Meaningful & Measurable

A Collaborative Action Research Project

Developing Approaches to the Analysis & Use of Personal Outcomes Data

FINAL PROJECT PARTNER REPORT

ANGUS COUNCIL

February 2015

About this Report

Meaningful and Measurable is a Collaborative Action Research project funded by the Economic and Social Research Council (ESRC). The project builds on an existing programme of work over several years in Scotland, involving all of the organisations to varying extents, in developing and embedding an outcomes approach to practice. The project itself was prompted because developing approaches to the recording, analysis and use of personal outcomes data has been found to pose challenges at all levels of organisations. Within this project, we are exploring the tension between:

- **Meaning:** the need for detailed, contextualised information on individual experience to inform individual planning and service improvement.
- **Measurement:** the need to aggregate information on personal outcomes to inform decision making at organisational and national levels.

All eight project partners have contributed to the findings of the project overall which will be reported separately.

Six project partners have also authored reports on their local projects.

This report shares the learning of Angus Council

Authors: Hazel Robertson, Anne Mollison & Karen Ross

PROJECT PARTNERS

Angus Council

Bridgend County Borough Council

East Renfrewshire CHCP

Edinburgh City Council

Moray HSCP

Penumbra

Stirling Council

VOCAL

ACADEMIC PARTNERS

University of Edinburgh

University of Strathclyde

University of Swansea

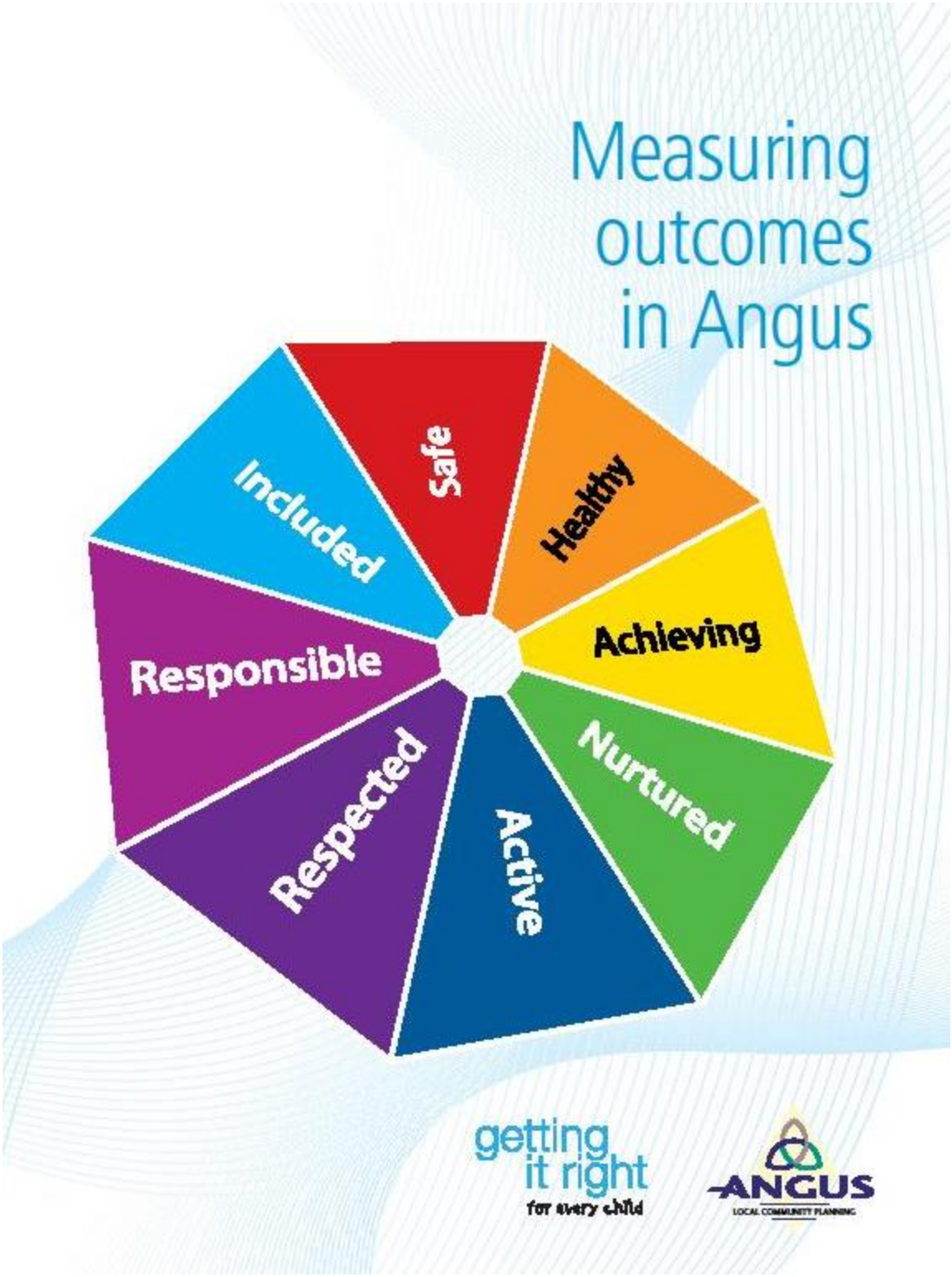
STAKEHOLDER PARTNERS

Joint Improvement Team

Community Care Benchmarking Network

Health & Social Care Alliance

Social Services Improvement Agency Wales


Measuring outcomes in Angus
Safe
Healthy
Achieving
Nurtured
Active
Respected
Responsible
Included
getting it right for every child
ANGUS
LOCAL COMMUNITY PLANNING

Angus Project Report

1. Identifying and Measuring Wellbeing Outcomes for Children and Families in Angus

In Angus Council our aim is to better understand if, and how, an outcomes focused approach can support working practice and be more effective in supporting the wellbeing and independence of children and their families.

Considerable progress has made been in supporting a focus on personal outcomes, notably through the development and implementation of the Angus Wellbeing Web, an interactive, visual tool which uses the Scottish Government's national practice model and SHANARRI [*Safe, Healthy, Achieving, Nurtured, Active, Respected, Responsible and Included*] principles. However, we have identified that further work is needed to ensure consistent and coordinated approaches in the use of the tool and to use the collective information to fully understand both personal and service outcomes and to help shape the future service design and commissioning of services.

The meaningful and measurable research project was identified as an opportunity to explore and further progress these issues with other partner organisations facing similar challenges.

2. Where We Were

Children and Families is a particularly complex and challenging area of service provision where input is often unsolicited. The Wellbeing Web tool has been developed specifically for engaging with this client group and is used to help facilitate conversations and to define and progress personal outcomes with children and their families.

The Wellbeing Web is centred on the SHANARRI principles of wellbeing which are the foundation of the Scottish Government's Getting It Right for Every Child [GIRFEC] programme. The tool comprises a 10 point numeric scale for each principle, represented visually in the form of a web, as shown on page 2, and a dialogue box is provided to record contextualising descriptions for each principle. The paper version of the tool also includes an action plan template, which is intended to be used to develop and record key areas of work and to specify personal outcomes for the Child's Plan.

Training in the use of the tool has been limited, largely confined to a launch event and the issuing of promotional and support materials. The tool is ostensibly used by multiple agencies involved in the life of the child / family at a given point in time. However use of the tool is not mandatory and practitioners across sectors select when and where they feel this is most appropriate. Where used, there is an organisational expectation that information from the Wellbeing Web will inform the development of a child's plan.

Within social work there is evidence of the tool being used over a period of time to record a child / family's progress and to address any particular issues. However, outcomes are not always

transferred into the child's plan and this would appear to demonstrate an incomplete and variable understanding of the intended use of the tool.

Education colleagues tend to use the tool differently, primarily to assist in the multi-agency decision making processes. Health colleagues have yet to fully embrace this model of working, although some health visitors and school nurses are using the tool and have reported that they find this helpful. Third sector partners have also had experience of using the Wellbeing Web and one agency is using it consistently.

During its development, it was also expected that the Wellbeing Web would be used to measure outcomes at service level by aggregating changes in numeric scores over time, which would enable practitioners to determine the relative success of a particular intervention. However, it is recognised that the isolated use of individual and aggregated numeric scores is problematic and, in the absence of adequate supporting contextual information, could be misleading. The potential for misinterpretation of numeric scores is intensified in this particular service context, where there is a tendency for parents and children to inflate scores, coupled with practitioner difficulties in negotiating scores with children and families without eroding trust or confidence during initial conversations.

Going forward, key objectives in Angus are:

- To ensure consistent and coordinated approaches in the use of the Wellbeing Web
- To capture, collate and analyse data from a range of agencies in a systematic fashion
- To consider how outcomes information can help shape the design of future commissioning of services
- To assess the value of professional judgement and practice by determining the impact of interventions with service users
- To assist in the implementation of change in organisational culture

We do not yet know how accurate and consistent the qualitative data that sit alongside the recorded indicator scores are, and the non-mandatory nature of the use of the Wellbeing Web adds further complexity in assessing aggregated value. Therefore, before we can begin to determine the potential opportunities for and limitations of using qualitative data for service improvement and planning purposes, we need to understand how this information is being gathered, and what, how and where it is being recorded.

3. What We Did

In order to establish a baseline for the research, we first undertook an audit of the social work information system to ascertain current use of the Wellbeing Web by practitioners. Subsequently, we consulted with children's service teams to discuss their understanding of outcomes and their experience of using the Wellbeing Web to help define and progress personal outcomes.

After the first project data retreat in January 2014, Angus and Penumbra (a national mental health voluntary sector organisation) identified a number of similarities in their baseline presentations and undertook to work collaboratively.

We jointly agreed the following key research questions:

- What do we mean by 'good' (quality) recording? Good 'quality' data?
- To what extent do staff (practitioners and frontline managers) understand outcomes?
- What are the factors that support 'good' recording of outcomes?
- In what ways has introducing outcomes focused recording influenced practice and relationships?
- What are the learning points from training, practice and supervision?

Phase 1 Activities

Semi-structured interviews (including independent observation of interview process by a member of the academic team) were conducted with 6 practitioners from Penumbra and 5 practitioners from social work using a jointly developed interview schedule. The interviews took a distinctive approach in that the 2 project partners 'switched', undertaking the interviews in each other's organisation to introduce a degree of independence. Each interviewee was also asked to bring an example of a current case where the respective tool had been used. Stepping through the case example formed a key part of the interview. The interview schedule included:

- What do we currently record in terms of personal outcomes?
- Where do we currently record this?
- How do we currently record personal outcomes?
- Why do we currently record personal outcomes?
- What needs to change in each of the above to achieve clarity and consistency in recording?

The interviews were recorded and transcribed. Following analyses of the interview data the scope of Phase 2 was determined, largely during the second data retreat.

Phase 2 Activities

During Phase 2, twenty case file audits (including electronic records) were completed using a list of questions agreed by Penumbra and Angus Council. Deeper analysis of a selection of cases from individuals included in Phase 1 was also undertaken. Further, informal interviews with 4 of the participating practitioners were arranged to clarify detail and enhance our understanding of recording practice.

A focus group was arranged subsequently for 9 practitioners from across both project partners, and drew upon Phase 1 and emergent Phase 2 findings and gaps. This examined the similarities and differences in practices between the respective organisations more closely and aimed to more firmly locate the use of the respective tools within the overall planning and review process. The focus group was led by a member of the academic team and a full transcript was made available, together with summary notes.

In addition, a survey was carried out across teams within social work, education and health services to determine the use of the Wellbeing Web and practitioners' experience of information sharing.

4. Findings

Key Learning Points

- Where used, the Wellbeing Web is valued and promotes constructive challenge amongst children, parents and practitioners
- The isolated use of numeric scores is problematic for a number of reasons, including an implicit expectation that scores should always go up over time
- Training has not been adequate and there is an inconsistent understanding of the intended application of the Wellbeing Web amongst practitioners
- There is therefore inconsistency in the use of the tool, particularly regarding the recording of supporting text and the use of the outcomes action plan template
- There is strong evidence of outcomes focused, action oriented practice
- Outcomes and actions are not routinely transposed into the Child's Plan
- The recording on CareFirst6 (electronic database) does not support the development of an outcomes plan and issues remain regarding the most effective methods of disseminating the agreed outcomes plans across agencies, where this is appropriate
- Overall, variable use is made of existing infrastructure to record and/or extract information
- While use of the Wellbeing Web remains optional, the SHANARRI indicators and principles are firmly and more widely embedded and are supporting a holistic approach to practice
- Practitioner skills and the establishment of trusting relationships are paramount

The key learning points are expanded upon below.

Using the Wellbeing Web

The interviews and focus group reaffirmed that practitioners who have chosen to use the Wellbeing Web have found this an effective tool to enhance conversations with and between children and families. Having an attractive and simple visual tool was highly valued. The 'Web' was perceived as being person-centred, non-threatening and easy to use, affording different degrees of ownership, or simply giving the person something to do. It has proved helpful in seeking the views of children, clarifying the child's understanding of their personal situation, ensuring their opinions are recorded and shared with others (including their parents). A few practitioners stated the tool worked well with all age groups, even very young children. However, 2 practitioners noted they found it difficult at times to engage some teenage boys in the use of the Wellbeing Web, putting this down to the stage of development where they felt the boys were more self-conscious. Generally the tool has been useful in broaching sensitive issues.

By bringing the various wellbeing indicators together in a coherent framework, the SHANARRI framework was felt to provide focus to discussions, helping to manage the complexities of people's lives by breaking things down into different areas. Equally, the requirement to attend to multiple dimensions of people's lives was identified as helpful in supporting people to look at the bigger picture, rather than getting bogged down in the latest issue:

"It helps look at the bigger picture. And not just focusing on one area, so, yeah, I do feel that you get a… more holistic, sort of, assessment, when you're using it with a child". **[Interviewee 4]**

When used with parents, several practitioners had found it particularly useful in supporting more honest reflection over time on the realities of difficult situations, and uncovering and then working with very different perceptions about what matters:

"It's made me realise that, particularly where I maybe see something as an issue – whether it's drugs – and the family actually don't see that as being the issue. They see other issues. But if we can deal with what they see as being the issue… that can really achieve some change. As you overcome that barrier…. you know, you're disagreeing continually. And sometimes that achieves much more successful outcomes … than anything else. **[Interviewee 1]**

It also became clear however that all practitioners were in agreement that the Wellbeing Web should not be compulsory. Individual practitioners felt strongly that the professional should be making the decision regarding when to use the tool and if it is appropriate. While reasons often related to avoiding crisis or confrontational situations, others emphasised that the Web was just one of a number of tools and often other tools were already in place:

"And one of the families...it was about looking at whether or not they had the, kind of, motivation, capability to be able to have their… their child back in their care. And we would also use our rehabilitation assessment contract so that looks at what's changed – what needs to change – so you kind of don't want to overwhelm them with loads of paperwork and loads of, kind of, reviews". **[Interviewee 3]**

Using Numeric Scales for Decision Making

Case file audit confirmed issues surrounding the isolated use of numeric scores, which centre on the tendency for both children and parents to inflate scores, especially during initial conversations. Practitioner interviews established that this tendency was widespread and also highlighted the importance of trust and respect in addressing this. For practitioners, it was the ability to interpret and respond to individual changes in perception, or to compare the perspectives of child, parent and practitioner at a given point in time, that was deemed critical, not the numbers themselves:

"*Frequently in the initial stages, people would rate themselves at a high level and after several conversations and when they trust the process they may score themselves lower. So to me the important bit is having that conversation, you do not want to dent their confidence, but I think it is because they have got a bit more insight. That's where the real value lies, in the conversation, not the score. The score being lower can be a positive thing in terms of moving forward….the numbers on their own could be misleading."* **[Focus Group Participant 4]**

Interviews also revealed other reasons where recording a lower score could be deemed positively. There was a general understanding amongst practitioners of the need to achieve balance across the wellbeing indicators. The possibility of imbalance directly challenges the implicit assumption that all scores should improve over time. For children, often these concerns centred on the '**Responsible**' indicator, illustrated by the case example of an 8 year old girl who the practitioner felt had too much responsibility for her age:

"She's doing a lot for her mum. But she thinks it's really good that she was [scoring] 10, being responsible. I see that as being a concern. Who's the carer there?" **[Interviewee 2]**

This case example was complicated further as the girl's mum had been very ill, and, having been apart from her dad for 5 years, she was now living with him. Her dad was taking good care of her, but she just wanted to be back with her mum and was happy to take on the caring responsibilities to achieve this. The interview depth illustrated the complexity of discussions

taking place around the different wellbeing indicators and family dynamics and reaffirmed the importance of recording and using supporting contextual information.

Inconsistent Understanding and Use of the Wellbeing Web: Scaling and Supporting Text

While isolated use of the numeric scales was understood to be of little value, when used in conjunction with appropriate qualitative comments recorded in the supporting dialogue box, the sense of progress changes over time.

Case file audit however highlighted inconsistent use of the supporting dialogue box. Practitioner interviews established very different understandings of the intended purpose of this box, and indeed whose perspective the tool was expected to record. While some practitioners prioritised recording the views of the child or parent, others recorded a negotiated perspective. Others still had developed a range of approaches to record differences between the perspectives of the practitioner and those of the child or parent. The diversity of approaches to scaling and recording was confirmed during the focus group, where each of the 4 participants from Angus had a different understanding. The focus group also established the value of bringing practitioners together to explore and discuss what they felt was appropriate and why, and highlighted their need for some flexibility depending on whether they were working with the parent, the child or both, and the age of the child:

"Initially it's their score.,, but then it's negotiated. Well, I talk to them about it - it's not just taking what they say as given, because for me that's the whole purpose of the tool - it's about helping them to think about their lives and then what could be better - it's about helping to have that conversation". **[Participant 1]**

"Well, I think that's a better way actually that you use it and well, I'm quite a new worker here, but the way I've kind of used it is I've put the child's number in the Web, but in the dialogue box, I put down my viewpoint, it should be higher or lower because of this or that. **[Participant 2]**

"I think it depends on the age of the child as well. If you are sitting doing it with a wee one and they are going to score all 10s and they are going to sit and colour it in really bonny…..you don't want to dent their confidence… and at the end of the day it is their score…. **[Participant 4]**

Exploring Children's Outcomes and identifying Actions

Case file audit established that when the Web is being used the principles of wellbeing are being fully explored. However, it also uncovered a dearth of information about personal outcomes or supporting actions, particularly in the electronic database system, CareFirst. Initially this raised questions as to whether outcomes focused conversations were taking place, and whether the use of the Wellbeing Web was translating into action.

Practitioner interviews and the focus group established that children's outcomes are being explored and actions identified to improve their situations. While one practitioner stated she did not see how the Web fitted into care planning for a child, most practitioners were very action-oriented, with the case examples discussed during the interviews illustrating a blend of actions to be by taken forward by the child, by other family members or by other supporters.

*"In terms of '**Included',** she wanted to separate from her partner and for him to leave the tenancy. She wanted to participate in voluntary work. And she wanted the child to learn how to speak and treat others properly. And in terms of what she wanted to happen in priority actions, she needed support to get her partner to move out of the house because she felt that he may not leave quietly.*

And she had been into the charity shop, so that was about her doing voluntary work…. And then there was timescales in which she would do that". **[Interviewee 2]**

There was also evidence of a strength-based approach to practice that highlighted the contribution of the parent or child, with several practitioners emphasising its importance:

"It also helps them recognise that they can make changes themselves. It doesn't always have to be… They would have to rely on… on individuals to support them. There are small changes that they could make to improve things within the home or in the school or in the community…." **[Interviewee 4]**

When talking through the case examples, the importance of parents whose health was poor or whose lives were chaotic being able to take small, manageable steps was also stressed:

`"So it allowed her to focus on lots of little, manageable tasks, but which improved the… You know, the home conditions for… for the children. And it made her a lot happier in herself as well. Because she was able to achieve them". **[Interviewee 4]**

There were also instances where the conversation itself served as a therapeutic intervention, as illustrated through the case example discussed by one practitioner which detailed the importance of acknowledging and talking about the child's very real concern that her mum might die:

"For safety she scored 6 and…She's put here, "At times I get scared when I have thoughts that mum is going to die." Because her mum had a stroke so…" **[Interviewee 3]**

Inconsistent Understanding and Use of the Wellbeing Web: Outcomes Planning and Recording

The practitioner interviews demonstrated that children's outcomes were being explored and actions identified to improve their situations. However, case file audit established that these outcomes and actions were often not recorded in the electronic database. There was some evidence of negotiated work within the information recorded on the CareFirst system:

*When talking about the importance of having someone who listens, '**being nurtured**': girl aged 13 noted she did not feel able to talk to her dad as he asks too many questions, however, she felt her mum just does not listen so she no longer sees the point. It was negotiated that her parents would make a point of being approachable and emotionally available to alleviate this concern.* **[Database extract]**

A key concern was that actions were often not being carried forward into the child's plan.

Practitioner interviews and the focus group explored several issues regarding inconsistent understanding and use of the different components of the Wellbeing Web tool. While time pressures and administration issues were also touched upon, particular concerns related to the action plan template and the expected transfer of outcomes into the child's plan.

A significant issue raised by practitioners was that whereas the paper version of the Wellbeing Web includes an action plan template, there was no equivalent provision on the electronic CareFirst system, requiring manual workarounds and potentially introducing risks:

"Also, the action plan on the back [of the paper Wellbeing Web] is not part of it [CareFirst]. Now, I know that we can incorporate that into everybody's assessments and their care plans, but I feel sometimes that might get lost if it's not part of… So when you print it out… If other professionals were to look at that as a document on its own, it's missing it". **[Interviewee 2]**

For some practitioners this had resulted in the action plan template effectively becoming redundant, such that the recording of actions was not seen as a function of the Wellbeing Web. Instead, they indicated that they would record actions in various places:

"If an issue had come up… yes, that issue would be recorded in the dialogue box. In terms of supporting action points to try to take that forward, that wouldn't be in that Web document. I would want to take those points to inform my assessment and ongoing work. So if you were looking to track that, you would see it through the case notes, care plans and assessments. You'd need to look across them all. **[Focus Group Participant 1]**

A few practitioners recognised that transfer to the child's care plan was expected and felt that this in itself this should not be problematic:

"A lot of the care plan fits in with that though. You know, it has the SHANARRI indicators in it. So if we've done a piece of work with a family using the Web, we can bring it together and say well this is what we're seeing in this area, and this is the piece of work that we need to do to help this family". **[Focus Group Participant 1]**

Practitioners repeatedly highlighted the need for an associated care plan to be attached to the recording of qualitative notes.

Sharing Information

Through the case file audit and interviews it was evident that information gained through the use of the Wellbeing Web was shared at multi-agency planning meetings in some of the cases. However, the sharing of information gathered through the use of the tool by different agencies was not happening consistently. This finding was also supported by the responses given in the multi-agency Wellbeing Web survey. As the recording on CareFirst does not support the ability to automatically transfer the outcomes information into the format for the Child's Plan, issues remain regarding the most effective methods of disseminating the agreed outcomes plans across agencies, where this is appropriate. Overall, variable use was being made of the existing infrastructure to record and extract information.

Practitioner Skills and Relationships

All practitioners acknowledged the importance of taking account of the age, development stage and the presentation of the child or young person as well as their level of engagement with the practitioner. A few practitioners stated the tool worked well with all age groups, even very young children, but went on to highlight that the skill of the practitioner was significant, as were relationships between practitioners, children and families. One key theme across all interviews and the focus group was the importance of building a trusting relationship with the child and the family in order to have open and honest conversations.

The Embedding of SHANARRI

A further overarching theme was that the SHANARRI principles are firmly embedded across the service and drawn up, whether or not the Wellbeing Web is used:

"*It's indicators we use every day. We're… You know, it's… It's not just for this. All the time we're thinking about these things in our job and… And in their families, in their homes, so… It's second nature, maybe.* **[Interviewee 1]**

Ultimately, the research has reinforced that what is most important is the relationship between the areas of wellbeing and the interpersonal skills of the practitioner in eliciting information or assisting the individual to define and progress their outcomes.

5. What Difference Is This Making?

This work has highlighted the restrictions on established recording processes perceived and experienced by practitioners, and the complexity of transferring their knowledge and learning from use of the Wellbeing Web into associated child centred plans.

A number of issues were identified by practitioners which could have a negative impact on the use of the Wellbeing Web. Some of these were of a practical nature such as limited availability of hard copies of the Wellbeing Web packs for new practitioners coming into Angus, which can readily be addressed.

A number of required changes to the Wellbeing Web recording template have also been identified. When it was suggested that an extra recording box inviting practitioners to record their own assessment could be added (which would entail a simple change to the form) most practitioners were enthusiastic.

System issues, particularly around the online database, have also featured strongly in discussions with practitioners and will be need to be revisited.

An inconsistency in approach has been highlighted throughout our research and this is due, in part, to a lack of training and support to use the tool. The clear need for further training and ongoing support has been identified.

6. Challenges and Opportunities

The service context is in itself highly challenging, with specific issues including:

1. Complexity of working under statutory order
2. Working differently and appropriately according to the age of child
3. Negotiating different opinions of child/parent(s)/practitioner

Moreover, the research has taken place in a time of significant change and where there have been competing priorities for the practitioners involved. In terms of embedding a whole systems personal outcomes approach, this has proved challenging in the context of long established bureaucratic and systemic recording practices which are often dictated by robust performance management frameworks.

For some practitioners a lack of time to input assessment information onto the electronic recording system prevented accurate recording. This had previously been addressed through an agreement that clerical staff would input the information if this was recorded in a handwritten format. However, practitioners advised that they frequently take brief notes during the session with the child, and as they require time to expand on the information before clerical staff can enter it into the IT system, this is not considered as a time saving process for them. Time constraints and pressures of paperwork were highlighted as one of the reasons the Wellbeing Web is not being used more widely across children's service.

There have been clear opportunities to extend the value of the Wellbeing Web when used jointly with other services e.g. Criminal Justice or Alcohol and Drug services in conjunction with Children's services. However, it is also clear that in many situations the outcomes for children and their families have been recorded prior to the use of the Wellbeing Web (for example, in formal child protection processes) and the Wellbeing Web can then be used as a helpful tool to discuss and explore all of the SHANARRI principles of wellbeing.

All staff interviewed stated how much they valued the tool and enjoyed using this to support individuals. There is true investment in the Wellbeing Web model, but this needs to be nurtured and supported to enable this approach to blossom. The need for multi-agency training and ongoing support for practitioners was highlighted if the tool is to be used to its full potential across Angus.

Challenges remain regarding how best to aggregate data to help shape future service design. The optional use of the Wellbeing Web as a tool to facilitate outcomes conversations is welcomed by practitioners and there is no expressed desire to make this mandatory.

Given that use of the Wellbeing Web is not mandatory, it is encouraging to note that the SHANARRI principles are firmly embedded and that outcomes focused practice is taking place more broadly.

7. Implications and Learning

A number of learning messages can be taken forward as a result of participating in this action research project, both through the work undertaken locally and through collaboration in the meaningful and measurable project more broadly.

Project Work in Angus

Case file data audit was extremely useful in providing an overview of what is being recorded and where. Audit is however of limited value in understanding why things are not recorded, or in determining the factors that get in the way of good recording. It is important to differentiate between poor understanding of organisational expectations and needs regarding recording and the use of tools, and poor outcomes focused practice.

Early engagement with practitioners was essential, highlighting assumptions that would have been made by looking at the data alone.

The research partnership presented participating organisations with opportunities to share experience and consider their aims. This enabled us to undertake a joint, collaborative study with Penumbra to explore similar issues in more depth and to exchange responsibility to interview practitioners, which added a degree of independence to the findings.

The distinctive approach taken to the interviews, namely stepping through a completed case example rather than discussing issues in more abstract terms, proved particularly insightful.

Bringing together participants from the two partner organisations in a focus group added an extra collaborative dimension to the project, and underscored the unique challenges and complexities of working in the context of Children and Families.

Being Part of the Meaningful and Measurable Collaborative More Broadly

Universal acknowledgement of the need to collect and analyse personal outcomes data has drawn the project partners together and generated rich discussion and debate.

The data retreats provided opportunities to share experiences and to consider a range of practical and academic approaches. The 3 x 2 day format worked particularly well and allowed informal 'team building', whilst also ensuring complete focus on the research objective in manageable blocks.

The principle of facilitating action research and promoting collaborative enquiry has enabled the partners to utilise periods of reflection and learning and then test this out in practice.

Having acknowledged the initial findings from our work, the research has been used as a platform to identify further change, including a number of changes to systems and forms. An independent case file audit has reinforced our view that on-going training and awareness raising across multiple agencies is required.


E·S·R·C
ECONOMIC
& SOCIAL
RESEARCH
COUNCIL