

Better systems, better chances

A review of research and practice for prevention and early intervention

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Executive Summary

“The two public policy strengths of early intervention are firstly that it is less expensive and second it is more effective than late intervention. It is no longer viable to take ever increasing amounts of taxation from the public to deal with the ever increasing impact of failing to intervene early ” (Allen and Smith, 2008).

Effective prevention and early intervention is possibly the most promising strategy for changing the trajectories of children. There is clear evidence that children’s life chances are influenced by their families and communities and that they are able to be changed for the better. Improving the wellbeing of children, young people and families at population-level requires flexible and responsive systems that are equipped to deliver preventive interventions and respond effectively early to emerging issues and challenges. There is a strong and growing evidence-base that supports the effectiveness of many prevention and early intervention programs and approaches, and consistent evidence about the features of service systems that contribute to poorer outcomes.

This paper has used available research to synthesise the factors that promote positive child development and to highlight factors that enable effective prevention and early intervention at a system-wide level. Current research provides strong theoretical underpinnings and directions for building systems that reflect the best available evidence about what children, young people and families require to enable them to thrive. The balance of evidence would suggest that there is no single model or ‘silver bullet’. Instead, the aim must be agile and responsive system comprised of cultures, structures and processes that produce service responses tailored to the needs and circumstances of families and communities; systems underpinned by robust accountability and governance mechanisms that enable adaptation and problem-solving; and an explicit focus on delivering interventions that are grounded in evidence.

This paper presents the findings of a rapid strategic literature review of prevention and early intervention programs and systems, with a specific focus on:

- Child development pathways and processes;
- The social and economic benefits of prevention and early intervention;
- Risk and protective factors for positive child development;
- Key pathways for intervention at key developmental stages (from antenatal through to adolescence); and
- System design elements that facilitate prevention and early intervention.

Child development: Key concepts, frameworks and theories

Understanding current research on how children grow, learn and thrive is central to understanding why prevention and early intervention is crucial and how to design interventions and systems that support optimal child development. This section presents key concepts, theories and models relating to child development, which are then drawn on and further explored in later sections of this report. The evidence shows:

- Early childhood provides a crucial 'window of opportunity' for public policy interventions to shape long-term trajectories given the brain development occurring over the period of 0-3 years.
- Child health is a strong predictor of adult health.
- Genetics are a considerable non-modifiable factor in predicting health and wellbeing outcomes. However, epigenetics helps us understand the importance of potentially modifiable parental behaviours and in particular maternal health, not only for the parent's current child but for generations to come.¹
- Brain development during adolescence presents another window of influence as the brain continues to grow at what is a time of transition from family to increasing peer influence, and exposure to risky behaviours increases.
- Disadvantage, poverty and inequality are contributors to poorer outcomes for health and wellbeing. However, services targeted only to those living with disadvantage will not address developmental vulnerability at a population level.
- Parents, play and home environments are critical to child development and health and wellbeing outcomes. Parenting is so influential that it can moderate the impact of social and economic disadvantage.
- There is typically no one driver or no one point of intervention that can ensure positive child development - combinations of risk and protective factors can create developmental pathways, leveraging and building resilience or exposing or escalating vulnerabilities.

The interaction of factors and context for development can be complex. Understanding the ecological model of child development as well as those combinations of risk and protective factors allows us to better understand how to intervene to improve child outcomes (through prevention or treatment).

Social and economic benefits of prevention and early intervention

There is a strong argument that expenditure on late intervention and crisis response is becoming unsustainable – rising demand and increasing complexity is creating significant long-term challenges for government budgets.

In addition to being crucial to children's developmental trajectories, it is clear that investments in the early years and in prevention and early intervention more broadly yield significant financial returns. The return on investment for prevention and early intervention is consistently greater than costly remedial responses. Getting it right in the early years reduces downstream expenditure on remedial education, school failure, poor health, mental illness, welfare reciprocity, substance misuse and criminal justice. Expenditure on evidence based prevention initiatives can reduce incidence and prevalence at a population-level. It is most cost effective to invest in early intervention that resolves issues as they emerge and are malleable, rather than responding to crisis, toxic stress and trauma, which is both more challenging and more expensive to resolve.

1. References to parents throughout this report include all primary caregivers and adults involved in raising children.

There is an ongoing debate regarding the relative cost effectiveness of universal and targeted services (Moore, 2008). Universal services tend to involve lower costs per-person but greater costs overall. They have the benefits of accessibility, being non-stigmatising, focusing on prevention and reaching the majority of children in need and therefore lifting wellbeing and outcomes at a population- level. Targeted services often involve substantially higher costs per-person, with potentially lower costs overall (although often the administrative costs of determining eligibility make this approach more expensive). They may be the most appropriate response to emerging or established problems, but they may not reach all those who require them and are often difficult and stigmatising to access.

Further, while targeted interventions can shift the 'tail end' of the population distribution, because there are far greater numbers of children experiencing developmental difficulties across the rest of the population, universal interventions are much more likely to deliver large-scale, population-level change.

Heckman (2008) argues for the prioritisation of young children experiencing disadvantage, given the higher rate of return and the need to compensate for poorer rates of parental investment (although he defines disadvantage as poor parenting rather than simply economic or social disadvantage). However, families with the greatest levels of need or the greatest potential to benefit from targeted interventions are often the least likely to access them and the most difficult to retain in an intervention long enough to receive the 'dose' needed to change outcomes. Our systems are not consistently effective in identifying needs and vulnerability does not only cluster in specific geographic areas. A proportionate universalism approach that combines universal and targeted interventions is the optimum approach.

Risk and protective factors

Understanding risk and protective factors and the complex interrelationships that 'activate' particular risk and protective pathways, can assist in determining the optimal points of intervention. The evidence shows:

- Risk and protective factors influence the course of development through their cumulative impact across time (Loxley et al., 2004).
- Some risk and protective factors have general impacts across multiple outcomes while others have more specific, defined pathways or apply more strongly to a particular demographic marker.
- A range of risk and protective factors can exist at proximal (individual and family) and distal (community and society) levels (Loxley et al., 2004).
- Processes can be implemented to modify the effects of risk factors through targeted preventive interventions (O'Connell et al, 2009).
- The more risk factors that are present, and the longer they persist over time, the greater the subsequent developmental impact.
- Parents, play and home environments are critical to child development and health and wellbeing outcomes. Parenting is so influential that it can mitigate the impact of social and economic disadvantage or, conversely, it can cancel out the benefits of other protective factors.
- Recent research has identified a consistent set of strongly supported protective factors that mediate the impact of significant risk factors and adverse life events for young people.

There is a core set of protective factors at individual, family and community levels that are strongly predictive of positive outcomes for young people. At the individual level, relational skills, self-regulation skills, problem-solving skills and involvement in positive activities

protect even highly vulnerable people from negative trajectories, especially when accompanied by strong parenting competencies, positive peers and caring adults, as well as positive community environment, school environment and economic opportunities (ACYF, 2013).

Conversely, there is a core set of individual, family and community stressors and circumstances that are consistently predictive of a wide range of adverse outcomes for young people. The absence of positive attachment and warm family relationships, poor parenting behaviours such as harsh and inconsistent discipline and limited cognitive stimulation, the presence of contributors to toxic stress, such as parental mental illness, family violence or substance abuse, and community factors such as unsafe neighbourhoods and schools, social isolation and poverty.

It is clear that many of these factors are malleable. There are a range of preventive interventions that have strong evidence to show they strengthen protective factors and reduce both the likelihood and severity of negative outcomes. There are also established approaches to identifying needs early and significantly moderating their impact and altering children's developmental trajectories. One of the key messages of the risk and protective factor literature is that the antenatal period and children's first three years are crucial to building strong foundations and establishing the competencies that lead to the development of essential relational, self-regulation and problem-solving skills.

This is also a critical window of opportunity for engaging with parents, given their openness to change, their contact with the universal child and family health system, and the impact of a mother's health and family circumstances on foetal health.

Optimal intervention points for child and youth wellbeing

There are effective and important preventive interventions in multiple domains of wellbeing and across the life course. However, the best investments are made in three key preventative areas:

- In the antenatal to age five period, particularly through investment in universal services that provide holistic health, learning and parenting support, along with early needs identification of potential risk factors and comprehensive support for families with established risks and low protective factors to prevent escalating negative trajectories (such as, employing proportionate universalism to respond to early signs of vulnerability and disadvantage);
- In parenting, with both universal, systems approaches and targeted interventions at different life stages to engage parents, to foster nurturing and skilled parenting from prior to birth and again throughout key life transition points; to develop positive social norms and constructive, preventative help-seeking behaviours; and to respond early to prevent risk factors escalating across the life course; and
- In universal and targeted mental health programs to support development of social and emotional wellbeing, fostering resilience and leveraging the strengths of individual, family and community contexts to prevent serious problems in adulthood stemming from multiple risk factors or emerging challenges of changing circumstances.

A synthesis of example evidence-based interventions across each life stage is provided in the appendices to this report. In summary, listed below are those interventions or pathways with higher levels of evidence of impact, address the key or multiple risk and protective factors; and leverage the child development science of brain development and early intervention or preventative influence.

Life Stage	Priority intervention pathways
Antenatal	High quality antenatal care, breastfeeding preparation, smoking cessation, maternal mental health, maternal alcohol use
Infancy and early Childhood	Access to health and social care, parenting skill development, home learning environment, promoting breastfeeding, social connections and support, nutrition, physical activity and obesity prevention
Preschool	Early education, parenting skill development, behavioural issues and social and emotional wellbeing, speech and language development, home learning environment, transition to school
Primary years	Parenting skill development, school-based nutrition, physical activity and obesity prevention, engagement in learning, school-based social and emotional wellbeing promotion, participation in sport and community activities, parent engagement in learning and schooling
Middle years	Parenting skill development, promoting engagement with school and preventing disengagement, learning support, behavioural issues school-based health and wellbeing, preventing substance misuse, transition to high school
Adolescence and youth	Preventing disengagement from school, mental health promotion, access to health services, sexual health promotion, preventing risky behaviours, young parenthood, preventing substance misuse, community connectedness and participation, crime prevention, restorative justice, suicide prevention, career pathways and transition

Analysis of current child and family service systems and evidence for change

Reviews of child and family service systems in Australia and internationally identify a common set of systemic issues. A recent analysis summarises these as being:

- A fragmented and poorly coordinated system in which specific service sectors largely focus on particular issues or groups of vulnerable people without a whole of system view.
- A program focus instead of a client focus, where the onus is on people to make sense of services, navigate from door to door and 'fit' a program to qualify for support.
- Services which fail to consider the family circumstances of clients, in particular the existence and experience of children.
- A traditional welfare approach that focuses on crisis support and stabilisation, and that may encourage dependency.
- A focus on solving problems after they occur rather than anticipating and intervening to prevent them arising (Department of Human Services (DHS), 2011).

While there is strong and consistent evidence about the challenges and limitations, failures and excessive costs of current service systems, the converse is not true; there is a significant lack of robust evidence about optimal service system design and only a limited number of models with hard evidence of effectiveness. This gap is being addressed,

however, with a growing evidence base about effective interventions and the system structures required to maximise their impact.

In addition, there is compelling evidence that that evidence-based prevention and early intervention can be significantly more effective and more cost effective than remedial responses.

This report does not suggest that every preventive intervention works (there is clear evidence that many do not); that no tertiary interventions are effective (there is clear evidence that they can and do change children's trajectories); or that large scale delivery of prevention and early intervention initiatives will entirely remove the need for tertiary responses. Rather, there is unambiguous evidence that evidence-based prevention and early intervention can lead to measurable and substantial reductions in the factors that place children and families at risk of poor outcomes.

Moreover, there is consistent evidence about the factors that promote child wellbeing, a growing body of programs with proven efficacy, and consistent messages about the types of service delivery and approaches to working with families that achieve better outcomes.

Friedman summarises the core messages emerging from this research:

- development of a set of values and principles to serve as a foundation for systems and services;
- a strong emphasis on individualised and family-driven care;
- service responses designed to meet the needs of children and their families rather than to meet the convenience of funders, systems, and providers;
- a strong focus on culturally competent systems and services; and
- a balance between the focus on deficits and a focus on strengths (Friedman, 2006).

There are strong indications that the 'ideal system' is not a rigid or static model. Instead, cultures, structures and processes need to be flexible and responsive, underpinned by robust accountability and governance mechanisms, to enable adaptation and problem solving.

In keeping with this thinking, this report focuses on several key directions:

- **A common approach to measuring outcomes:** the use of an outcomes framework to provide accountability and embed the measurement of effectiveness and building of evidence at all levels of the system;
- **Data-driven local planning and commissioning:** local approaches to needs assessment, service planning and resourcing;
- **Scale-up of evidence-based practice:** building 'evidence ready' systems and using evidence to guide investment decisions and service provision;
- **Shared ways of working:** shared values, a common approach to identifying needs and intervention thresholds, and processes and structures that enable and promote shared ways of working;
- **Matching services to needs:** assessment and planning processes that respond holistically to meeting the needs of children and families, and focus on building their capacity and working towards improved outcomes; and
- **Key principles:** grounding the system in the core principles of a holistic approach, strengths-based practice, working in partnership with families, and building capacity.

These elements can contribute to shifting systems from their current state to a preferred state, highlighted below.



This report details interventions and system structures and processes with a strongly evidence-informed theory of change and, where possible, identifies programs and models proven to be effective. In addition, it highlights the importance of a commitment to implementation and the use of insights from implementation science and the role of governance and accountability mechanisms that focus on addressing systemic barriers.

Features of a prevention-focused service system

There are a number of system-level factors that can contribute to and enable effective prevention and early intervention. The report identifies effective system design approaches, current system reform directions and approaches - in Australia and internationally - and key considerations for implementation. Conclusions that emerge from this analysis include:

- The central importance of establishing the infrastructure for an 'intelligent system', especially by measuring common outcomes, improving collection and use of data (including cost-benefit analysis), developing data analysis capacity and embedding a data-driven approach at all levels of the system.
- The benefit of a shared and consistent practice model and guide to identifying areas of strength and need, grounded in an ecological approach to child and family wellbeing and informing practice across universal, secondary and tertiary sectors.
- Governance approaches that strike a balance between tailoring to local needs and local decision-making with the important role of central leadership in maintaining momentum – recognising that the right balance is likely to differ between areas (due to different starting points and capacity) and across time (at different stages of implementation).
- An approach that recognises and builds on existing good practice and builds the mechanisms that enable a focus on continuous quality improvement rather than a pre-determined ideal end-state – aiming for iterative rather than transformational change.

- Governance models that contain authority and capability to address system barriers at the local level.
- Utilising implementation science approaches that engage with explicit and implicit elements of the system, including building capacity and adopting common principles and processes.
- The importance of building the capacity of systems, organisations and practitioners to implement evidence-based interventions at scale.

Conclusion

The aim of reform must be the development of infrastructure for an 'intelligent system' that collects and uses data to measure the outcomes it is achieving, and which has mechanisms for decision-making that are responsive to evidence, data and changing local contexts. Effective systems are designed around the factors that promote the wellbeing of children and reflect the ways families work. They leverage trusted universal service platforms to promote the factors known to be important for child development and they respond early to emerging problems.

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