

# Use of evidence-based practices in early childhood education and care

National snapshot 2021/2022

July 2023



# **The Australian Education Research Organisation (AERO) is Australia's national education evidence body, working to achieve excellence and equity in educational outcomes for all children and young people.**

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## **Acknowledgement of Country**

AERO acknowledges the traditional custodians of the lands, waterways, skies, islands and sea country across Australia. We pay our deepest respects to First Nations cultures and Elders past and present. We endeavour to continually value and learn from First Nations knowledges and educational practices.

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# Contents

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<b>Overview</b>	<b>4</b>
Introduction	4
Summary of findings	6
Summary of recommendations and next steps	8
<hr/>	
<b>State of quality evidence-based practice in ECEC</b>	<b>10</b>
<hr/>	
<b>Evidence-based practices of interest</b>	<b>12</b>
<hr/>	
<b>Use of evidence-based practices in ECEC</b>	<b>14</b>
<hr/>	
<b>Enablers of evidence-based practice</b>	<b>17</b>
<hr/>	
<b>The need for additional data on ECEC practice</b>	<b>18</b>
<hr/>	
<b>References</b>	<b>19</b>

## Figure

Figure 1: Proportion of service ratings for each NQS QA	11
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## Tables

Table 1: Quality areas, standards and elements of interest	12
Table 2: NQS ratings for Standards 1.2, 1.3, 5.1, 5.2, 6.2	14
Table 3: Elements within 7.2 Leadership	17

# Overview

## Introduction

One of the Australian Education Research Organisation (AERO)'s core goals is to increase the use of evidence-based practices in the early childhood sector. To track progress toward that goal, AERO is gathering data to understand the current state of evidence-based practice in services to establish a baseline against which to measure change. This snapshot explores how the National Quality Standards (NQS) data might contribute to establishing a baseline for the current use of evidence-based practice in early childhood education and care (ECEC). Q4 2021 NQS data were analysed to align with the collection time of other data for the [snapshot of evidence use in ECEC services](#), including survey and interviews with ECEC educators, teachers and leaders.

Evidence-based practices are educational approaches that are backed up by research evidence. This means there is broad consensus from rigorously conducted evaluations that they work.

In ECEC, this refers to educators, teachers and leaders being intentional in their practice, and their practice drawing on rigorous research and advice from recognised authorities such as government or peak bodies (Early Childhood Technical Assistance Center [ECTAC], 2023; Jackson, 2021; Mancenido & Fabry, 2022). Critical reflection underpins effective evidence-based practice (ECTAC, 2023; Jackson, 2021) and is identified as a key aspect of the Early Years Learning Framework V2.0 (EYLF V2.0) Practice of Assessment for learning, development and wellbeing. The critical reflection process involves educators, teachers and leaders drawing on evidence-based research, theory and multiple perspectives and using this knowledge to inform the planning cycle (Australian Government Department of Education [AGDE], 2022).

The NQS is a key aspect of the National Quality Framework. It outlines the assessment and rating process and sets a high benchmark for early childhood ECEC services Australia-wide, including long day care, family day care, preschool/ kindergarten, and out of school hours care. The NQS was developed by ECEC experts in consultation with the government and was informed by research and a range of validated scales and measurement tools (Rothman et al., 2012; Siraj et al., 2019).

The NQS is linked with the EYLF V2.0 as an approved learning framework under the National Law and Regulations. Both the NQS and the EYLF V2.0 provide opportunities for educators, teachers and leaders to draw on evidence to support their practices.

The NQS data is especially useful in this snapshot for examining the following:

1. The overall state of quality evidence-based practice in Australian ECEC services, and where AERO might be best placed to make an impact.
2. The prevalence of specific practices that the evidence suggests are strongly associated with children's learning in the early years.
3. The relationship between these practices and components of the NQS, to identify potential enablers of evidence-based practice in ECEC.
4. Where additional data and insights may be needed to monitor evidence-based practice in ECEC over time, to complement NQS monitoring.

Educators, teachers and leaders use professional judgement to support and extend children's learning, development and wellbeing (AGDE, 2022). Professional judgement is developed by drawing on a wide range of perspectives, worldviews, theoretical approaches and contemporary research which inform practice (AGDE, 2022). This process includes deep thinking and critical reflection of professional sources of knowledge as the foundation of evidence-based practice. Based on these considerations, 4 NQS areas of practice were identified as priorities for this analysis. These were also selected because of their strong evidence base and relevance to the practices of individual educators, teachers and leaders (rather than service-level practices):

- **Intentional teaching** involves thoughtful guidance by educators, teachers and leaders to extend each child's learning and development while responding to children's ideas and interests.
- **Assessment practices**, including formative assessment, authentic assessment, and assessment-in-action.
- **Relationships with children and between children**, including sensitive and responsive relationships support children to learn from each other and develop self-regulation skills.
- **Collaborative practices** with families through the establishment of genuine ways to listen to and communicate with families.

### Terminology: Educators, teachers and leaders

In this report, we refer to 'educators, teachers and leaders' to describe the variety of roles that staff working in ECEC settings may hold. Within each of these categories, roles are diverse, especially in 'leader' roles, which include direct contact with children, as well as administrative-only roles. The 'leader' category includes nominated supervisors, educational leaders, and service directors and coordinators. We also use the term 'practitioners' to refer to all educators, teachers and service leaders in ECEC services.



## Summary of findings

### **Most services are rated as ‘Meeting NQS’ or above overall, but only under a third of services are ranked as ‘Exceeding NQS’ for each quality area (QA)**

Each QA is rated as ‘Meeting NQS’ or higher by 90–98% of ECEC. This suggests that a strong baseline of quality evidence-based practice is already in place. QA1 (Educational program and practice) has the highest percentage of services rated ‘Working Towards NQS’, suggesting potential for better use of practices that support children’s learning and development.

The proportion of services rated ‘Exceeding NQS’ is relatively small: less than one-third of all services for each QA. This suggests that many services could support quality improvement by drawing on evidence-based practices related to the 3 ‘Exceeding’ themes, where practice is:

- embedded in service operations
- informed by critical reflection
- shaped by meaningful engagement with families and/or the community.

### **Educators, teachers and leaders are more confident with pedagogy than assessment**

Standard 1.2 (Practice) was at least met by 95% of services and 90% of services at least meet Standard 1.3 (Assessment and Planning).

In addition, there is a wide variation – from 67% to 97% – across types of ECEC services meeting Standard 1.3, suggesting that educators, teachers and leaders in some service types are more confident with pedagogy than assessment.

### **Relationships with children are at the forefront of most ECEC services**

Standard 5.1 (Relationship between educators and children) and Standard 5.2 (Relationships between children) are at least met by 97% and 98% of services, respectively. Almost a quarter (23%) of services are exceeding these standards, which is an encouraging proportion (ranked 3rd and 4th among 15 standards).

### **Most ECEC services are strong in building partnerships with families, and many are rated ‘Exceeding NQS’**

Most ECEC services (97%) have a rating of ‘Meeting NQS’ or above for Standard 6.1 (Supportive relationship with families).

More than a quarter of services (28%) were rated as ‘Exceeding NQS’ for Standard 6.1, suggesting that in these services, educators, teachers and leaders inform their practice through respectful and ongoing engagement with families.

## Effective leadership is closely linked to stronger assessment and planning

Standard 7.2 (Leadership) was highly correlated with Standard 1.3 (Assessment and Planning) (Australian Children's Education & Care Quality Authority [ACECQA], 2022a) suggesting an important role for leaders in supporting educators and teachers to build their practices in the NQS areas they find most challenging.

## Among family day care services, effective leadership is associated with a higher standard of family engagement

In family day care services, leadership (Standard 7.2) was correlated with the quality of family engagement (Standard 6.1). This suggests that in family day care settings where effective leadership builds and promotes a professional learning community, there may be a stronger focus on family engagement in their quality improvement plans.

## Ratings related to practice and relationships with children are closely related, but not across all service types

Quality of practice (Standard 1.2) and relationships with children (Standard 5.1) were strongly correlated among long day care services and preschools/ kindergartens. However, this is not the case in all service types. Further understanding of trends in how services use evidence-based practices – and how these vary across different setting types – may be useful for providing tailored support.



## Summary of recommendations and next steps

This snapshot of evidence-based practices in the NQS data provides several key actions and next steps for organisations engaging with evidence use and the early childhood sector, including AERO.

### Practice data at teacher and educator level is necessary to monitor the individual changes that contribute to system improvement

This analysis has demonstrated the usefulness of NQS data in providing a high-level snapshot of evidence-based practice in Australian ECEC services. At the same time, it demonstrates certain limitations of the NQS data set as a source of insight for monitoring the impact of AERO's work, including:

- NQS data is collected at the service level, for the purpose of informing whole-of-service reflection and continuous improvement.
- NQS data does not capture within-service variation in evidence-based practices.
- NQS data does not capture the complex factors that affect the quality of ECEC practice.

#### Next step for AERO:

- » collect further practice data at the teacher- and educator- level to monitor the individual changes that contribute to system improvement
- » better understand the complex factors that affect the quality of ECEC practice through literature reviews and consultation with the ECEC sector.

### Better use of evidence-based practices can improve service ratings in each QA

There are significant benefits when educators, teachers and leaders are supported to draw on high-quality, rigorous research and guidance, and use this knowledge to inform practice (Farley et al., 2017).

Many services have the potential to make better use of evidence-based practices, which may contribute to improving their ratings in each QA.

For example, 10% of services achieved a rating of 'Working Towards NQS' for QA1 (Educational program and practice). Assessment for learning is an area with potential for ongoing practice improvement, as well as for elevating other practices to higher levels. Variability across ECEC service types – especially in assessment and critical reflection – suggests the need for tailored approaches to improving practice. While improving practice in one area often lifts practice overall, some service types may benefit from targeted support with specific practices.

#### Next step for AERO:

- » identify ways to support and embed the use of evidence-based practices – particularly through effective professional learning
- » develop evidence-based resources to help educators, teachers and leaders lift their practice to higher levels of quality – especially assessment practice.



## More effective leadership across ECEC services can improve all areas of practice

Improvements to ECEC quality may be achieved by enhancing the enablers of evidence-based practice, especially effective leadership.

### Next steps for AERO:

- » explore the role of educational and service leaders in supporting quality improvement and implementation of evidence-based practice
- » engage with educators, teachers and leaders in developing resources to support evidence-based practice.



## State of quality evidence-based practice in ECEC

Given the NQS was developed through consultation with reference to research evidence, NQS data can be used as a broad indication of the use of selected evidence-based practices in Australian ECEC services. For example, scaffolding is an effective practice to achieve positive outcomes for children. QA 1 Educational program and practice captures this practice under Element 1.2.2 (Responsive teaching and scaffolding), under Standard 1.2 (Practice).

ACECQA publishes regular snapshots of NQS data across all QAs of the NQS:

- QA1 = Educational program and practice
- QA2 = Children’s health and safety
- QA3 = Physical environment
- QA4 = Staffing arrangements
- QA5 = Relationships with children
- QA6 = Collaborative partnerships with families and communities
- QA7 = Governance and leadership.

Services are usually allocated one of 3 ratings for each quality area:

- Working Towards NQS
- Meeting NQS
- Exceeding NQS.

An additional option, ‘Significant Improvement Required’, is possible in cases where quality is of concern. Services achieving ‘Exceeding NQS’ in all 7 QAs may apply for an ‘Excellent’ rating overall. The overall distribution of quality ratings for Quarter 4 of 2021<sup>1</sup> is shown in [Figure 1](#).

Each QA is rated at least ‘Meeting NQS’ by 90–98% of ECEC services. This suggests that a strong baseline of quality evidence-based practice is already in place. QA1 (Educational program and practice) has the highest percentage of services rated ‘Working Towards NQS’, suggesting potential for better use of practices that support children’s learning and development.

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<sup>1</sup> Using Q4 2021 NQS data aligns with the collection time of other data analysed for this snapshot of evidence use in ECEC services in Australia. While Q3 2022 data became available as this report was being completed, Q3 2022 data presents similar trends, with no significant shifts from those included in the [NFQ Snapshot Q3 2022 report](#).

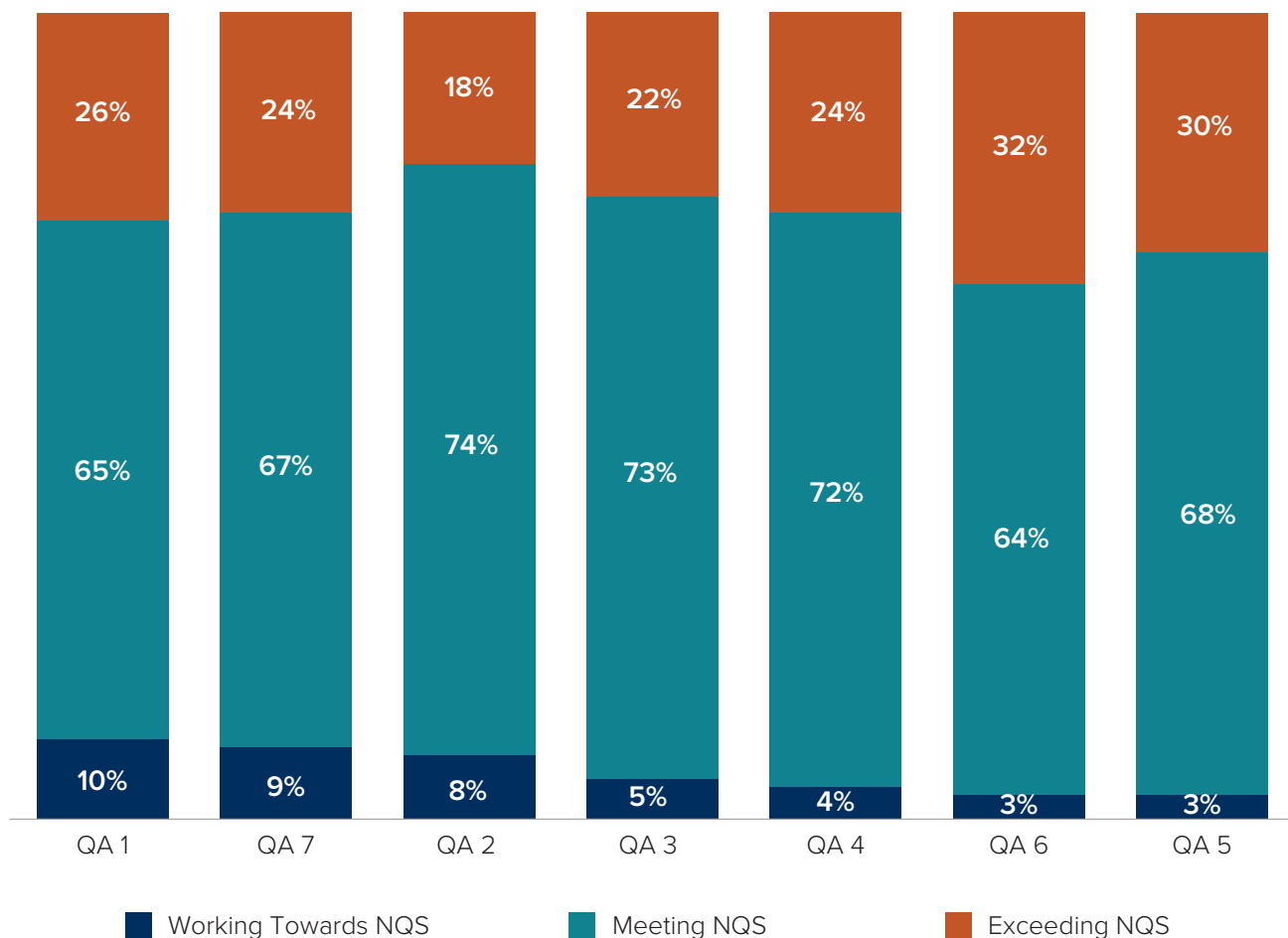
The proportion of services rated 'Exceeding NQS' is relatively small – less than one-third of all services for each QA. This suggests that many services could support quality improvement by drawing on evidence-based practices related to the 3 'Exceeding' themes, where practice is:

- embedded in service operations
- informed by critical reflection
- shaped by meaningful engagement with families and/or the community.

### Implications for AERO

Overall, the NQS data suggests strong potential for AERO to support the sector to achieve high-quality outcomes for children's learning, development and wellbeing. Evidence-based practices can accelerate this ongoing progress.

**Figure 1:** Proportion of service ratings for each NQS QA



Note: The data presented here and used throughout the report is from Q4 2021 – the latest available data at the time of analysis. Q3 2022 data presents similar findings, with no significant shifts from those included in the [NFQ Snapshot Q3 2022 report](#).

Source: ACECQA (2022b).

## Evidence-based practices of interest

AERO aims to promote a more granular understanding of evidence-based practice, focused on specific practices within the broad NQS standards or QAs. Choosing which components of the NQS best reflect these specific practices was therefore an important part of determining how NQS data could best be used.

Four areas of practice were identified as priorities for this analysis. These were selected because of their strong evidence base and relevance to the practices of individual educators, teachers and leaders (rather than service-level practices):

- **intentional teaching**, which involves thoughtful guidance by educators, teachers and leaders to extend each child’s learning and development while responding to children’s ideas and interests (Epstein, 2014; ACECQA, 2020)
- **assessment practices**, including formative assessment, authentic assessment, and assessment-in-action (Centre for Education Statistics and Evaluation, 2020; Hedge & Cohrssen, 2019; Kirkby et al., 2018)
- **relationships with children and between children** – sensitive and responsive relationships support children to learn from each other and develop self-regulation skills (ADGE, 2022)
- **collaborative practices** with families through the establishment of genuine ways to listen to and communicate with families (ACECQA, 2020).

Table 1 shows where each of these practices is located in the NQS, including the QA, standard and elements that best represent each practice.

**Table 1:** Quality areas, standards and elements of interest

Area of practice	Quality Area	Standard	Element
<b>Intentional teaching and assessment practices</b>	Quality Area 1 – Educational program and practice	1.2 Practice Educators facilitate and extend each child’s learning and development.	1.2.1 Intentional teaching
			1.2.2 Responsive teaching and scaffolding
			1.2.3 Child directed learning
		1.3 Assessment & planning Educators and co-ordinators take a planned and reflective approach to implementing the program for each child.	1.3.1 Assessment and planning cycle
			1.3.2 Critical reflection
			1.3.3 Information for families
<b>Relationships with children and between children</b>	Quality Area 5 – Relationships with children	5.1 Relationships between educators and children Respectful and equitable relationships are maintained with each child.	5.1.1 Positive educator to child interactions
			5.1.2 Dignity and rights of the child

Area of practice	Quality Area	Standard	Element
<b>Collaborative practices</b>	Quality Area 6 – Collaborative partnerships with families and communities	6.1 Supportive relationships with families  Respectful relationships with families are developed and maintained and families are supported in their parenting role.	6.1.1 Engagement with the service
			6.1.2 Parent views are respected

Unlike QA ratings, which represent aggregate ratings of relevant standards, ratings for standards and elements are assigned individually based on Authorised Officers' assessments of practice at the service:

- **Elements** have 2 possible ratings – 'Met' or 'Not Met'. An element is ranked as met when an assessor establishes, based on information provided by the service and observation during their visit to the service, that the descriptor of that element is met (ACECQA, 2020).
- **Standards** have 3 possible ratings: 'Working Towards NQS', 'Meeting NQS' or 'Exceeding NQS'. If any elements within a standard are not met, the service is ranked as 'Working towards NQS' for the respective standard. If all elements are met, the standard is ranked as 'Meeting NQS'. 'Exceeding NQS' indicates that in addition to meeting all the elements, the service demonstrates 3 'Exceeding' themes for that standard:
  - Practice for this standard is embedded in service operations.
  - Practice for this standard is informed by critical reflection.
  - Practice for this standard is shaped by meaningful engagement with families and/or community (ACECQA, 2022a).

## Use of evidence-based practices in ECEC

Table 2 presents the NQS ratings against each of the standards of interest (see State of quality evidence-based practice in ECEC). Results broadly indicate that, as at Q4 2021, the evidence-based practices associated with the standards and elements within QA 1 Educational program and practice (e.g., intentional teaching, responsive teaching) are used by a large proportion of services (95% for Standard 1.2 Practice and 90% for Standard 1.3 Assessment & planning) to a level of quality sufficient to meet the NQS. A slightly higher proportion use evidence-based practices related to QA 5 (Relationships with children) or QA 6 (Collaborative partnerships with families and communities) to the same level (97% and 98%, respectively).

Detailed results for standards and elements within each quality area are further discussed in the next section. See [Methodology](#) for details on the data analysis.

**Table 2:** NQS ratings for Standards 1.2, 1.3, 5.1, 5.2, 6.2

Standard	Meeting NQS (%)	Exceeding NQS (%)	Total at least meeting (%)	Element	Met (%)
1.2 Practice	73%	22%	95%	1.2.1 Intentional teaching	97.7%
				1.2.2 Responsive teaching and scaffolding	97.3%
				1.2.3 Child directed learning	97.1%
1.3 Assessment & planning	67%	23%	90%	1.3.1 Assessment and planning cycle	91.8%
				1.3.2 Critical reflection	92.1%
				1.3.3 Information for families	98.4%
5.1 Relationships between educators and children	75%	23%	97%	5.1.1 Positive educator to child interaction	98.5%
				5.1.2 Dignity and rights of the child	97.8%
5.2 Relationships between children	75%	23%	98%	5.2.1 Collaborative learning	99.4%
				5.2.2 Self-regulation	97.9%
6.1 Supportive relationships with families	71%	28%	98%	6.1.1 Engagement with the service	99.2%
				6.1.2 Parent views are respected	99.3%

Source: ACECQA (2022b)

## Quality Area 1 – Educational program and practice

### **The differences between the 2 standards analysed for this QA suggest that educators, teachers and leaders are more confident with pedagogy than assessment**

For Standard 1.2 (Practice), our analysis found:

- The proportion of services with quality evidence-based teaching practices is generally high, with 95% of services rated as ‘Meeting NQS’ or higher.
- Some variability between service types is evident, with the proportion of services ‘Meeting NQS’ or higher ranging between 85% and 99% across types of ECEC services (long day care, preschool/ kindergarten, outside school hours care, family day care).
- One-fifth of services (22%) are rated as ‘Exceeding NQS’ in Standard 1.2, suggesting that educators, teachers and leaders across these ECEC services facilitate and extend each child’s learning and development through intentional teaching, responsive teaching, and scaffolding, and by promoting child agency. These practices met the 3 ‘Exceeding’ themes of being embedded in service operations, informed by critical thinking and shaped by meaningful engagement with families and/or communities.

For Standard 1.3 (Assessment and Planning), our analysis found:

- This standard has the highest proportion (10%) of services rated as ‘Working Towards NQS’. While 90% being rated as ‘Meeting NQS’ or above is the highest proportion reached for this standard since NQS data collection began in 2012 (ACECQA, 2022a), this standard remains the most challenging for services.
- Among all 40 NQS elements, Elements 1.3.1 (Assessment and planning cycle) and 1.3.2 (Critical reflection) have the highest (8.2%) and second highest (7.9%) proportion of services assessed as ‘Not met’ (ACECQA, 2022a), indicating that the practices associated with these elements are among the most challenging to apply and/or demonstrate.
- Variation across ECEC service types is wider for this standard, with between 67% and 97% of services at least meeting Standard 1.3, depending on service type. For some services, correlation analyses demonstrate high correlation levels between Standards 1.2 and 1.3 – for example for preschools and kindergartens and long day care services.
- Almost a quarter (23%) of services are rated ‘Exceeding NQS’ for this standard, indicating that many examples of strong practice are evident.

## Quality Area 5 – Relationships with children

**Both standards analysed in this QA are met by the majority of ECEC services of all types, although there is scope to develop practice to even higher levels**

For Standard 5.1 (Relationship between educators and children) and Standard 5.2 (Relationships between children), our analysis found:

- Both standards are at least met by 97% and 98% of services, respectively, suggesting that most ECEC services are using evidence-based practices with respect to relationships. However, further information is necessary to understand the practices adopted across services that cumulatively lead to these rankings.
- There is very little variation in the proportion of services meeting these standards across ECEC service types (95%–99% and 97%–99% respectively).
- Around one-fifth of services are rated as ‘Exceeding NQS’ in both standards (20% and 19%, respectively). While this is an encouraging proportion, it is lower than some other NQS standards. It suggests that a very strong base level of practice in this area (high proportion of services rated as ‘Meeting NQS’ or higher) is not translating to a proportionally stronger representation of practice at the highest levels (proportion of services rated as ‘Exceeding NQS’).

## Quality Area 6 – Collaborative partnerships with families and communities

**The standard analysed in this quality area suggests that most ECEC services are strong in building partnerships with families, and many exceed expectations**

For Standard 6.1 (Supportive relationships with families), our analysis found:

- The standard is at least met by 97% of services, and over 99% of services meet at least one of its constituent elements.
- Over a quarter of services (28%) exceed this standard, suggesting that in these services, educators, teachers and leaders inform their practice through meaningful engagement with families, which is embedded in service operations and informed by critical reflection.

Overall, this analysis of use of evidence-based practices in ECEC indicates that:

- Evidence-based practices, as measured through the standards and elements selected for this analysis, are already occurring in most ECEC services.
- There is nevertheless sufficient variability in these practices to indicate potential for improvement.
- Assessment for learning is an area with particular potential for ongoing practice improvement. This may have the additional benefit of elevating other practices to higher levels.
- Variability across ECEC service types – for example, especially in assessment and planning and critical reflection – suggests the need for tailored approaches to improving practice.



## Enablers of evidence-based practice

Exploring the relationships between different standards and elements can help us to understand how the aspects of quality measured by the NQS relate to one another. This can point to other aspects of quality that may act as enablers of the evidence-based practices of greatest interest, examined earlier in this report. Our analysis focused most closely on QA7, Standard 7.2 (Leadership), which includes 3 elements, as shown in Table 3.

**Table 3:** Elements within 7.2 Leadership

Quality Area	Standard	Elements
<b>Quality Area 7 Governance and Leadership</b>	7.2 Leadership Effective leadership builds and promotes a positive organisational culture and professional learning community.	7.2.1 Continuous improvement
		7.2.2 Educational leadership
		7.2.3 Development of professionals

A number of studies have found that effective leadership in ECEC services can support participation in professional learning and research and uptake of evidence-based practices such as collaboration and critical reflection, all of which have an impact on practice (Colmer et al., 2015; Hadley et al., 2015; Hesterman & Targowska, 2020; Page & Eadie, 2019). We, therefore, anticipated that this standard would be associated with the evidence-based practices explored in this report.

We found a number of relationships in the NQS data that may point to enablers of evidence-based practice (see [Methodology](#) for details of this analysis).

**a. Ratings related to practice (Standard 1.2) and relationships with children (Standard 5.2) are closely related, but not across all service types.**

Among long day care and preschool/ kindergarten services, Standard 1.2 (Practice) was strongly correlated with the quality of Relationships between educators and children (Standard 5.1) and between children in a service (Standard 5.2).<sup>2</sup>

However, quality of practice and relationships with children were not highly correlated across all setting types. Understanding trends in how services use evidence-based practices (and how this varies across different setting types) may be useful for providing tailored support.

**b. Effective leadership is closely linked to stronger assessment and planning.**

Standard 7.2 (Leadership) was highly correlated with Standard 1.3 (Assessment and planning), suggesting an important role for leaders in supporting educators and teachers in the NQS practices that are most challenging for the service.

<sup>2</sup> Intercorrelation between standards was statistically significant and above 0.7 for these services

**c. Among family day care services, effective leadership is associated with a higher standard of family engagement.**

In family day care services, leadership (Standard 7.2) was correlated with the quality of Family engagement (Standard 6.1).<sup>3</sup> This suggests that family day care settings that are focused on family engagement in their quality improvement plans may benefit from attending to the leadership behaviours that encourage and support educators and teachers to engage with families.

This analysis indicates that:

- Improvements to ECEC quality may be achieved by enhancing the enablers of evidence-based practice – especially effective leadership.
- While improving practice in one area often lifts practice overall, some service types may benefit from targeted support with specific practices.

## The need for additional data on ECEC practice

This analysis has demonstrated the usefulness of NQS data in providing a high-level snapshot of evidence-based practice in Australian ECEC services. At the same time, it demonstrates certain limitations of the NQS data set as a source of insight for monitoring the impact of AERO's work.

These limitations include:

- NQS data is collected as part of the assessment and rating process under the Education and Care Services National Regulations. As such it includes data at the service level, for the purpose of informing whole-of-service reflection and continuous improvement. In contrast, AERO's work focuses on achieving practice change for individual educators, teachers and leaders. Further practice data at educators, teachers and leaders level is therefore required to understand and monitor the individual changes that contribute to system improvement.
- The NQS does not capture within-service variation in evidence-based practice. Research on other education settings has recognised the importance of reducing variability in teaching practice within sites, not only between them (Reynolds, 2008). This may be especially relevant for ECEC services, which employ staff at a range of qualification levels.
- The NQS data is a high-level snapshot that does not fully reflect the complex factors that affect the quality of ECEC practice. A deeper understanding of these practices requires an in-depth review of relevant literature, as well as consultation with ECEC teachers, educators and leaders.

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<sup>3</sup> Intercorrelation between standards was statistically significant and above 0.7. Spearman's rank-order correlations. Statistical significance at  $p < .005$ . Correlations range between -1 and 1. Correlation levels above 0.7 indicate a strong level of correlation.

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