facilitate the creation and redeployment of assets or resources to address health and social needs). Identifying and evaluating the impact on social risks seem to be relevant to preventive impacts. The overall evaluation used a multimethod (both qualitative and quantitative data) evaluation design of RHC perspectives following guidance from the Centers for Disease Control and Prevention's (CDC) Framework for Program Evaluation in Public Health (Koplan et al., 1999) to develop an overall program logic model, then created a suitable evaluation design using elements from the RE-AIM/PRISM evaluation planning and framework (Glasgow et al., 1999).

**THRIVE conceptual framework** of child and youth thriving (Ettinger et al., 2022) was developed as part of The Pittsburgh Study (USA) to promote cross-sector collaborations between health care, public health, social services, education and other community organisations. TPS THRIVE is guided by a community-informed conceptualisation of child and youth thriving based on a concept mapping study with

91 community members and health professionals in multiple neighbourhoods. Additional interpretation and validation focus groups were conducted with over 150 stakeholders including community leaders, youth and families to update the conceptual framework, and a scoping review was also carried out at the same time. The framework includes 8 domains of youth thriving across individual, relationship and contextual levels: Strong minds and bodies; Positive identity and self-worth; Fun and happiness; Caring families and relationships; Safety; Vibrant communities; Healthy environments; Racial justice, equity and inclusion. Primary outcomes: in early childhood (0-5) the primary outcome is the National Survey of Children's Health measure of thriving/ flourishing. For school age children and youth, it is the thriving score on the Brief Inventory of Thriving (BIT) a 10-item assessment of youth psychological wellbeing. Secondary outcomes: for early childhood, the NIH PROMIS measures of thriving/ flourishing, including curiosity, persistence, adaptability, supportive relationships, positive affect, and the NSCH Healthy and Ready to Learn measure of school readiness. For school age and adolescent children secondary outcomes are future orientation, PROMIS measures of meaning and purpose, academic proficiency and achievement. None of the outcomes measured are specific to preventive impacts, but these could be inferred if a group of children receiving an early or preventive care intervention produced better scores for these outcomes than a comparator group who did not receive such an intervention.

**Social Determinants of Health Measurement Roadmap** (Hacker et al., 2025) – a roadmap covering five SDOH domains, containing measures developed for evaluating funded programs supporting patient populations with health-related social and SDOH needs (USA). The development of the roadmap involved a literature scan and a rating process based on 5 criteria relevant to the Centers for Disease Control and Prevention (CDC) National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP)'s SDOH priorities. A complementary community review by 13 multisector community partnerships (MCPs) applied a real-world public health practice lens to measure development. MCPs' ratings were analysed to create summary scores for each measure, and open-ended feedback was synthesized using rapid qualitative analysis. Health outcomes related to: changes in community/social connectedness, community connections to clinical care, and changes in community service utilisation. Specific measures were: Number and percent of patients with improved self-management of chronic disease(s) (increased medication adherence, improved BP, HbA1C, screenings, exercise, and smoking cessation); Number and percent of patients seen by community health workers or health care extenders; Number and types of new bidirectional systems established in health care and community-based settings; Number of people who report interacting with family and friends on a regular basis; Proportion of residents who report that their community has safe communal areas for people to gather (e.g. parks, recreation

centres, and community centres). None of these were specifically badged as measures of preventive impact, although improved self-management of disease is often seen as a measure of successful risk reduction.

**Care Experience Record Tool** (Turner & Murray, 2019) – an evaluation framework was developed, based on a logic model and theory of change, to measure the impact of Neighbourhood Care Teams supporting people in Scotland with frailty, people at the end of their lives or people who are socially vulnerable. The framework was reported to articulate the impact of Neighbourhood Care models on people who are supported by the model and on staff, and included measures of impact on unplanned admissions and acute length of stay. The authors concluded that the evaluation framework is transferable to other community-based projects that aim to support people to live well in their community and avoid (prevent) unplanned admissions and time in hospital. Although no findings on impacts were reported in this paper, another paper reporting on implementation of the same model in Scotland (Dobie et al., 2019) reported two individual case studies demonstrating reduced nursing time and service footfall in a patient's home, reduction of calls to the GP, and prevention of ambulance call outs, compared to the situation for these individuals before the intervention.

Further details of these eight studies are presented in Annex 4.

**Example: SEND Alliance Model**

Stakeholder events that included education, health, social care, voluntary and community sector (VCS), and additional parent, carer and children and young people (CYP) events were held to set strategic direction and support the outcomes-based commissioning model to redesign the SEND system.

A partnership with the Council for Disabled Children conducted 140 interviews to support development of the outcomes framework and corresponding data framework.

## Key findings on development of measurement tools:

**Eight studies were found that reported on the development of outcome frameworks or measures of preventative impact of integrated early intervention or prevention services. These spanned a range of populations: children and young people, CYP with special educational needs and disabilities, general health and social care service users, older people, people with specific vulnerabilities; and interventions ranging from tertiary prevention of unplanned**

**hospital admissions for frail older people to social prescribing for prevention of poor wellbeing. Most involved cycles of co-production and feasibility testing. Preventative impacts were measured using outcomes such as prevention of unplanned hospital or A&E attendance and related costs, prevention of escalation (e.g. to Tier 4 CAMHS), self-management of long-term conditions, maintaining independence, autonomy, coping, or reducing social risks by connection with social care services.**

## Review findings: Types of measurement tools

*How are measurement tools and frameworks being used in the UK and internationally to evaluate the preventative impact of prevention and early intervention in integrated health and social care? Which of these show promise in supporting an integrated approach to measuring the impact of prevention and early intervention in health and social care?*

Twenty-seven studies reported one or more measures or tools that had been used to try to measure the impact of integrated prevention and early intervention services. Few reported specific preventative impacts as such, but in the majority prevention-relevant impacts, that might be seen in a logic model (Savaya & Waysman, 2005) as interim or proxy outcomes on a pathway to preventative impact, such as better management of long-term conditions or connections with services, were reported. The tools are described below, grouped under the types of measure and (where helpful) of integration model. Further details of these studies are presented in Annex 5.

### Conceptual frameworks (8 in total)

There were two main types of conceptual frameworks mentioned: (i) logic models, roadmaps and theories of change focused on outcomes and impacts (5 in total), and (ii) process or implementation frameworks (3 in total), which included but were not limited to measures of impact.

#### Conceptual frameworks of *impact* identified in the review were:

**Social Determinants of Health (SDOH) Measurement Roadmap** (Hacker et al., 2025) – the roadmap comprised five measurement categories or components to visually illustrate the inputs, key activities and intended effects associated with the implementation of a SDOH project aiming to improve health outcomes and reduce health disparities. The five categories are: coalitions, community capacity, SDOH outcomes, health outcomes and equity outcomes. Specific measures were: Number and percent of patients with improved self-management of chronic disease(s) (increased medication adherence, improved BP, HbA1C, screenings, exercise, and

smoking cessation); Number and percent of patients seen by community health workers or health care extenders; Number and types of new bidirectional systems established in health care and community-based settings; Number of people who report interacting with family and friends on a regular basis; Proportion of residents who report that their community has safe communal areas for people to gather (eg, parks, recreation centres, and community centres). None of these were specifically badged as measures of preventive impact, although improved self-management of disease is often seen as a measure of successful risk reduction.

**Patient-centred medical home framework (PCMH)** (Weinstein et al., 2013) – this framework was used to structure a preliminary program evaluation of a partnership between a Housing First agency and a Department of Family and Community Medicine, to address multiple levels of health care needs for people with histories of homelessness and serious mental illness (Agency for Healthcare Research and Quality, 2012). Outcomes that related to preventative impacts included: staff and client awareness of physical health issues, resulting in increased engagement in ongoing care and screenings; continuity rates; use of emergency services.

The **MRC Framework for evaluating complex interventions** (Skivington, 2021) was used by Eastwood et al., 2019 to evaluate an integrated care initiative called Healthy Homes and Neighbourhoods (HHAN), a population-based, family-centred care coordination network that functioned across agencies to assist vulnerable families to keep themselves and their children safe and promote social cohesiveness. The authors adapted the framework's iterative approach of development, feasibility/ piloting, evaluation and implementation to include critical realist, participatory, continuous and theory driven elements. The rationale for the adaptation was to enable study of mechanisms of both effect and context. Measures of preventive impact in this study included: reduction in unplanned and probable preventable hospitalisation, emergency department visits, admissions and length of stay for members of HHAN families.

**THRIVE conceptual framework** of child and youth thriving (Ettinger et al., 2022) – was used to study the impact of cross-sector collaborations between healthcare, public health, social care, social services, education and community organisations on children's developmental stages and contexts from birth through completion of high school and to inform a child health data hub accessible to advocates, community members, educators, health professionals and policymakers. None of the outcomes measured are specific to preventive impacts, but these could be inferred if a group of children receiving an early or preventive care intervention produced better scores for these outcomes than a comparator group who did not receive such an intervention.

**SELFIE (Sustainable integrated chronic care modeLs for multi-morbidity: delivery, Financing, and performance) framework** (Litchfield et al., 2025) – a conceptual framework, structured according to the six WHO key components of health systems: service delivery, leadership & governance, workforce, financing, technologies & medical products, information & research (Leijten et al., 2018), was used to guide interviews at micro-, meso-, and macro-level in a qualitative exploration of staff experience of a co-located integrated child health and social care service in the UK. Study participants described at the micro-level how the service increased engagement of families and facilitated referral to social support and preventive care; at a meso-level the benefits of co-location, collaborative working and community outreach, and at the macro-level, improvements to the access and availability of appropriate care.

### Conceptual frameworks of *implementation* identified in the review were:

**RE-AIM** (Glasgow, 1999) which is well known in public health intervention evaluation. RE-AIM stands for: Reach, Effectiveness, Adoption, Implementation, Maintenance. RE-AIM was used in several studies to provide a broad framework that could be populated with outcome measures. In Fiori et al. (2024) it was used to organise process and outcome measures to evaluate a community health worker intervention (prevention-relevant outcomes included patient-reported connection to social services and self-report of whether their health related social need was improved or fully resolved), while in Sharma et al. (2024) it was used to guide an evaluation of a closed-loop referral infrastructure, and prevention-relevant outcomes included: (Long term impacts) Decreased utilisation of preventable healthcare services (decreased hospitalisation rates, readmission rates, ED visits); Improved QoL and wellbeing among people receiving referrals at participating organisations; Improved health outcomes impacted by unmet social needs among persons receiving referrals at participating organisations; Disparities among participating organisations.

The **Consolidated Framework for Implementation Research (CFIR;** Damschroder et al., 2009**)** was used with the RE-AIM framework in Gil-Salmeron et al. (2025) to systematically integrate perspectives from all groups into an implementation evaluation of the Health Navigator Model, a cancer prevention intervention for people experiencing homelessness.

The **NASEM 2019 framework**, a conceptual framework from a report on strengthening social care integration into healthcare (Bibbins-Domingo, 2019) proposed five categories of health care activities that facilitate addressing social needs:

- Awareness – activities that identify the social risks and assets of defined patients and populations,
- Adjustment - activities that focus on altering clinical care to accommodate identified social barriers,
- Assistance - activities that reduce social risk by providing assistance in connecting patients with relevant social care resources,
- Alignment - activities undertaken by health care systems to understand existing social care assets in the community, organise them to facilitate synergies and invest in and deploy them to positively affect health outcomes,
- Advocacy - activities in which health care organisations work with partner social care organisations to promote policies that facilitate the creation and redeployment of assets or resources to address health and social needs

The framework was used by Carroll et al. (2024) to evaluate the impact and activity of regional health connectors working across systems. Outcomes particularly relevant to preventative impacts were identifying and evaluating the impact on social risks e.g. by connecting patients with relevant social care resources.

As well as the above frameworks which were used to develop, organise or measure impacts, many reports mentioned assessment or practice frameworks used to develop interventions. These could also potentially be repurposed as conceptual frameworks, to select and organise appropriate outcome measures, in the future.

## Outcome frameworks (4 in total)

**Outcomes framework for SEND Alliance model** (Allard and Mitchell, 2025) – the development of this outcomes framework and corresponding data is detailed under question 1. Its reported impact is to set a clear child-centred strategic direction based on strategic outcomes. Preventive impact outcomes reported to have been measured with this tool include (prevention/ reduction of) A&E attendance for self-harm (28% less likely to attend in Rochdale compared to national average), and a reduction of 14 children being admitted to tier 4 CAMHS in the last two years.

**Performance indicator framework**: Validated scales (Barth et al., 2020) were used to evaluate Partnering for Success – an intervention offering training implementation and clinical strategies (CBT+) for children receiving child welfare and mental health services. It is described as a high-fidelity performance indicator framework organised and assessed at two distinct levels: (1) Delivery system partnership & leadership performance, (2) Child welfare & MH workforce performance. Domains were: Readiness, Adherence, Quality, Reach, Dosage, Participant responsiveness. Child outcomes were assessed using Paediatric symptoms checklist (PSC-17; Gardner et

al., 1999) and a trauma symptoms screening measure, plus additional tools as needed/ relevant. Potentially preventative impacts of the intervention were reported as responses to the early intervention; that is, substantial improvement in PSC-17 clinical scores over the course of treatment were observed in a group of 25 children, but there was no separate comparison group who were not receiving the intervention.

**A Triple aims outcome framework** (Cochrane & Pierce, 2017) was used to assess the impact of integrated health and social care teams centred around GP practices to offer more proactive services earlier in condition pathways, such as more anticipatory care coordination for high-risk patients, supportive self-care and empowerment through health coaching for early diagnosis patients, pre-diagnosis assessment, public health initiatives which strengthen community capacity to promote healthier lifestyles. They give no further details of the framework in this conference abstract, but they are probably referring to the Triple Aim Framework – a strategic model to optimise healthcare system performance which has three core dimensions: Improving the patient experience, enhancing population health, and reducing per capita costs (Berwick et al., 2008).

**Quality standards manual** - Castellano Zurera et al. (2019) developed a certification process that allows Social Centres for Integrated Care (SCIC) in Spain to identify areas for improvement and share good practice on integrated care, based on an OECD quality standard which reviews the quality of healthcare. The manual is structured into 5 blocks: Person, Organisation, Professionals, Support, Continuous Improvement. The outcomes in the Person domain are perhaps the most relevant to preventative impacts: The person as active subject, Accessibility and continuity of attention, Documentation; Organisation: Management by processes, Promotion of quality of life. The paper does not give any further detail of how the tool was applied to measure preventative impacts of preventive care or early intervention services in integrated care.

## Evaluation frameworks (3 in total)

**Care Experience Record Tool** (Turner & Murray 2019) – developed to articulate the impact of Neighbourhood Care models on delivering holistic integrated care that enabled people to live in their community for longer. Local sites were supported to develop process and outcome measures that aligned to the national logic model, including a common set of national measures used by local sites. The framework was reported to articulate the impact of Neighbourhood Care models on people who are supported by the model and on staff, and included impact on unplanned admissions and acute length of stay. The authors concluded that the evaluation framework is transferable to other community-based projects that aim to support

people live well in their community and avoid (prevent) unplanned admissions and time in hospital.

**SUSTAIN-EU evaluation framework** (Barbaglia et al., 2016) - The tool includes demographic information, outcomes (person-centred), care plan template; Prevention orientation; Safety, Efficiency; Implementation progress (de Bruin et al., 2018). Baseline assessments of each integrated care initiative (interviews and workshops) were conducted to determine how well the initiatives provide patient-centred, prevention-oriented, efficient, and safe care services. Semi-structured interviews with key informants investigated different characteristics and contextual factors (e.g., policies, leadership, innovation, sustainability, resilience, among others) to identify strengths and weaknesses, as well as potential areas of improvement. Although this paper only reported the protocol and not the application of the framework, it did report a 'Prevention orientation' domain which included the following indicators: Perceived control in health care (PCHC); Care plan template to collect the proportion of older people receiving a medication review; Advice on medication adherence; Advice on self-management and maintaining independence; Perceptions and experiences.

**Social prescribing scheme assessment model** (Carrera-Noguero et al., 2025) – the final model contained 91 criteria: 41 structural criteria focused on equity, accessibility and validation of health assets; 36 process criteria highlighted patient consent, collaboration between PHC teams and HA providers, and adherence tracking; fourteen outcome criteria emphasised improvements in quality of life, autonomy, coping, emotional and social wellbeing, and reduction in healthcare usage, which are generally seem as measures of preventive impact.

## Toolkits (1 in total)

**Health and social care platform dashboard** (Baird 2016) – this dashboard was developed in preparation for the Scottish Integrated Care Partnerships. Numerous interactive dashboards were developed using data visualisation tools, presenting trend and associated cost information at Scotland, regional, partnership and GP practice level, including: High Resource Individuals; Detailed Resource and activity; High level resources; Delayed discharges. Although this conference abstract did not report a specific application of the tool in monitoring preventive impacts, it did report that the tool includes a measure of system impacts (cost and activity) of an individual's use of services, as well as positive feedback that the tool helps users to understand how clients move within and across a health and social care setting – something (client pathway) that was identified in the qualitative study as very useful in understanding what successful prevention means. A specific outcome mentioned,

that may be of use for measuring preventive impact, was acute inpatient non-elective costs.

## Validated scales and measures (37 in total)

Multiple validated scales and measures were used in studies and reports to assess the preventative impact of integrated care. These were always combined (i.e. more than one validated scale was used, usually to measure different outcome domains) and often combined with non-validated measures (see below). Measures have been grouped into nine categories (see Annex 6 for full details):

1. *Global assessment (3 measures)*
2. *Quality of life (3 measures)*
3. *Activities of daily living/ functioning (7 measures)*
4. *Mental health (2 measures)*
5. *Wellbeing (7 measures)*
6. *Other (4 measures)*
7. *Patient-reported Experience Measures (PREMs): 3 measures*
8. *Service use (3 measures)*
9. *Non-validated measures (5)*

## Key findings on types of measurement tools:

**Fifty-three measurement tools and frameworks were reported and grouped as: conceptual frameworks (8), outcome frameworks (4), evaluation frameworks (3), toolkit (1), validated scales and single measures (37). The majority of studies reported prevention-relevant impacts, that might be seen in a logic model as interim or proxy outcomes on a pathway to preventative impact, such as better management of long-term conditions or better connections with services, rather than specific preventative impacts such as reduced mortality or morbidity. Reduced unplanned admissions to hospital or visits to A&E, and associated cost benefits, were also commonly viewed as indicators of preventative impact.**

## Key findings: Developing shared measurement frameworks

*How could existing evaluation tools, methods and approaches support the development of shared measurement frameworks for integrated prevention and early intervention services in health and social care in Wales?*

A qualitative approach was chosen to answer this research question, as the rapid evidence review had not identified many examples of the application of existing tools and approaches to measuring preventative impact in the Wales ICCS context. This was expected as the approach is new and therefore it was decided that speaking to current policymakers, academics and practitioners working in the field would provide important current context.

A qualitative approach was adopted to capture comprehensive and detailed perspectives and experiences of policymakers and practitioners on how existing tools could support the development of shared measurement frameworks for integrated prevention and early intervention services in health and social care in Wales.

Policymakers, practitioners and academics with interest and experience in the topic were approached by email invitation through the contact networks of the research team and the commissioners. If a positive response was received, a participant information sheet and consent form were shared, with a list of possible dates and times for an online interview. Ethical approval was obtained from the Research Ethics Committee of Leeds Beckett University.

At the beginning of each focus group, the findings of the rapid evidence review were presented to participants as a discussion aid. After the presentation, participants were asked the following questions:

1. **In your view, are any of the existing measures or tools useful or adaptable?**

   **If so which? Why?**

2. **In your view, are any of these development methods feasible/ appropriate?**

   **If so, which? Why?**

3. **Are there any other measurement frameworks we've not mentioned here that you think could be useful to look at?**
4. **What have we missed/ what else do we need to think about?**

Due to time constraints, a detailed thematic analysis was not possible. Transcripts were recorded for each interview or focus group and were checked for accuracy within 72 hours of the interview/focus group being conducted. Transcripts were read twice for familiarisation and then the content was grouped into categories. The researchers (AMB and DV) discussed and refined the categories before they were finalised.

Five focus groups, and two individual interviews, with fourteen participants in total, were held online in November and December 2025.

The focus group attendees were predominantly female (9 participants in total) and located in the United Kingdom (13 participants in total). Participants worked for a variety of organisations, including regional partnership boards (4 in total), integrated care boards (3 in total), academic institutions (2 in total), government (1 in total), local authorities (1 in total), health agencies (1 in total), NHS Wales (1 in total) and independent charities (1 in total) and not-for-profit foundations (1 in total).

Participant responses have been grouped into three main categories: Developing a framework; Measuring effectiveness and impact; and Applying findings for service improvement.

## Developing a framework

The first category derived from the analysis is *Developing a framework.*

Throughout the focus groups and interviews, there were consistent discussions around definitions, scope and purpose of measurement. Participants stressed the importance of having an agreed definition of integration and prevention, as well as clear guidance of how an outcome measure or framework should be implemented and used to support staff understanding and ensure implementation is standardised across services.

The use of inflexible and universal outcome frameworks was generally not supported by participants, due to perceived differences between what prevention looks like in different services and for different parts of the system. For example, a mental health service may define ‘prevention’ to be a person moving to a lower tiered service or not needing to be moved to a higher tier (therefore needing more specialised support), whereas an inpatient unit may see prevention as reduced total of bed days. A suggested solution to this dilemma was to work with each service to co-produce separate definitions of prevention which specifically apply to their own service and then choose the most appropriate outcome measures which fit the service’s definition of prevention.

While some participants focused on specific tools, others argued that the choice of tool is dependent on the focus of the intervention:

> *"I think they could all be useful, but again, it comes back to what are you asking them to do".*

> *"It's how do they sit together in a logical framework of measurement and against a programme of work that is trying to achieve something".*

Participants across multiple focus groups concurred that an agreement of how both integration and prevention are defined is needed before a measurement framework is developed and implemented across services. In addition to defining terms, participants also recommended defining what the service is aiming to ultimately achieve in terms of prevention:

> *"Describing where you want to end up is really good. The kind of preferred state rather than the one that we've got".*

> *"It's the definition of what we want to stop happening".*

> *"I think the question about what are you really interested in preventing is the critical one".*

While participants discussed the tools and frameworks they have previously used or currently use in their services, the focus in many of the discussions was on how to define prevention and integration, as well as the need to agree the scope and purpose of the proposed framework and its mechanisms:

> *"Definitely get your definitions nailed down before you embark on trying to count things!"*

> *"I think there's something as well about the different strategies for the different types of prevention you're trying to do. But otherwise, yeah, it's not going to work. I guess what I'm trying to say is there isn't one preventative integrated care thing that you could do. What you're going to do is think about what are your populations and say, right, well, what might be the most appropriate thing to do with that population? What might be the most appropriate with the next and the next and the next? And you're going to have to work your way through it because I don't think there is one golden bullet that fits everything".*

One participant suggested a possible solution for this issue, explaining that offering a small range of tools or measures for services to choose from may be more appropriate.

Participants also discussed how feasible it will be for any developed framework to determine exactly how it will measure the impacts of integrated prevention if a person is accessing multiple services over a period of time, and whether it will be able to predict or forecast future activities and access:

> *"When a person is potentially accessing a service universally but needs to dip in and out of the services in the other end of the continuum and how do you measure that of, oh, they've gone into enhanced care. But for how long? And it's that that time frame, and where have they gone? Have they gone back to kind of only requiring universal prevention support or are they now in the intensive area of care, so trying to measure a person's journey in that sense to understand where they sit".*

> *"I think a lot of it is subjective, someone who's done an active monitoring course for six weeks, for example, which is a low-level course about your mental health, might be fine for a year and then need mental health intervention in a year's time. So you can measure it at that point in time, but you can't then say whether that's stopped them from entering statutory services at some point in the future. So it is really difficult."*

Participants reflected on their own difficulties with staff members and services having a different understanding and definition of measures and frameworks, stating that they would like to have *"something very clear and explicit, is something that I'd be keen to see for the ICCS going forward":*

> *"we've had a lot of trouble with the definitions…we came up with the measures and a lot of the time people are reading them but not understanding what you mean, there's one in there, like preventing your escalating your level of needs. And it's like, well, how do you measure that? So I think that's just like an important thing to sort of think about as well as the definitions."*

> *"You can speak to different services and their idea of prevention is very different to the third sector's idea of prevention. So I think a key point in this is that if we are implementing a prevention framework from an integrated prevention framework of measures, we all need to as the health providers, social care providers, third sector, we all need to have a unified definition of prevention, early intervention and proactive care. We all need to be singing from the same hymn sheet."*

Some participants expressed there may be some confusion with the terms integration and prevention, with one exclaiming, *"integrated prevention, what the heck is that!"*. Some shared their own understanding and definitions:

*"Surely it's not about whether a team is integrated and a measurement framework that we can apply in that space. It's about, you know, the health and care system with wider partners trying to support people, I think that's the way I define it."*

*"To try and stay true to the definition of integrated prevention, you know, it sounds to me that if we had a locked in social prescribing, community coordination, modelling into primary care, you know, it's that sort of data set that we'd be quite interested in. We want to see more referrals. We'd want to see, you know, an increase in people moving from being referred from general practice into third sector teams and for there to be an appropriate capacity in the third sector to manage the range of social needs of broad categories and that sort of the different aspects of social need that we would want to see addressed then in a different way, in a non-clinical way."*

*"How do we determine what service is responsible for that patient not having an admission? That is the really, really hard part, measuring prevention or early intervention, it might not be prevention. The patient might still deteriorate and might still need a stay in hospital".*

### *Purpose of measurement*

The need to define the aim of the measurement framework was further explored throughout the focus groups, with participants explaining that understanding the mechanisms by which the intervention or service is expected to have a preventative impact, and agreeing its scope is imperative. Participants advised deciding the level of analysis and the aims of what the integration and prevention is wanting to achieve before finalising the tool(s) to be used to assess impact:

*"You cannot determine what measures are appropriate without understanding first the mechanisms, second the outcomes, and then the links between the two. You need an idea of what you need that information to answer for you"*

*"The goal of the person who is using this at a strategic level is really important. What are they being used for? What is the question that we're asking them?"*

It was agreed that a "*common objective*" between strategic and service levels is needed and to ensure that "*everybody agrees that that's what you collect and that's the reason why you're doing it*", otherwise the framework "*will fall apart*":

*"One of the unifying features can be your common objective, so you're clearly set up by your organisations and the policy and the technologies and training*

*measures with a common purpose of greater prevention and less reactive healthcare. But those things have got to be congruent".*

The differences in prioritisation were highlighted throughout the focus groups, especially when discussing the relevance of implementing a specific framework or outcome measure(s) across different services and whether the data collected will be relevant to the services themselves:

*"One of the things that we get a lot in practice is that the people who collect those measures, you know, we get asked to use these tools, are often very far away from any sense of the data telling them something useful for their job".*

The appropriateness of implementing a specific framework or outcome measure(s) across different services and the populations they serve was also queried. For example, outcome measures which may be suitable for a physical health team or a community outreach service may not be appropriate for services that support people with mental health or neurological needs:

*"As an example, one of our measures is deterioration or escalation of need is prevented. But in some cases when you're working with people, maybe living with dementia, then that may not be an appropriate level of questioning to be asking people. So it's trying to find that flexibility".*

*"The sort of measure you might use will be very different to someone who's got a complex care plan who's got, you know, significant multimorbidity and mental health. And for them, prevention is, you know, staying out of hospital and have less exacerbated trips to the GP".*

The findings from this category indicate that not only is it imperative that the definition and scope of integration and prevention is needed, but that it also needs to fit the services involved. The framework and outcome measure(s) also need to be carefully considered to ensure they are appropriate and suitable for services. Co-producing and agreeing the definition of integration and prevention with services, alongside giving them the opportunity to choose an appropriate outcome measure which will collect meaningful data may be necessary.

### *Measuring effectiveness and impact*

The second category, *measuring effectiveness and impact,* details the existing measures and frameworks that have been used by participants to measure

effectiveness in their services. Participants reflected on how often measures should be completed by participants, as well as their accessibility.

There was an overall preference among participants for single validated scales for measurement of person-centred impacts, (such as patient-reported outcome measures [PROMs] and patient-reported experience measures [PREMs]) though comprehensive frameworks (such as the Outcomes STAR framework, Burns et al., 2008) were felt by some to be more useful for measuring progress towards preventative impact across multiple services and at a system level. There was also lack of consensus over whether early impacts on prevention were more likely to be seen first at a systems level or at an individual person level, with some believing that it is better to measure at the person/individual level as "*that's actually where you can get early signals of things happening"*.

*Existing measures, tools and frameworks*

Participants provided information on tools and frameworks they have used in their own services or that they know have been used by other services. These tools and frameworks were used with varying levels of success. For example, one participant found the EuroQol-5D (EQ-5D, The EuroQol Group, 1990), a validated quality of life measure, a useful tool which indicates if a person's quality of life has improved when engaging with an intervention and/or service, but another participant found that not being able to compare EQ-5D scores with a control group to show improvements can be challenging.

Specific tools and frameworks mentioned in the focus groups and interviews included:

- Discharge to Recover then Assess (D2RA) discharge tool
- EuroQol-5d (EQ-5D)* (The EuroQol Group, 1990)
- Healthy years of life lost
- Making Every Adult Matter (MEAM) framework[3]
- Motional tools[4]

[3] Home - MEAM

[4] Motional - Emotional Wellbeing & Mental Health Online

- Outcomes STAR framework (Burns et al., 2008)
- Patient Reported Outcome Measures (PROMs) And Patient-Reported Experience Measures (PREMs)
- Strengths and Difficulties Questionnaire (SDQ) (Goodman, 1997)
- (Short) Warwick-Edinburgh Mental Wellbeing Scale ((S)WEMWBS)* (Stewart-Brown et al., 2009)
- The Friends and Family Test (NHS England, 2014)
- i-THRIVE toolkit*[5]
- Trauma Informed Care System (TICS)
- Sense of coherence scale (Antonovsky, 1987)

*also included in Rapid Evidence Review

The outcome measures and frameworks mentioned throughout the report are summarised in Annex 5.

Some participants commented on tools and frameworks that have been developed by services but were unable to provide specific names. These included a recently developed framework focusing on care-experienced children and their mental health, social connections tools developed by Swinburne University, rubrics for maturity scales and impact evaluation frameworks, frameworks based on results-based accountability, and staff improvement frameworks. Participants did not expand on why these frameworks and tools were selected by services, and were unable to report whether they were useful as at the time of interview, as they had not used or tested them yet.

Interestingly, one participant commented on how the Ottawa Charter[6] has never been used as an outcome framework, yet could be a useful tool:

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[5] I-Thrive toolkit

[6] The Ottawa Charter for Health Promotion is a global health milestone which identified three strategies for effective health promotion (advocate, enable and mediate) and five components of health promotion action and prerequisites for health (building healthy public policy, creating supportive environments, strengthen community action, developing personal skills and reorienting health services) to achieve Health for All by the year 2000.

> *"We've said these are the things that should be helping health promotion, but people aren't using it to frame things".*

Quality of life scales were deemed to be '*powerful*'. The EQ-5D (The EuroQol group, 1990), a validated quality of life outcome measure which is widely used in health economic evaluations, was found to be found to be "*quite a useful tool*" when assessing quality of life and health utilisation, especially when presenting data to "finance performance committees", as it allowed the committees to clearly understand how programmes were positively impacting people, while highlighting that less money was being spent by services since the programme was implemented.

While participants were unable to declare whether the SDQ (Goodman, 1997), a screening tool to assess mental health needs in children and adolescents, was useful as it is "*something new we've brought in this month*", participants stated that that they found (S)WEMWBS (Stewart-Brown et al., 2009), which monitors mental wellbeing, to be a useful tool, having used it in a social prescribing evaluation. Participants completing the (S)WEMWBS did not find it "*too burdensome*", and *"generally tend to quite like it*".

The MEAM framework was seen positively by one participant, who reflected that it aligns with the stages of change model (Prochaska & Norcross, 2001) and assists in determining whether a person is ready or willing to change. In addition, the Trauma Informed Care System (TICS), which works to bring together services who support *"high-risk individuals but take up a massive amount of NHS and social care resource*", was reported to be effective in reducing demand on services.

The language used by tools which evaluate the impact of preventative services and interventions was a focus of discussion for some participants, finding that the language used "*frames the conversation, it drives the result*". Participants reflected that the tools tended to use negative statements or inaccessible language, which may skew the results of the intervention's impact or limit people completing the tool:

> *"A lot of these tools are, how do I put it, the statements are very negative about life as opposed to the positive. I think that a lot of these things that get developed are based on what's in the clinical system, which are what are traditionally termed as deficits. So we're already measuring against worst case scenarios. And it's all in that language. And I guess it can be quite off putting for people".*

Throughout the focus groups, participants provided details on how the effectiveness of the developed framework or outcome measure(s) or its impact can be assessed.

Interestingly, some participants queried how to measure prevention and whether it can be accurately measured:

> *"How do you measure prevention? There is no answer to that global question. You have to be much more specific about what you mean and what you're trying to prevent".*

Others highlighted how some health conditions can make it difficult to measure prevention or differences made when accessing services:

> *"I think as well some sometimes it's hard - I know, because of the dementia project -people are hard to measure the difference made, because how do you measure the difference made with someone with dementia? Or, that person has not done this and not done that because they've had the support in place".*

Participants reflected on the importance of ensuring that the person's voice is heard (and their caregiver, when applicable) when determining effectiveness as although *"we're not going to capture every single person that needs help or needs preventative services, it's important that we capture the ones that we can, and we capture that appropriately"*:

> *"I'm a strong advocate that the voice of the patient has to be in there significantly and also the voice of that carer and their family and things because you know, if you do something which delivers system efficiency but makes people unhappy, I don't think you're doing the right thing".*

Considering when and how often to measure differences made when accessing services was discussed. Participants shared experiences of when the timelines for commissioned evaluations were too short to evaluate a service or intervention:

> *"We've also done some system level activity. And we're coming across the same challenges in that people are sort of saying, well, this isn't really telling us anything and we're sort of saying, we know, we told you that when you asked for the evaluation in the first place, your timeline's much too short!"*.

Participants were willing to share how their own services, or other organisations, have developed and evaluated frameworks. Some participants stated how the EQ-5D (The EuroQol Group, 1990) was used to measure differences in a range of different services "*diabetes remission, social prescribing, advanced respiratory problems*" and is a "*useful tool to assess quality of life and things*". Others, who had used the SWEMWBS (Stewart-Brown et al., 2009) and EQ-5D in their services, expressed that while they are useful, as they are self-reporting measures they cannot measure the care or support that the person was given by the service. One participant explained

that it's important to consider where the person is on their health journey and how receptive they are to support, as these factors can have a big impact on measuring the effectiveness of a prevention service:

> *"It also depends on where the patients are at the point in their health journey, life journey, to be making those changes. So for example, I might go along and I might be pre-diabetic and I might be fully engaged in what that health professional is telling me and I report better outcomes. But someone else could go along and he could say, I don't really pay attention to my health. I'm not interested, but he receives the same amount of care as me. Same level of care, but his outcomes are different. That's not measuring the impact of a prevention service from an integrated point of view. If we're having the same care but our outcomes are different because of what we put into that effort to make ourselves better or not, that doesn't tell us anything about the care that we've received. All that tells us is how willing we are to make that change ourselves".*

Participants shared insights into some of the aforementioned frameworks and tools:

> *"The Health Creation Alliance…it's more upstream. If we say integration includes integrating for health, not just integrating healthcare services, then this was about community organisations and membership of community organisations and an economic evaluation of that and how that related to or didn't impact on healthcare use and utilisation, so it's a mixed economic evaluation. And one of the key things that came out of that was if we're interested in cost effective health outcomes, then this stuff works. If you're interested in just reducing utilisation of healthcare services, then it's doesn't work. It's not as cost effective, but that's because you're not measuring their health gain, you're just measuring utilisation".*

> *"One of the tools we've used a little bit, it started in Torbay with persona use as a tool for developing services and outcomes…I've done it around social care residents, and we did it based on actual data. So we've taken a survey with residents, then translated it into a deck of eight personas. It turned it back into a person and it went well - what actually is going to be a meaningful change for that person from an integrated approach to health and social care".*

Participants provided further insights on how to measure effectiveness from their own experiences of conducting evaluations. This included involving a control group and considering the inclusion of service reported outcomes:

*"I think we've got very good measures for patient reported outcomes, but not service reported outcomes...self-reported measures are not enough in this space".*

*"Something to consider going forward is a control group. For the diabetes remission service, their quality of life improved. The programme started in the normal world and then about six months we went into Covid, and we don't know how it compared to other people over time, which in hindsight with that particular intervention, would have probably been quite useful to understand".*

While there were a range of frameworks and outcome measures reported, and used with varying levels of success by participants, the importance of including the service user's voice and experiences when measuring prevention was reflected throughout the focus groups and interviews. This included ensuring that the outcome measure(s) being implemented are chosen carefully, so they can be completed easily by the individual accessing the service, as well as how often they are completed.

### *Applying findings for service improvement*

The third category focuses on how a framework or outcome measure will be implemented into services. Participants considered the feasibility of implementing a new outcome measure and/or framework into services, as well as how to apply the findings and feedback from the completed measures.

*Feasibility of framework/outcome measure implementation*

It was agreed that if the framework or outcome measure(s) to be implemented is not appropriate or meaningful to services and staff, it will not be used correctly, or even used at all:

*"If it's not designed for or to meaningful to the people are intended to use it, it won't be used - no matter how good it is. And if it doesn't mean anything to them or they can't see the use of it. For example, I think PROMS and PREMS are fantastic, but they weren't meaningful in practice or necessary for the right people".*

The burden of a new framework or outcome measure being implemented was deliberated in the focus groups. Capacity of staff and services were flagged by participants who highlighted that adding an additional outcome measure or framework may cause further strain "*in a system where it's actually shrinking the number of staff rather than growing the number of staff*":

> *"if you're going to add in something else, the question then becomes, well, if the time constraint is still there, what are you going to take out? It's not readily apparent what you can take out, at which point I've heard it from the coalface, so to speak, the frontline, on a number of occasions saying all you're doing is adding stuff in which is making my job harder"*.

> *"I think there's another thing that comes with this and that's the admin burden of doing it. This is work somebody has to do…somebody's then got to process it. Somebody's then got to analyse it".*

Data sharing and access were deemed further potential burdens. Participants expressed concern that third sector organisations may not have access to outcome measures or databases. In addition, current infrastructure may lead to issues in data sharing:

> *"We have a lot of isolated systems and a lot of isolated dashboards that don't feed into each other...It's just so difficult in terms of that infrastructure around data and data sharing".*

> *"One thing I've just highlighted overall is the challenge between statutory services and third sector organisations having access to these tools"*

In addition to potentially increasing workload on services, there were also worries about added costs. Participants highlighted the "*disparity with statutory organisations and third sector organisations who get very little funding*", suggesting that those with limited funding may struggle to include an additional framework or outcome measure into their staff workloads. This may be due to having limited staff to take on additional activities or being unable to fund paying for licencing costs to use particular outcome measures.

*Application of the framework/outcome measure findings*

Participants considered how to apply the findings from a developed framework or outcome measure, highlighting the benefits of its implementation. One participant explained how in their service, they used focus groups and surveys to gather feedback and then case studies to highlight the impact their service has had on people:

> *"Sometimes it's hard to get feedback off people as well. You know, just a formal survey. So yeah, they use a lot of methods. And case studies. Case studies (written by individuals, professionals at service level) tend to be the best way to highlight the work that's being done and the impact on the clients of the service"*

While showing the benefits of implementing integrated prevention services using person-centred outcome measures was seen as important, participants reflected that commissioners or performance committees may only be convinced of the benefits a service provides by showing an improvement in health utilisation data or a reduction in costs:

> *"I think about some of the stuff that I've been doing, which has all been about finance, performance committee and understanding return on investment. EQ5D has been very useful in helping me sort that out and put it in a format so that our finance people understand it. And they actually like it because it gives them a way of them understanding what is happening and how the money's been spent and what they're getting back for it. But that doesn't mean it's the answer. It's an answer for a specific purpose, which is about finance and economics".*

> *"I think back to all the work we've been doing, where I know for a fact that in reality, when it went to finance performance committees to get recommissioned, it was the healthcare utilisation data that sold it. It wasn't the fact that all these people were reporting that they're living well with pain scores, which is another tool just specifically for pain... In reality, it came down to, well, actually we're spending less money on these people now".*

Integration of systems and data sharing were seen as a streamlined way to show the benefits of applying new interventions and frameworks:

> *"we've got a system where it gathers all the data for us. So we send out our quarterly monitoring forms and everything comes back in and we're able to pull it then through Power BI. So it's really good at giving us the data altogether at project level, programme level, in cohorts and things like that".*

However, one participant expressed concern about data sharing with external services:

> *"We link all our data using a NHS reference number. Well if you've got someone who's going to a third sector provider do they know their NHS reference number, do they want to be giving it out? Secure transfer of data - you know you can't just secure this, you can't just transfer this stuff from a Yahoo account".*

This category highlights the importance of the feasibility and applicability of the implemented framework and/or outcome measure. Considerations of the appropriateness and meaningfulness of the implemented tool needs to be made, otherwise it may not be completed correctly or even ignored by services and

organisations. When applying the findings, participants recognised the need to highlight the benefits of the application and integration to not only services, but also to commissioners.

## Key findings: Developing a shared measurement framework

**The findings from the focus groups and interviews emphasise the value of including services and organisations in the decision to not only define integration and prevention, and how it may differ across services, but also in the decision of which new outcome measure and/or framework should be implemented. This will ensure that services and staff have a clear understanding of what is being measured and why, which will have a positive impact on the feasibility of the implementation.**

**While there is a wide range of tools and frameworks available, some of which are used by focus group and interview participants, a one-size-fits-all approach may not be suitable to measure across a range of services who are focused on different outcomes and needs.**

**In addition, the burden on staff and services need to be carefully considered when implementing a new tool. This is particularly important for third sector organisations who may not have the capacity, funding or sufficient access to data to support the feasibility of a new framework/outcome measure.**

**Lastly, the effect of a newly implemented tool in relation to service users was considered by participants. The service user's voice should be a key consideration in measuring prevention as they have direct experience of using the service and any interventions offered. The health condition of the service user and their engagement with services may also have an effect on measuring prevention or differences made when accessing services, which may affect the feasibility of the implemented tool to measure prevention.**

# Conclusion

This mixed methods review of potential measures and frameworks to evaluate the preventative impact of integrated preventive services and early interventions has some important conclusions and implications for the development of the Integrated Community Care System in Wales.

The rapid evidence review reported on eight studies about developing a measure or framework (RQ1). Most of the articles described a mixed methods process of co-production and cycles of testing and refinement of measures with a range of stakeholders. Some described the use of logic models, theories of change or implementation frameworks, while some recommended the development of core outcome sets, domains and measures.

Twenty-seven studies reported on 53 measurement tools and frameworks, grouped as: conceptual frameworks (8), outcome frameworks (4), evaluation frameworks (3), toolkit (1), validated scales and single measures (37). The majority of studies reported prevention-relevant impacts, that might be seen in a logic model as interim or proxy outcomes on a pathway to preventative impact, such as better management of long-term conditions or better connections with services, rather than specific preventative impacts such as reduced mortality or morbidity. Reduced unplanned admissions to hospital or visits to A&E, and associated cost benefits, were also commonly viewed as indicators of preventative impact.

The importance of co-production was confirmed in the qualitative interviews and focus groups, as participants emphasised the crucial step of defining what successful prevention looks like for each service or intervention, before choosing suitable outcomes to measure, and lastly suitable outcome indicators. Interviewees also spoke of the importance of developing a definition that was meaningful to all stakeholders, particularly those who would be collecting the data. This will ensure that services and staff have a clear understanding of what is being measured and why, which will have a positive impact on the feasibility of the implementation. Participants also felt that the service user's voice should be a key consideration in measuring prevention as they have direct experience of using the service and any interventions offered.

Although the 2021-2026 Welsh Government's blueprint for the ICCS identifies shared measurement frameworks as a key enabler to support delivery (Welsh Government, 2024), this review and other such as Marczak et al. (2019), have identified some potential barriers to this approach. While there is a wide range of tools and frameworks available, some of which were used by focus group and interview participants, a one-size-fits-all approach may not be suitable to measure preventative impact across a range of services who are focused on different outcomes and needs. The health condition of the service user and their engagement with services may also have an effect on measuring prevention or differences made when accessing services, which may affect the feasibility of the implemented tool to measure prevention.

Although comprehensive frameworks which include many outcomes and perspectives might seem an attractive approach, in practice participants working in Regional Partnership Boards and Integrated Care Boards preferred to use a limited number of validated outcome scales. Collection of large volumes of data was felt to be unfeasible, given staff capacity, and potential constraints on data sharing across sectors.

In addition, the burden on staff and services need to be carefully considered when implementing a new tool. This is particularly important for third sector organisations who may not have the capacity, funding or sufficient access to data to support the feasibility of a new framework/outcome measure.

Potential core outcomes to focus on are suggested by other reviews on similar topics: Masters et al. (2025) in a rapid systematic scoping review of effective prevention interventions, focused on economic and population-level impact outcomes. Another review which explored the impacts of secondary prevention services for older adults found consistent evidence using health-related quality of life and social connectedness outcomes. There are examples of economic tools such as ICECAP-A (University of Bristol, 2023) that focus on wellbeing outcomes, or the Adult Social Care Outcomes Toolkit (Rand et al., 2015), with a focus on social care-related quality of life, although neither of these have a specific focus on preventative impacts of integrated preventive services or early intervention. A mixed methods study (Cook et al., 2024) which evaluated the effectiveness of Local Area Coordinators also focused on economic and wellbeing-related outcomes.

Alternatively, the Healthy Days at Home Wales (HDAHW) suite of whole system measures[⌗⌗] focuses mainly on prevention of unplanned or unnecessary use of

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⌗⌗ **Healthy Days at Home Wales - Public Health Wales**

hospital services as a common metric, although this was in principle an approach that many of our qualitative research participants found problematic.

Timescale is another important issue when assessing preventative impacts, as preventive interventions may take many years for a comparative impact to be seen. Evaluation design is also important, as without a comparator group it can be very difficult to attribute cause and effect, especially over a long time period. Marczak et al. (2019) recommend small randomised pilot studies for new interventions, over a six month time period (suggested), or difference in difference methods which compare an intervention and a comparison group (first difference) before and after the intervention (second difference).

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# Annex 1: Methodology

## Rapid review

### Inclusion criteria

- **E**xpectation: Measures assessing the preventative impact of integrated and preventative early intervention services, and prevention services and interventions.
- **C**lients/ population: General population, priority population groups (older people, children and young people, carers, people with dementia, mental health issues, learning disability, neurodivergence), patients, carers, communities.
- **L**ocation: Worldwide and UK – focus on regional and national level.
- **I**mpact: Person centred preventative impacts (Health and wellbeing, service use, satisfaction); System level (structures; workforce); Processes.
    - Types of data (quantitative, qualitative).
- **P**rofessionals: Health and social care professionals; health and care providers, other (e.g. national government).
- **SE**rvice: Measurement tools and frameworks for early intervention and integrated prevention.

### Search strategy

We searched the following electronic databases using a single search strategy (see Annex 2 for search strategy): Social Sciences Citation Index; MEDLINE; CINAHL, from 2000 to October 2025.

We also searched a range of organisational websites, including Welsh Government, NHS England, NHS Scotland, NHS Wales, World Health Organization (WHO), NHS Integrated Care Boards (ICBs) in England and Integrated Community Care Systems (ICSSs) in Wales, the King's Fund, the Health Foundation, Wales Centre for Public Policy, Social Care Institute for Excellence (SCIE) and the National Institute for Health and Care Excellence (NICE). See Annex 2 for the full list of organisational websites searched.

Search results from the electronic database searches were uploaded into Endnote, deduplicated, and transferred into Rayyan for screening.

Search results - PDF files and URL links - from the organisational websites were saved into an electronic folder and a shared Excel file set up for screening.

## Study selection

For the electronic search results, Rayyan software was used to screen and record decisions. A pilot stage took place where all reviewers screened the same 20 records, and discussed any discrepancies, to make sure the eligibility criteria were clearly and consistently understood. After this, the remaining records were divided up amongst the review team, with each allocated to a single reviewer. There were opportunities to seek second opinions at any stage.

All titles and abstracts that were marked as potentially relevant at this stage were retrieved in full and screened again, with some further simple coding applied to those included at this stage (e.g. UK/ international; type of measure; type of outcome).

## Data extraction

Data extraction took place into a shared Excel sheet for all records, to ensure consistency.  Data extraction categories included:

- Article ID;
- UK/ Wales/ International;
- Level (national/ regional/ other);
- Population (general; service users; priority groups; workforce);
- Type of prevention (primary; secondary; tertiary; policy level/ upstream/ wider determinants; community level; targeted/ universal/ proportionate universal);
- Type of integration/ system/ model;
- Type of measurement tool (conceptual framework; outcome framework; toolkit; existing complex questionnaire; validated scales and measures – multiple or single);
- Items on tool development (if relevant);
- Items/ process evaluation on tool use (if reported);
- Outcomes and impacts measured (reported against 3 groupings: impacts e.g. health and wellbeing (for patient/ carers, system and workforce); processes e.g. waiting times; structures e.g. facilities); unintended consequences;
- Outcomes and impact findings (if reported).

# Annex 2: Search strategy

Search string 1: Integration

Integrat* OR partner* OR coordinate* OR streamline*

Search string 2: Models or systems

Model* OR framework* OR system* OR service* OR board

Search string 3: care, health

'Social care' OR 'healthcare' OR 'health care' OR 'public health' OR 'health promotion' OR 'health improvement' OR 'health protection' OR 'community care' OR 'third sector' OR 'VCSO' OR 'VCSE' OR 'VCSFE' OR 'social service*' OR 'voluntary sdj3 sector' OR 'community adj3 sector' or 'voluntary adj3 organi$ation*' OR 'community adj3 organi$ation*' OR 'primary care'*

Search string 4: prevention

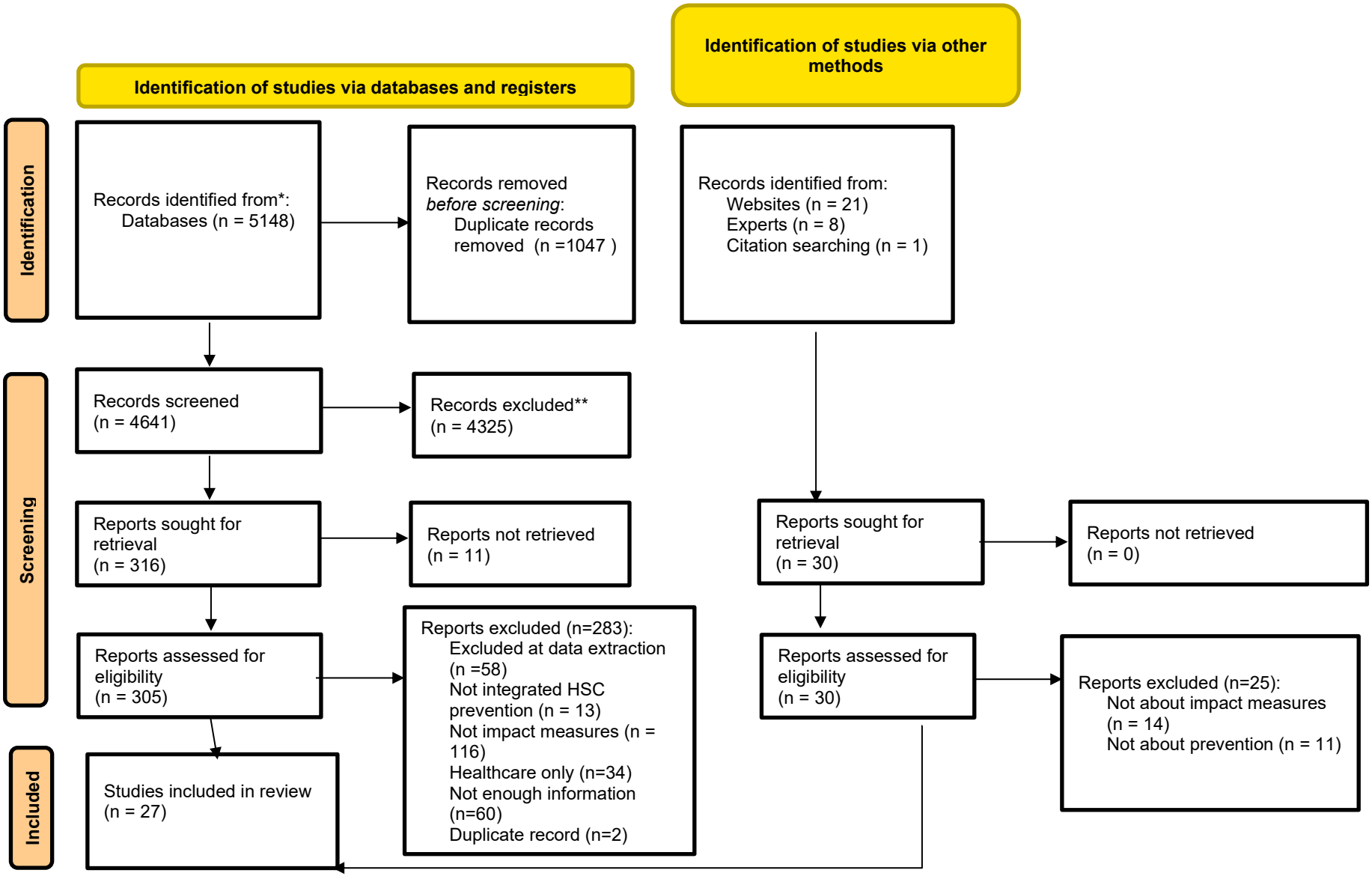
Prevent* OR 'early intervention*' OR 'health promotion' OR 'health protection' OR 'child*' OR 'early years' OR 'health inequality*' OR 'health inequit*' OR 'health equit*' OR 'health disparit*' OR lifecourse OR life-course OR 'healthy ageing' OR reablement OR 'step up step down' OR 'care and repair' OR 'social prescribing' OR 'healthy adults' OR 'independen* adj3 liv*'

Search string 5: Measures

(Measure* OR impact* OR outcome* OR scale* OR evaluation OR assessment OR thematic OR logic* OR evidence) adj2 (framework OR model OR tool OR resource) OR domain* OR dashboard OR indicator*

(1 Adj5 2) AND 3 AND 4 AND 5

## Figure 2: Study selection process



# Annex 3: Organisational websites

Bevan Foundation

CIW

CQC & Scottish equivalent

DHSC, OHID

Health & Care Wales

Health Foundation

Institute of Welsh Affairs (iwa.wales)

King's Fund

Local Government Association

Locality

National Institute for Health and Care Excellence (NICE)

NESTA

NHS Confederation

NHS England

NHS ICBs in England and ICSSs in Wales

NHS Scotland

NHS Wales

Social Care Institute for Excellence (SCIE)

Social Care Wales

Wales Centre for Public Policy

Welsh government

WHO

# Annex 4: Table of included studies for Q1 development of measures

N=8

| Study reference | Country | Level | Population of interest | Type of integration | Type of prevention | Outcomes measured | Name of tool | Type of measurement tool |
|---|---|---|---|---|---|---|---|---|
| Allard & Mitchell, 2025 | UK | Regional | Children and families with Special Educational Needs and Disabilities (SEND) | SEND Alliance Model: Integrated whole system alliance and outcome based accountability framework for children and families with SEND | Community level coordination | Health and wellbeing impacts: feeling listened to; A&E attendance for self-harm; admittance to tier 4 CAMHS; starting employment from SEND internship; transition to employment or college | Outcomes framework for SEND Alliance Model | Outcome framework |
| Baird, 2016 | UK | Regional | High resource individuals | Scottish Integrated Care Partnerships | Tertiary | System impacts (cost and activity) | Health and social care platform: | Toolkit |

| Study reference | Country | Level | Population of interest | Type of integration | Type of prevention | Outcomes measured | Name of tool | Type of measurement tool |
|---|---|---|---|---|---|---|---|---|
| | | | | | | of person's use of services | Numerous interactive dashboards developed using data visualisation tool, presenting trend and associated cost information at Scotland, region, partnership and GP practice level, including: High Resource Individuals; Detailed Resource and activity; High level | |

| Study reference | Country | Level | Population of interest | Type of integration | Type of prevention | Outcomes measured | Name of tool | Type of measurement tool |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | resources; Delayed discharges | |
| Barbaglia et al., 2016 | Seven EU countries | Regional | Older people living at home with multiple health and social care needs | SUSTAIN-EU: Integrated care models for older people living at home with multiple health and social care needs | Tertiary | Qualitative interviews (with 4 key informants: organisation manager, health professional, patient and carer) & workshops for baseline assessments to know the degree at which the initiatives are providing patient-centred, prevention-oriented, efficient and safe care | SUSTAIN-EU Evaluation framework | Evaluation framework |

| Study reference | Country | Level | Population of interest | Type of integration | Type of prevention | Outcomes measured | Name of tool | Type of measurement tool |
|---|---|---|---|---|---|---|---|---|
| | | | | | | services. Interviews will cover policies, leadership, innovation, sustainability, resilience and more. | | |
| Carrera-Noguero et al., 2025 | Spain | National | General population | Social prescribing schemes in primary healthcare (PHC) | Community level coordination | Final model contained 91 criteria: 41 structural criteria focused on equity, accessibility and validation of health assets; 36 process criteria highlighted patient consent, collaboration | Social Prescribing Scheme Assessment Model | Evaluation Framework |

| Study reference | Country | Level | Population of interest | Type of integration | Type of prevention | Outcomes measured | Name of tool | Type of measurement tool |
|---|---|---|---|---|---|---|---|---|
| | | | | | | between PHC teams and HA [health asset] providers, and adherence tracking; 14 outcome criteria emphasised improvements in quality of life, autonomy and reduced healthcare use. | | |
| Carroll et al., 2024 | USA | Regional | N/A | Regional health connectors working across systems | Community level coordination | NASEM framework with 5 elements: Awareness - activities that identify the social risks and assets of defined | National Academies of Sciences, Engineering and Medicine (NASEM) 2019 framework from report on | Conceptual framework |

| Study reference | Country | Level | Population of interest | Type of integration | Type of prevention | Outcomes measured | Name of tool | Type of measurement tool |
|---|---|---|---|---|---|---|---|---|
| | | | | | | patients and populations; Adjustment - activities that focus on altering clinical care to accommodate identified social barriers; Assistance - activities that reduce social risk by providing assistance in connecting patients with relevant social care resources; Alignment - activities undertaken by health care systems to understand | strengthening social care integration into healthcare | |

| Study reference | Country | Level | Population of interest | Type of integration | Type of prevention | Outcomes measured | Name of tool | Type of measurement tool |
|---|---|---|---|---|---|---|---|---|
| | | | | | | existing social care assets in the community, organise them to facilitate synergies and invest in and deploy them to positively affect health outcomes; Advocacy - activities in which health care organisations work with partner social care organisations to promote policies that facilitate the creation and redeployment of assets or resources to | | |

| Study reference | Country | Level | Population of interest | Type of integration | Type of prevention | Outcomes measured | Name of tool | Type of measurement tool |
|---|---|---|---|---|---|---|---|---|
| | | | | | | address health and social needs. | | |
| Ettinger et al., 2022 | USA | Regional | Children and youth. | The Pittsburgh Study (TPS) Tracking Health, Relationships, Identity, EnVironment and Equity (THRIVE) study - TPS promotes cross-sector collaborations between health care, public health, social services, education and other community organisations. | Primary | Primary outcomes: early childhood (0-5) is National Survey of Children's Health measure of thriving/ flourishing. For school age children and youth it is thriving score on the Brief Inventory of Thriving (BIT) a 10-item assessment of youth psychological wellbeing. | THRIVE conceptual framework of child and youth thriving | Conceptual framework |

| Study reference | Country | Level | Population of interest | Type of integration | Type of prevention | Outcomes measured | Name of tool | Type of measurement tool |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Secondary outcomes: for early childhood, the NIH PROMIS measures of thriving/ flourishing, including curiosity, persistence, adaptability, supportive relationships, positive affect, and the NSCH Healthy and Ready to Learn measure of school readiness. For school age and adolescent children secondary outcomes are | | |

| Study reference | Country | Level | Population of interest | Type of integration | Type of prevention | Outcomes measured | Name of tool | Type of measurement tool |
|---|---|---|---|---|---|---|---|---|
| | | | | | | future orientation, PROMIS measures of meaning and purpose, academic proficiency and achievement. | | |
| Hacker et al., 2025 | USA | Other | Patient populations with health related social and social determinants of health (SDOH) needs | SDOH in five domains. Developing a set of SDOH measures for evaluating funded programs in these domains. | Community level coordination | Health outcomes related to the SDOH domain - social connectedness - changes in community/social connectedness, Health outcomes related to the SDOH domain - community connections to | Social Determinants of Health Measurement Roadmap. Measures developed for SDOH project or programs. | Conceptual framework |

| Study reference | Country | Level | Population of interest | Type of integration | Type of prevention | Outcomes measured | Name of tool | Type of measurement tool |
|---|---|---|---|---|---|---|---|---|
| | | | | | | clinical care - changes in community service utilization | | |
| Turner & Murray, 2019 | UK - Scotland | Other | Service users and priority groups. People with frailty, people at the end of their lives or people socially vulnerable | Neighbourhood Care Teams. Tailored to local context and aimed to: have the person at the centre of holistic care,<br><br>support people to make informed choices about their own care, support self-management, take a reablement approach, and make use of formal and informal networks in local communities to support people live well in their community for longer. | Secondary | Evidence of impact on people supported by Neighbourhood Care Teams. Care experience record tool developed | Care Experience Record tool. | Evaluation framework. |

# Annex 5: Table of included studies for Q2 Types of measures

N=27

| Study reference | Country | Level | Population of interest | Type of integration | Type of prevention | Outcomes measured | Name of tool | Type of measurement tool |
|---|---|---|---|---|---|---|---|---|
| Abbasi et al., 2021 | Canada | Other | Older patients living with frailty. | Seniors' community hub - integration of primary care with social care patients and families | Tertiary | QoL, mobility, linkages to care | EQ-5D-5L, EQ VAS, 4-metre gait speed, linkages made to health, social and community care | Multiple validated scales |
| Allard & Mitchell, 2025 | UK | Regional | Children and families with special educational needs and disabilities | SEND Alliance Model: Integrated whole system alliance and outcome-based accountability framework for children and families with SEND | Community-level coordination | Health and wellbeing impacts: feeling listened to; A&E attendance for self-harm; admittance to tier 4 CAMHS; starting employment from SEND internship; transition to employment or college | Outcomes framework for SEND Alliance Model | Outcome framework |

| Study reference | Country | Level | Population of interest | Type of integration | Type of prevention | Outcomes measured | Name of tool | Type of measurement tool |
|---|---|---|---|---|---|---|---|---|
| Baird, 2016 | UK | Regional | Numerous interactive dashboards developed using data visualisation tool, presenting trend and associated cost information at Scotland, region, partnership and GP practice level, including: High Resource Individuals; Detailed Resource and activity; High level resources; Delayed discharges | Scottish Integrated Care Partnerships | Tertiary | System impacts (cost and activity) of person's use of services | Health and social care platform | Toolkit |

| Study reference | Country | Level | Population of interest | Type of integration | Type of prevention | Outcomes measured | Name of tool | Type of measurement tool |
|---|---|---|---|---|---|---|---|---|
| Barbaglia et al., 2016 | Seven EU countries | Regional | Older people living at home with multiple health and social care needs | SUSTAIN-EU: Integrated care models for older people living at home with multiple health and social care needs | | Qualitative interviews (with 4 key informants: organisation manager, health professional, patient and carer) & workshops for baseline assessments to know the degree at which the initiatives are providing patient-centred, prevention-oriented, efficient and safe care services. Interviews will cover policies, leadership, innovation, sustainability, resilience and more. | SUSTAIN-EU Evaluation framework | Evaluation framework |
| Barth et al., 2020 | USA | National | Children receiving child welfare and | Partnering for Success (PFS): offers training implementation and clinical strategies for | | PFS uses a high-fidelity performance indicator framework organised and assessed at 2 distinct | High fidelity performance indicator framework; | Outcomes framework; validated scales |

| Study reference | Country | Level | Population of interest | Type of integration | Type of prevention | Outcomes measured | Name of tool | Type of measurement tool |
|---|---|---|---|---|---|---|---|---|
| | | | mental health services | children receiving child welfare and mental health services | | levels: (1) Delivery system partnership & leadership performance, (2) Child welfare & MH workforce performance. Domains were: Readiness, Adherence, Quality, Reach, Dosage, Participant responsiveness. Child outcomes assessed using Paediatric symptoms checklist (PSC-17) and a trauma symptoms screening measure, plus additional tools as needed/ relevant. | Paediatric symptoms checklist (PSC-17) | |
| Carrera-Noguero et al., 2025 | Spain | National | N/A | Social prescribing schemes in primary healthcare (PHC) | | Final model contained 91 criteria: 41 structural criteria focused on equity, accessibility and | Social Prescribing Scheme | Evaluation Framework |

| Study reference | Country | Level | Population of interest | Type of integration | Type of prevention | Outcomes measured | Name of tool | Type of measurement tool |
|---|---|---|---|---|---|---|---|---|
| | | | | | | validation of health assets; 36 process criteria highlighted patient consent, collaboration between PHC teams and HA providers, and adherence tracking; 14 outcome criteria emphasised improvements in quality of life, autonomy and reduced healthcare use. | Assessment Model | |
| Carroll et al., 2024 | USA | Regional | N/A | Regional Health Connectors working across systems | | NASEM framework with 5 elements: Awareness - activities that identify the social risks and assets of defined patients and populations; Adjustment - activities that focus on altering clinical care to accommodate identified | National Academies of Sciences, Engineering and Medicine (NASEM) 2019 framework from report on strengthening | Conceptual framework |

| Study reference | Country | Level | Population of interest | Type of integration | Type of prevention | Outcomes measured | Name of tool | Type of measurement tool |
|---|---|---|---|---|---|---|---|---|
| | | | | | | social barriers; Assistance - activities that reduce social risk by providing assistance in connecting patients with relevant social care resources; Alignment - activities undertaken by health care systems to understand existing social care assets in the community, organise them to facilitate synergies and invest in and deploy them to positively affect health outcomes; Advocacy - activities in which health care organisations work with partner social care organisations to promote policies that facilitate the creation and redeployment of assets or | social care integration into healthcare | |

| Study reference | Country | Level | Population of interest | Type of integration | Type of prevention | Outcomes measured | Name of tool | Type of measurement tool |
|---|---|---|---|---|---|---|---|---|
| | | | | | | resources to address health and social needs. | | |
| Castellano Zunera et al., 2019 | Spain | Regional | Elderly people, disabled people, people with drug-related problems and addictions, people with mental illness, migrants. | Social Centres for Integrated Care | | Manual of quality standards for certification: Person: The person as active subject, Accessibility and continuity of attention, Documentation; Organisation: Management by processes, Promotion of quality of life, Strategic management and planning; Professionals: Professional development; Support: Structure and equipment, Information systems; Continuous | Manual of quality standards for certification | Outcomes framework |

| Study reference | Country | Level | Population of interest | Type of integration | Type of prevention | Outcomes measured | Name of tool | Type of measurement tool |
|---|---|---|---|---|---|---|---|---|
| | | | | | | improvement: Quality tools, Outcomes. | | |
| Cochrane & Pierce, 2017 | UK | Regional | Various | Integrated health and social care teams centred around GP practices to offer more pro-active services, offered earlier in their condition pathways e.g. more anticipatory care coordination for high-risk patients, supportive self-care and empowerment through health coaching for early diagnosis patients, pre-diagnosis assessment, public health initiatives which strengthen community capacity to promote healthier lifestyles | | Refers to triple-aims outcomes framework | Triple-aims outcomes framework | Outcomes framework |

| Study reference | Country | Level | Population of interest | Type of integration | Type of prevention | Outcomes measured | Name of tool | Type of measurement tool |
|---|---|---|---|---|---|---|---|---|
| Eastwood et al., 2019 | Australia | Regional | Vulnerable families. | Healthy Homes and Neighbourhoods (HHAN) - population-based family centred care coordination network that functions across agencies to assist vulnerable families to navigate the health and social care system, to keep themselves and their children safe | | N/A | MRC Framework for Evaluating complex interventions | Conceptual Framework |
| Ettinger et al., 2022 | USA | Regional | Children and youth. | The Pittsburgh Study (TPS) Tracking Health, Relationships, Identity, EnVironment and Equity (THRIVE) study - TPS promotes cross-sector collaborations between health care, public health, social services, education and other community organisations. | | Primary outcomes: early childhood (0-5) is National Survey of Children's Health measure of thriving/ flourishing. For school age children and youth it is thriving score on the Brief Inventory of Thriving (BIT) a 10-item assessment of youth psychological wellbeing. | THRIVE conceptual framework of child and youth thriving | Conceptual framework |

| Study reference | Country | Level | Population of interest | Type of integration | Type of prevention | Outcomes measured | Name of tool | Type of measurement tool |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Secondary outcomes: for early childhood, the NIH PROMIS measures of thriving/ flourishing, including curiosity, persistence, adaptability, supportive relationships, positive affect, and the NSCH Healthy and Ready to Learn measure of school readiness. For school age and adolescent children secondary outcomes are future orientation, PROMIS measures of meaning and purpose, academic proficiency and achievement. | | |
| Fiori et al, 2024 | USA | Regional | Patient self-reporting health | Community health workers (CHW) employed to | | CHW effectiveness was measured through | RE-AIM framework | Conceptual framework |

| Study reference | Country | Level | Population of interest | Type of integration | Type of prevention | Outcomes measured | Name of tool | Type of measurement tool |
|---|---|---|---|---|---|---|---|---|
| | | | related social needs (HRSN) in Bronx NY | navigate health related social needs among primary care patients | | patient-reported connection to social services and self-report of whether their HRSN was improved or fully resolved | | |
| Gardiner, 2025 | Ireland | Regional | Children and young people | Co-production of a variety of healthcare interventions that utilise outdoor, sports-based, nature-based and or animal facilitated activities as a therapeutic medium | | Each programme has a set of quality measures to evaluate impact for young people and healthcare staff. Measures include WEMWBS, Beck Anxiety Inventory for Youth (BAI) participant surveys, parent surveys, staff feedback. Overall assessments include confidence, fitness, ability to socialise and attend MH appointments | WEMWBS; Beck Anxiety Inventory for Youth | Validated scales |

| Study reference | Country | Level | Population of interest | Type of integration | Type of prevention | Outcomes measured | Name of tool | Type of measurement tool |
|---|---|---|---|---|---|---|---|---|
| Gil-Salmerón et al., 2025 | Spain | Regional | People experiencing homelessness | Health Navigator Model (HNM), a cancer prevention intervention for people experiencing homelessness (PEH). | | Perspectives from all groups (PEH, health and care professionals, mangers) were integrated into the implementation evaluation, employing the Consolidated Framework for Implementation Research (CFIR) and the RE-AIM framework | Consolidated Framework for Implementation Research (CFIR) and RE-AIM framework | Conceptual framework |
| Hacker et al., 2025 | USA | Other | Patient populations with health related social and social determinants of health (SDOH) needs | SDOH in five domains. Developing a set of SDOH measures for evaluating funded programs in these domains. | | Health outcomes related to the SDOH domain - social connectedness - changes in community/social connectedness, Health outcomes related to the SDOH domain - community connections to clinical care - changes | Social Determinants of Health Measurement Roadmap. Measures developed for SDOH project or programs. | Conceptual framework |

| Study reference | Country | Level | Population of interest | Type of integration | Type of prevention | Outcomes measured | Name of tool | Type of measurement tool |
|---|---|---|---|---|---|---|---|---|
| | | | | | | in community service utilization. | | |
| Kwok et al., 2025 | Hong Kong | Regional | Older adults | Community-based Health-Social Partnership Programme (C-HSPP) for enhancing self-care management among older adults | | Primary outcome: Self efficacy (General self-efficacy scale); Secondary outcomes: QoL (12 item short form Health Survey version 2 Chinese (HK) version), Depressive symptoms (15 item Chinese version of the Geriatric Depression Scale (GDS)), Loneliness (6 item Chinese version of the De Jong Giervald Loneliness scale). Fear of falling (single question), Medication adherence (Adherence to refills and medications scale), Basic Activities of Daily Living (Modified Barthel index - Chinese version), | Primary outcome: Self efficacy (General self-efficacy scale); Secondary outcomes: QoL (12 item short form Health Survey version 2 Chinese (HK) version), Depressive symptoms (15 item Chinese version of the Geriatric Depression Scale (GDS)), Loneliness (6 item Chinese | Validated scales, multiple |

| Study reference | Country | Level | Population of interest | Type of integration | Type of prevention | Outcomes measured | Name of tool | Type of measurement tool |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Instrumental activities of daily living (Lawton Instrumental Activities of Daily living scale - Chinese version), Health service utilisation (total number of unplanned general outpatient dept visits, GP visits, ED visits and hospital admissions), blood pressure, capillary blood glucose, BMI | version of the De Jong Giervald Loneliness scale). Fear of falling (single question), Medication adherence (Adherence to refills and medications scale), Basic Activities of Daily Living (Modified Barthel index - Chinese version), Instrumental activities of daily living (Lawton Instrumental | |

| Study reference | Country | Level | Population of interest | Type of integration | Type of prevention | Outcomes measured | Name of tool | Type of measurement tool |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | Activities of Daily living scale - Chinese version), Health service utilisation (total number of unplanned general outpatient dept visits, GP visits, ED visits and hospital admissions), blood pressure, capillary blood glucose, BMI | |
| Litchfield et al., 2025 | UK | Regional | Underserved communities in the UK | Integrated child health and social care service (co-located) | | Qualitative exploration of staff experience using the Sustainable integrated | SELFIE framework | Conceptual framework, structured |

| Study reference | Country | Level | Population of interest | Type of integration | Type of prevention | Outcomes measured | Name of tool | Type of measurement tool |
|---|---|---|---|---|---|---|---|---|
| | | | | | | chronic care model for multi-morbidity: delivery, financing and performance (SELFIE) framework. | | according to the six WHO key components of health systems |
| Mir et al., 2022 | Spain | Regional | Older people reporting feeling lonely during primary care consultation | Social prescribing programme for social loneliness among older people, involving primary care centre staff, community pharmacists and social workers | | Participation, health and social indicators monitored for all participants, including the social loneliness ESTE II score | ESTE II social loneliness scale; Net Promoter score | Validated scales |
| Oster et al., 2025 | Australia | Regional | Community members who have received support from the social | Social prescribing | | Convergent mixed methods evaluation across 3 levels: (i) process evaluation to assess implementation fidelity and quality | Quantitative measures include pre and post outcome measures routinely | Validated scales, multiple |

| Study reference | Country | Level | Population of interest | Type of integration | Type of prevention | Outcomes measured | Name of tool | Type of measurement tool |
|---|---|---|---|---|---|---|---|---|
| | | | prescribing program | | | (qualitative); (ii) implementation evaluation to examine broader contextual factors influencing model delivery (qualitative) and (iii) outcome evaluation measuring the effectiveness and SROI of the model in achieving its intended individual- and system-level outcomes (quantitative). Quantitative measures include pre and post outcome measures routinely collected by POs as part of the CCP, to reduce the burden on service providers and participants, including referrals made, community participation, satisfaction with care, | collected by POs as part of the CCP, to reduce the burden on service providers and participants, including: referrals made, community participation, satisfaction with care, Structural Wellbeing INdex (SWI), Personal Wellbeing Index (PWI), Campaign to End Loneliness Tool (CtELT) | |

| Study reference | Country | Level | Population of interest | Type of integration | Type of prevention | Outcomes measured | Name of tool | Type of measurement tool |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Structural Wellbeing INdex (SWI), Personal Wellbeing Index (PWI), Campaign to End Loneliness Tool (CtELT) | | |
| Petch et al., 2013 | UK | Regional | Older people, people with an intellectual disability, people using mental health services | Health and social care partnerships | | Framework of 15 outcomes: QoL (Feeling safe, Having things to do, Seeing people, Staying as well as you can be, Living life as you want, Living where you want, Dealing with stigma (MH); Change (Improved confidence and skills, Improving mobility, Reduced symptoms); Process (Listened to, Choice, Treated as an individual, Reliability, | Validated outcomes framework to collect and analyse qualitative data (15 outcomes across 3 domains: QoL, process and change). | Outcomes framework |

| Study reference | Country | Level | Population of interest | Type of integration | Type of prevention | Outcomes measured | Name of tool | Type of measurement tool |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Responsiveness). Assessed qualitatively. | | |
| Sharma et al., 2024 | USA | Regional | Patient populations with SDOH needs | Closed loop referral for care coordination between health care and social service agencies in Greater Houston | | Logic model and theory of change developed to assess long term impact on health equity, creating efficiencies or reducing costs. RE-AIM framework used to guide the evaluation. Long term impacts: Decreased utilisation of preventable healthcare services (decreased hospitalisation rates, readmission rates, ED visits); Improved QoL and wellbeing among people receiving referrals at participating organisations; Improved | RE-AIM; Logic model and theory of change | Conceptual framework |

| Study reference | Country | Level | Population of interest | Type of integration | Type of prevention | Outcomes measured | Name of tool | Type of measurement tool |
|---|---|---|---|---|---|---|---|---|
| | | | | | | health outcomes impacted by unmet social needs among persons receiving referrals at participating organisations; Disparities among participating organisations | | |
| Spoorenberg et al., 2013 | Netherlands | Regional | People aged 75 years or older | Embrace: a population-based model for integrated elderly care | | Patient outcomes: IM-E-SA, EQ-5D, SMAS-30, GFI, GWI, Modified Katz ADL, QoL Quality of care outcomes: PACIC, PIH scale, GAS Service use and cost outcomes: MDS-e, EQ-5D, Modified Katz ADL | Patient outcomes: IM-E-SA, EQ-5D, SMAS-30, GFI, GWI, Modified Katz ADL, QoL Quality of care outcomes: PACIC, PIH scale, GAS Service use and cost outcomes: | Validated scales, multiple |

| Study reference | Country | Level | Population of interest | Type of integration | Type of prevention | Outcomes measured | Name of tool | Type of measurement tool |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | MDS-e, EQ-5D, Modified Katz ADL | |
| Spoorenberg et al., 2016 | Netherlands | Regional | People aged 75 years or older | Embrace: a population-based model for integrated elderly care | | GeriatrICS (a geriatric core set based on the ICF), Patient Assessment of Integrated Elderly Care (PAIEC), perceived quality of care, service use and costs, experiences of OP and professionals (qualitative) | GeriatrICS ( a geriatric core set based on the ICF), Patient Assessment of Integrated Elderly Care (PAIEC), perceived quality of care, service use and costs, experiences of OP and professionals (qualitative) | Validated scales, multiple |

| Study reference | Country | Level | Population of interest | Type of integration | Type of prevention | Outcomes measured | Name of tool | Type of measurement tool |
|---|---|---|---|---|---|---|---|---|
| Turner & Murray, 2019 | UK - Scotland | Other | People with frailty, people at the end of their lives or people socially vulnerable. | Neighbourhood Care Teams. Tailored to local context and aimed to: have the person at the centre of holistic care,<br><br>support people to make informed choices about their own care, support self-management, take a reablement approach, and make use of formal and informal networks in local communities to support people live well in their community for longer. | | Evidence of impact on people supported by Neighbourhood Care Teams. Care experience record tool developed. | Evaluation framework, Care Experience Record tool. | Evaluation framework. |
| Uchino et al., 2022 | Japan | Other | Young people between 12-35 seeking help because of | Community-based Centre 'one stop network'. Youth mental health service. | | Clinical characteristics and number of consulted contents. In the group CCM (clinical case management) 6 months - presence of a mental | International Statistical Classification of Diseases and Related Health | Validated scales and measures. |

| Study reference | Country | Level | Population of interest | Type of integration | Type of prevention | Outcomes measured | Name of tool | Type of measurement tool |
|---|---|---|---|---|---|---|---|---|
| | | | mental health difficulties. | | | illness and case management records - contents, service minutes and methods used in each session. Global Assessment of Functioning (GAF). | Problems, 10th Revision (ICD-10), Global Assessment of Functioning (GAF). Investigation of records of case management. | |
| Weinstein et al., 2013 | USA | Regional | People with histories of homelessness and serious mental illness. | Housing and Health (primary care-public health partnership) - Pathways to Housing-PA (PTH-PA). | | Program analysis showing overlapping features of the program with patient-centred medical home framework (PCMH) and '10 Essential Public Health Services'. Including: staff and client awareness of physical health issues, resulting in increased engagement in ongoing care and screenings; and efforts to quantify continuity rates | Patient-centred medical home framework (PCMH) and Local Public Health System Performance Assessment Instrument (version 2.0) for preliminary | Conceptual Framework and Likert-scaled performance assessment instrument. |

| Study reference | Country | Level | Population of interest | Type of integration | Type of prevention | Outcomes measured | Name of tool | Type of measurement tool |
|---|---|---|---|---|---|---|---|---|
| | | | | | | and to track use of emergency services. | program analysis. | |
| Yu et al., 2020 | Hong Kong | Other | Older people living in the community with pre-frailty or frailty. | Integrated care-model for pre-frail and frail older people. | | Primary outcome : Frail Score. Secondary outcomes: five domains of frail score, use of health services in the last 12 months (hospitalization, specialist outpatients, general outpatients). | Frail Scale (five domains: fatigue, resistance, ambulation, illnesses and loss of weight) and use of health services in the previous 12 months (hospitalization , specialist outpatient clinic and general outpatient clinic). | Validated scales and measures |

# Annex 6: Summary details of frameworks and tools

| Framework | Identified by review or focus group | Description of Framework |
|---|---|---|
| **Conceptual Frameworks** | | |
| MRC Framework for evaluating complex interventions (Skivington et al., 2021) | RER | Used to evaluate an integrated care initiative (Healthy Homes and Neighbourhoods (HHAN)). The authors adapted the framework's iterative approach of development, feasibility/ piloting, evaluation and implementation to include critical realist, participatory, continuous and theory driven elements. The rationale for the adaptation was to enable study of mechanisms of both effect and context. |
| National Academies of Sciences, Engineering and Medicine (NASEM) framework (McCauley et al., 2021) | RER | The NASEM framework was adapted to measure the impact of regional health connectors working across systems (USA). It focuses on awareness, adjustment, assistance, alignment and advocacy. |
| Patient-centred medical home (PCMH) framework (Agency for Healthcare Research and Quality, 2012) | RER | THE PCMH was used to structure a preliminary program evaluation of a partnership between a Housing First agency and a Department of Family and Community Medicine, to address multiple levels of health care needs for people with histories of homelessness and serious mental illness. |

| Framework | Identified by review or focus group | Description of Framework |
|---|---|---|
| Reach, Effectiveness, Adoption, Implementation, Maintenance (RE-AIM) (Glasgow et al., 1999) | RER | A well known framework in public health intervention evaluation. RE-AIM was used in several studies to provide a broad framework that could be populated with outcome measures. |
| Sustainable integrated chronic care models for multi-morbidity: delivery, Financing, and performance (SELFIE) framework (Leijten et al., 2018) | RER | A conceptual framework, structured according to the six WHO key components of health systems: service delivery, leadership & governance, workforce, financing, technologies & medical products, information & research. |
| Social Determinants of Health Measurement Roadmap (Hacker et al., 2025) | RER | A roadmap covering five social determinants of health (SDOH) domains, containing measures developed for evaluating funded programs supporting patient populations with health-related social and SDOH needs (USA). |
| The Consolidated Framework for Implementation Research (CFIR) (Damschroder et al., 2009) | RER | Used to systematically integrate perspectives from all groups into an implementation evaluation of the Health Navigator Model, a cancer prevention intervention for people experiencing homelessness. |

| Framework | Identified by review or focus group | Description of Framework |
|---|---|---|
| THRIVE conceptual framework of child and youth thriving (Ettinger et al., 2022) | RER | THRIVE was developed as part of The Pittsburgh Study (USA) to promote cross-sector collaborations between health care, public health, social services, education and other community organisations. |
| **Evaluation Frameworks** | | |
| Care Experience Record Tool | RER | An evaluation framework developed to measure the impact of Neighbourhood Care Teams supporting people in Scotland with frailty, people at the end of their lives or people who are socially vulnerable. |
| Social Prescribing Scheme Assessment Model | RER | (Carrera-Noguero et al., 2025) – an evaluation framework developed for social prescribing schemes in primary healthcare in Spain |
| SUSTAIN-EU evaluation framework (de Bruin et al., 2018) | RER | A framework to evaluate integrated care models for older people living at home with multiple health and social care needs. |
| **Outcomes Frameworks** | | |
| Outcomes framework for SEND Alliance model | RER | An integrated whole system alliance and outcome-based accountability framework for children and families with SEND (UK). |

| Framework | Identified by review or focus group | Description of Framework |
|---|---|---|
| Trauma Informed Care System (TICS) | Focus group | TICS is an organizational framework that provides a compassionate approach to healthcare. It promotes heaving and recovery other practices and services which may cause further trauma to the service user. |
| Quality standards manual | RER | Used to identify areas for improvement and share good practice on integrated care, based on an OECD quality standard which reviews the quality of healthcare. The manual is structured into 5 blocks: Person, Organisation, Professionals, Support, Continuous Improvement. |
| Performance indicator framework | RER | The performance indicator framework is a high-fidelity performance indicator framework organised and assessed at 2 distinct levels: (1) Delivery system partnership & leadership performance, (2) Child welfare & MH workforce performance. Domains were: Readiness, Adherence, Quality, Reach, Dosage, Participant responsiveness. |
| Triple aims outcome framework (Berwick et al., 2008) | RER | A strategic model to optimise healthcare system performance which has three core dimensions: Improving the patient experience, enhancing population health, and reducing per capita costs |
| **Other Frameworks** | | |
| Discharge to Recover then Assess (D2RA) discharge tool | Focus group | D2RA is a patient flow framework which aids in timely and safe hospital discharge. |

| Framework | Identified by review or focus group | Description of Framework |
|---|---|---|
| Framework for Health Creation (from the Health Creation Alliance) | Focus group | A framework which provides an asset-based paradigm for health. It describes how a person or community can gain a sense of purpose, hope, mastery and control over their own lives and immediate environment. |

| Validated measure/tool | Identified by review or focus group | Description of Framework |
|---|---|---|
| 6 item Chinese version of the De Jong Giervald Loneliness scale (Leung et al., 2008) | RER | The tool measures social and emotional loneliness, as well as overall loneliness. |
| 12-item Short Form Health Survey version 2 Chinese (HK) version (SF- 12v2) (Lam et al., 2013) | RER | The SF-12v2 focuses on physical functioning, role limitation due to physical problems and emotional problems, mental health, bodily pain, general health, vitality, and social functioning. |
| 15 item Chinese version of the Geriatric Depression Scale (GDS) (Chi et al., 2005 | RER | The GDS is a valid and reliable tool to measure levels of depression. |

| Validated measure/tool | Identified by review or focus group | Description of Framework |
|---|---|---|
| Basic Activities of Daily Living (BADL, Modified Barthel index - Chinese version) (Leung et al., 2007) | RER | The BADL measures 10 basic activities of daily living (feeding, dressing, grooming, bathing, toileting, bed-chair transfer, bladder and bowel control, ambulation, and stair climbing). |
| Beck Anxiety Inventory for Youth (Beck Youth Inventory) (Beck et al., 2001) | RER | A self-report measure comprising five inventories that can be used separately or together to assess symptoms of depression, anxiety, anger, disruptive behaviour, and self-concept. |
| Campaign to End Loneliness Tool (CtELT) (Campaign to End Loneliness, 2019) | RER | A valid and reliable three- item scale which assess improvements. |
| Electronic Frailty Index (eFI) (Clegg et al., 2016) | RER | The Electronic Frailty Index identifies risk of frailty using routinely collected primary care data via 36 deficits (such as comorbidities, physical impairments, clinical signs, abnormal test values, and social circumstances). |
| ESTE II social loneliness score (Rubio et al., 2009) | RER | The ESTE II evaluates social loneliness and related factors in older adults, particularly those with mild cognitive impairment. |

| Validated measure/tool | Identified by review or focus group | Description of Framework |
|---|---|---|
| EQ-5D (EQ-5D-5L, EQ VAS) (The EuroQol Group, 1990) | Focus group and RER | A validated tool which evaluates health-related quality of life. The EQ-5D covers five dimensions: mobility, self-care, usual activities, pain/discomfort, and anxiety/depression. |
| Frail Scale (Gleason et al., 2017) | RER | The Fail Scale measures the early detection of frailty in the community. |
| General self-efficacy scale (GSE) (Schwarzer & Jerusalem, 1995) | RER | The GSE evaluates the strength of a person's belief in their ability to respond to situations and hand any associated setbacks, |
| GeriatrICS | RER | A geriatric core set based on the ICF. |
| Global Assessment of Functioning (GAF) (Aas, 2010) | RER | The GAF subjectively rates an individual's social, occupational, and psychological functioning. |
| Goal Attainment Scaling (GAS) (Ryan, 2020) | RER | The GAS evaluates the impact of interventions as recorded in the care and support plans. |
| Groningen Frailty Indicator (GFI) (Steverink et al., 2001) | RER | The GFI assesses frailty over physical, social, cognitive, and psychological domains |

| Validated measure/tool | Identified by review or focus group | Description of Framework |
|---|---|---|
| Groningen Well-being Indicator (GWI) (Spoorenberg et al., 2018) | RER | The GWI measures daily experiences well-being using eight domains (enjoying eating and drinking, sleeping and resting well, having good relationships and contacts, being active, managing yourself, being yourself, feeling healthy in body and mind, and living pleasantly). |
| Instrumental activities of daily living (IADL, Chinese version) (Tong et al., 2002) | RER | The IADL measures activities that allow a person to live independently in a community. |
| INTERMED for the Elderly Self Assessment (IM-E-SA) (Peters et al., 2013) | RER | The IM-E-SA measures case complexity using four domans (biological, psychological, social needs, healthcare) over three time perspectives; history, current state and prognosis. |
| Minimal Data Set-economic evaluation (MDS-e) (Spoorenberg et al., 2013) | RER | An assessment tool used to record the demographic, clinical, functional, and psychosocial status of individuals. |
| Modified Katz Activities of Daily Living (ADL) (Katz et al., 1970) | RER | The ADL assesses functional independence in older adults by rating performance in six areas (bathing, dressing, toileting, transferring, continence, and feeding) |

| Validated measure/tool | Identified by review or focus group | Description of Framework |
|---|---|---|
| Paediatric symptoms checklist (PSC-17) (Gardner et al., 1999) | RER | A parent-reported checklist used to evaluate emotional and behavioural problems in children |
| Partners in Health scale (PIH) (Battersby et al., 2003) | RER | The PIH assists healthcare workers, working in partnership with people with chronic illness, to increase their self-management capacity. |
| Patient Assessment of Chronic Illness Care (PACIC) (Schmittdiel et al., 2007) | RER | The PACIC evaluates the implementation of the chronic care model from the patient's perspective. |
| Patient Assessment of Integrated Elderly Care (PAIEC) (Uittenbroek et al., 2015) | RER | THE PAIEC measures the quality of integrated care from the perspective of older adults, assessing care across domains like communication, tailored support, and follow-up. |
| Personal Wellbeing Index (PWI) (International Wellbeing Group, 2013) | RER | A validated measure which assesses subjective wellbeing across seven life domains (standard of living, health, achieving in life, personal relationships, safety, community connectedness, and future security). |
| Strengths and Difficulties Questionnaire (SDQ) (Goodman, 1997) | Focus group | A validated emotional and behavioural screening questionnaire for children and young people. The SDQ measures: emotional symptoms, conduct |

| Validated measure/tool | Identified by review or focus group | Description of Framework |
|---|---|---|
| | | problems, hyperactivity/inattention, peer relationships and prosocial behaviour. |
| Self-Management Ability Scale (SMAS-30) (Schuurmans et al., 2005) | RER | The SMAS-30 measures self-management ability using six subscales (taking initiatives, self-efficacy beliefs, investment behaviour, positive frame of mind, multi-functionality of resources, and variety in resources) |
| Sense of coherence scale (Antonovsky, 1987) | Focus group | A questionnaire which evaluates a person's resilience and ability to maintain health. |
| Structural Wellbeing Index (SWI) (Oster et al., 2025) | RER | The SWI captures participants' current situation across nine life domains (physical wellbeing, emotional wellbeing, financial situation, family and domestic violence, child safety, alcohol and other drugs, housing situation, gambling, social and cultural connections). |
| (S)WEMWBS (Stewart-Brown et al., 2009) | Focus group and RER | The SWEMWBS is the short version of the Warwick–Edinburgh Mental Wellbeing Scale (WEMWBS). The SWEMWBS monitors mental wellbeing. |

| Non-validated tools | Identified by review or focus group | Description of Framework |
|---|---|---|
| 4-metre gait speed | RER | A measure of mobility in older people |
| Integrated People-Centred Health and Social Services (IPCHSS) standard | RER | The IPCHSS is a co-designed evidence based tool to evaluate the impact of Integrated People Centred Health and Social Services (Canada). |
| Healthy years of life lost | Focus group | A measure of premature mortality. |
| Making Every Adult Matter (MEAM) | Focus group | MEAM supports services to design and deliver better coordinated services for people facing multiple disadvantages. MEAM covers: partnership, coproduction and vision, consistency in selecting a caseload, coordination for clients and services, flexible responses from services, service improvement and workforce development, measurement of success, and sustainability and systems change. |
| PROMS/PREMS<br><br>(Patient-Reported Outcome Measures, Patient-Reported Experience Measures) | Focus group | Questionnaires used to gather service users perceptions on their health status (PROMS) and their experience of service use (PREMS). |

| Non-validated tools | Identified by review or focus group | Description of Framework |
|---|---|---|
| The Friends and Family Test (NHS England, 2014) | Focus group | A feedback tool for people who use NHS services. The tool provides services the opportunity to report their overall experience of services. |

| Toolkit/dashboard | Identified by review or focus group | Description of Framework |
|---|---|---|
| Health and social care platform | RER | A dashboard developed to measure the impact of Scottish Integrated Care Partnerships. |
| i-THRIVE toolkit | Focus group | i-THRIVE supports the implementation of the THRIVE framework for system change. It covers four phases during the implementation of the THRIVE framework into a service: engagement and understanding your system, building capacity, implementation, and learning, embedding and sustaining. |
| Motional tools (Emotional wellbeing and mental health) | Focus group | Motional is a suite of tools which measure and report on emotional health in an educational setting. |
| Outcomes STAR (Burns et al., 2008) | Focus group | A suite of tools designed to support and measure change in care settings. The scales are structured around a five-point model of change. Service users and staff discuss the service user's life which are plotted on the star to give an |

| Toolkit/dashboard | Identified by review or focus group | Description of Framework |
|---|---|---|
| | | overview of their current circumstances. The process is repeated at a later date, to provide a picture of change. |
| SCIROCCO tool | RER | The SCIROCCO tool tests maturity of existing structures for delivering integrated care, with 12 dimensions: Readiness to change; structure and governance; eHealth services; standardisation and simplification; funding; removal of inhibitors; population approach; citizen empowerment; evaluation methods; breadth of ambition; innovation management; capacity building. |

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