Northern Territory Government

The value of investment in the early years: Balancing costs of childhood services

Early Childhood Series No. 4. 2011

Acknowledgements

This publication was produced on behalf of the Department of Education and Training by the Menzies School of Health Research.

Recommended citation

Robinson G, Silburn, SR, Arney F, 2011. *The value of investment in the early years: Balancing costs of childhood services.* Topical paper commissioned for the public consultations on the Northern Territory Early Childhood Plan. Darwin: Northern Territory Government.

ISBN: 978-0-9871030-8-6 (paperback)
ISBN: 978-0-9871030-9-3 (on-line)

This publication is also available on-line and may be downloaded from:
www.det.nt.gov.au/parents-community/early-childhood-services/ntecplan

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Acronyms

NT	Northern Territory
OECD	Organisation for Economic Co-operation and Development
UK	United Kingdom
USA	United States of America

Executive summary

A large proportion of the NT's children do not realise their developmental potential. This has significant implications for society and government as the consequences of poor early childhood development extend through the lifecycle. Children with compromised early development are at substantially increased risk for adverse educational outcomes, poor functional literacy, delinquency and crime, unemployment, substance misuse, poor adult physical and mental health, and premature death.

There is much to be gained through better investment in the early years to reduce the population levels of poor health and social and emotional problems later in life. This will not only reduce the impact of these problems for individuals and society, but also add to the productive capabilities, skills and competencies of the next generation of Territorians.

The costs to individuals of poor early development include reduced educational attainment, detrimental effects of welfare dependency, reduced quality of life and limited opportunities for effective participation in their own communities and wider society. Families and society also incur high costs in dealing with the burden of social and emotional problems and ill-health, as well as the costs associated with much higher rates of welfare dependency, involvement with the justice system and incarceration.

At the same time, research regarding the efficacy and effectiveness of evidence-based early childhood interventions show that high quality programs can yield significant short and long-term benefits that far exceed their costs. These programs include approaches to enriched early learning in childcare centres and preschool settings (High/Scope Perry Preschool, Abecedarian etc.); parenting interventions from early infancy onwards delivered at home or in health or community centres (Nurse-Family Partnerships etc.); and a range of behavioural programs for parents and/or children that target child behaviour, mental health and social emotional learning (The Incredible Years program, Triple P Positive Parenting Program etc.).

Research also suggests that careful targeting of early childhood development programs can optimise returns on investment and guard against the dilution of resources and effort. Low cost, poor quality versions of programs with weak implementation controls are unlikely to yield any return at all. Extrapolating from the evidence from high quality studies, it is argued that investment in equivalent early childhood programs made universally available for disadvantaged children can yield a significantly positive return on investment within two decades.

Public investment in large-scale (population-wide) programs such as Head Start and Early Head Start in the USA and Sure Start in the UK has yielded somewhat variable benefits. There are also concerns about the extent of the overall return on the very substantial investment in these approaches. A major factor underlying the concerns about Sure Start was the fact that policy decisions about how the program was to be implemented in communities did not require the implementation of proven (i.e. evidence-based) programs and precluded their evaluation methodologies using controlled trials. These policy constraints have resulted in the reportable outcomes being more variable and less demonstrable than would otherwise have been the case. The implementation and evaluation of recent nationally funded, area-based initiatives in Australia have also been limited by such policy constraints. This seriously limited the potential benefit of this substantial investment and the learnings which could have emerged from more systematic program delivery and evaluation.

High quality programs that have been rigorously evaluated for their preventive effects and their long-term benefits to individuals and society provide the strongest evidence regarding the characteristics of effective early childhood interventions.

These studies reveal that key elements of program effectiveness include:

- *Individualisation of service delivery*. There is convincing evidence to suggest that programs that cannot respond to individual children's and families' needs are less successful. This includes not only adjustment to the specific developmental needs of children, but also recognition of features of the socioeconomic setting of parents and children, as well as of the cultural backgrounds of individuals. Provision of generic advice and messages or pre-packaged interventions that are not responsive to context are less effective than those that are individualised and sensitive to context and need.
- *Quality of program implementation*. One of the most powerful and universally supported findings is that quality of implementation and delivery of high quality services and interventions are decisive for outcomes. This may involve explicit curriculum or clear, well-supported intervention protocols backed by training, appropriate staff-client ratios, experiential training and practice opportunities for parents.
- *Timing, intensity and duration of intervention*. Programs need to be appropriate for children's developmental level and of sufficient intensity and duration to achieve optimum effect. Loosely delivered programs of variable quality and intensity and insufficient duration are least likely to generate a significant effect at the population level.
- *Provider knowledge, skills and relationship with the family*. This entails qualifications, training and professional development of staff, as well as models of practice that promote continuity and quality of engagement with parents and children.
- *A family-centred community-based coordinated orientation.* Many of the most successful programs are centre-based or involve a mix of centre and home-based strategies that work best within a framework of community engagement and participation. This requires explicit coordination and arrangements for the integration of services and practitioners.

In summary, the evidence reviewed in this paper indicates that to improve the proportion of NT children achieving their developmental potential, a high priority must be given to strengthening the reach and effectiveness of early childhood services. This will require building the capacity of community organisations (as well as of government and non-government agencies) to sustain this expanded investment in children's futures. These improvements can be enhanced by:

- Developing models for collaborative and integrated delivery of an expanded range of more effective early childhood services and interventions.
- Combining universal and targeted early childhood services for implementation at scale. New investment should aim to extend a core set of universal services needed by all children as well as developing targeted services for groups and communities with higher levels of need.
- Investing in, first, proven and then promising early childhood programs where such programs can be shown to be feasible, culturally accessible and cost-effective for the NT context.
- Implementing strategic programs in the form of properly controlled implementation trials to ensure that there is both effective implementation and robust evidence of effectiveness.
- Strengthening the capacity of community organisations, including professional resources, community leadership and local governance to ensure that they can support the delivery of high quality early childhood services at centres and in homes.
- Exercising political leadership to engage all stakeholders and the wider NT community in an informed discussion about the issues, challenges, and means of achieving better outcomes for children and the potential benefits for individuals and society.

1. Why children's early development matters

"When we invest wisely in children and families, the next generation will pay that back through a lifetime of productivity and responsible citizenship. When we fail to provide children with what they need to build a strong foundation for healthy and productive lives, we put our future prosperity and security at risk."

(Centre on the Developing Child, Harvard University, 2010)[1]

This paper extends the consideration of a population approach to early childhood services by discussing the strength of the research evidence for the benefits of investment in preventive and supportive early childhood programs and reviews those interventions that have been shown to be effective in improving population outcomes. It does not consider macro-economic factors, such as taxation, childcare rebates and leave entitlements (such as paid parental leave), which also impact on families and parenting, and potentially influence the quality of support for child development. Nor does it discuss welfare policies such as income management where family payments are subjected to specific surveillance and compliance regimes to support children's growth and development.

A recent OECD report into population health investment in Australia and some other similar countries indicates that proportions of expenditure on prevention and population health have for decades been static at around 0.1% of Gross Domestic Product and 1-2% of total health care expenditure.[2] This resistance to change indicates that it is not a simple matter to increase expenditure on prevention against the claims of hospital care, acute care and clinical services and the research and development effort they require. In making the case for a larger share of health and other resources being allocated to prevention, there are two important considerations. Firstly, there are significant, and, it might be argued, unacceptable costs that can accrue to both society and to individuals if nothing is done. Secondly, the case for prevention needs to make more explicit the evidence that population outcomes can be improved by well-directed investment in services and programs to support child development, in a way that can not be achieved by existing clinical care and remedial services.

1.1 The costs of inaction and the case for prevention

It is unfortunately the case that a large proportion of the NT's children are not realising their developmental potential. This was evident in the national findings of the Australian Early Development Index census of five year olds commencing their first year of school in 2009 where a significantly higher proportion of NT children were found to be developmentally vulnerable in comparison with other Australian children.[3] This is important as the disadvantage associated with poor early childhood development tends to have a compounding effect through the entire lifecycle. The immediate consequences of poor early childhood development include difficulties in making a successful transition into school learning, poor educational achievement and low functional literacy, early school drop-out, higher risk of unemployment, delinquency, substance misuse, crime and suicide. Individuals and families incur very high costs for children developing such problems.

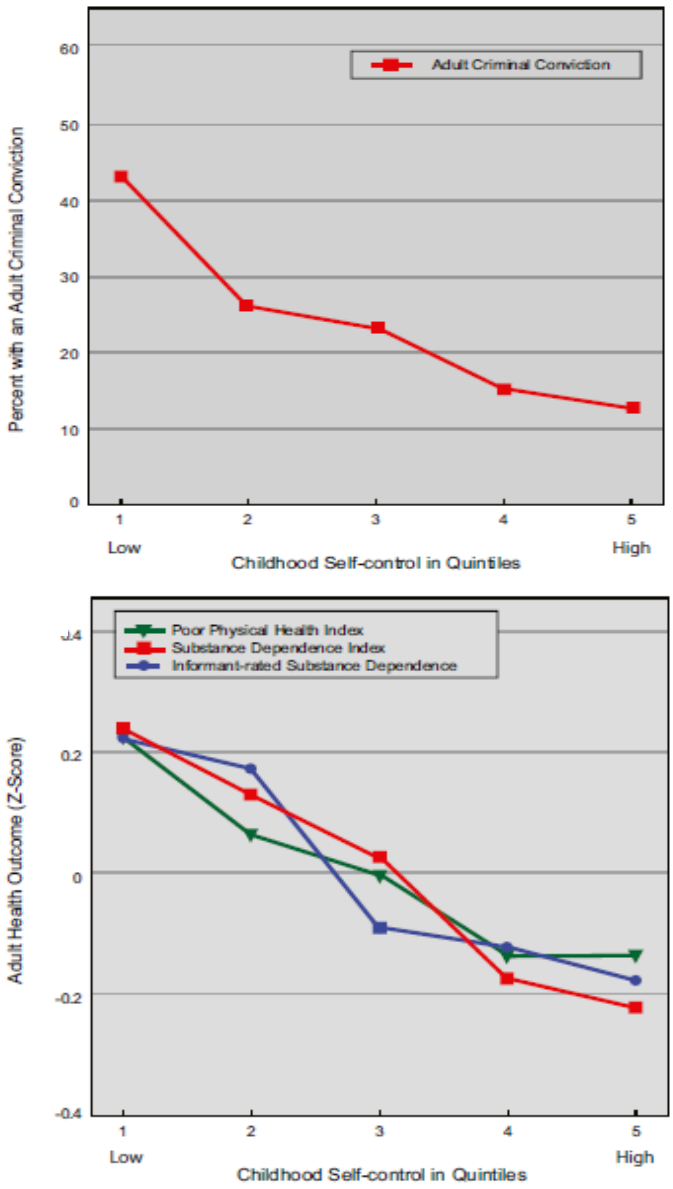
Apart from the consequent risks of reduced capacity for self-determination and reduced quality of life, the effects of adverse conditions of child-rearing on early brain development are also associated with increased risk for a range of adult physical and mental health problems and premature death. Families and society also incur high costs through needing to deal with the burden of ill-health and social problems, the ongoing costs of welfare dependency and increased costs of the criminal justice system. Much can clearly be gained through increased investment in developmental prevention to reduce these burdens and through improving the overall health, wellbeing and productive capacities of the next generation of Territorians.

Early social and emotional development, which includes the acquisition of social competencies and the capacity for self-regulation is an important predictor of success in school learning and later life outcomes. This was highlighted by an important recent longitudinal study which assessed children from age 3 years through childhood and adolescence to age 32, and examined the relationship between self control assessed in childhood and later health and social outcomes like substance misuse and crime.[4]

This study found that even after social class and IQ were taken into account, childhood self control significantly predicted later health status, wealth, substance misuse and crime (Figures 1 & 2). It showed that people who improved in self control after childhood had better adult outcomes on all indices, even after controlling for social class and IQ. These findings are important because they suggest that emotional self-regulation (i.e. self control) is amenable to improvement through intervention, both in childhood and adolescence.

Similar associations between self control in childhood and later outcomes remained evident even after children diagnosed with Attention Deficit Hyperactivity Disorder were excluded from the analysis. This suggests that there is a broad relationship – a gradient – between the level of self control in childhood and adult social outcomes beyond the effects of a clinically diagnosable disorder. The strength of the associations evident in early adulthood highlight the potential benefits to society if early preventive action is taken to improve self control and to reduce the incidence of problems linked to poor self control at a population level.

Figures 1 & 2: Self control in childhood and later health and social outcomes



(Source: Moffat et al, 2011) [4]

Another longitudinal study of children in disadvantaged urban London found that by age 28, the costs to society for individuals with childhood conduct disorder were ten times higher than for children without these behaviour problems.[5] These costs are incurred through their increased utilisation of the criminal justice, health, remedial education and welfare service systems. Disruptive and poorly self-regulated behaviour in childhood is thus a major predictor of how much an individual will cost society. In addition to costs of crime and related adverse outcomes, health and education service use by youth with Attention Deficit Hyperactivity Disorder and conduct disorder, is extremely expensive.[6]

The recent Report of the Board of Inquiry into the Child Protection System in the Northern Territory has also dramatically highlighted the rising costs of inaction in prevention.[7] Statutory child protection services including surveillance, investigation, child removal and placement have become increasingly controversial, in part because they consume vast resources without measurably contributing to prevention of risk and vulnerability. The Report of the Board of Inquiry into the Child Protection System in the Northern Territory recommended significant expansion of preventive services without which the child protection system would be even more overwhelmed.

Another important area of cost arises from the impact of unrecognised and untreated, but potentially preventable problems on the effectiveness of services. For example, child conduct problems and difficulties in children's behavioural adjustment increase demand for high-cost remedial services and are also often followed by more overt non-compliance and antisocial or disruptive behaviour in children's later school years. These problems in the classroom can negatively affect the quality of the learning environment for all children. Failure to prevent such problems before school and in the early school years is a major factor limiting the efficiency and effectiveness of the school system as a whole and reduces its output (educational attainment) relative to the costs of school education provision.

Failure to prevent modifiable problems also has an adverse impact on the provision of remedial services. An important Australian study, the Pathways to Prevention Project, evaluated multiple interventions in a whole of community based on multiple partnerships between non-government organisations, community organisations and a university.[8] It showed that the cost per participant of the multiple interventions of the community-wide project was more than $20,000 below the cost of participation in a remedial reading program that had been adopted by the Queensland Education Department. This study argued that a community-wide program with components addressing social skills, early literacy and family intervention, that diverts even a small number of children from such a remedial service (and services such as intensive behaviour management programs) achieves significant and measurable reductions in costs to society.

In a jurisdiction like the NT, where there is significant under-development of many of the specialised services and limited access to existing services outside of the major centres, the importance of developmental prevention programs to reduce the need for more costly remedial services cannot be overstated. However, investment in developmental prevention should not be at the expense of progressive development of remedial services, rather both types of intervention should be on par with services available to children in other states and territories– both types of intervention are required. Possibly the most salient cost of inaction in the area of early child development for any society is the failure to realise the developmental potential of all its children, and so to maximise the productivity and wellbeing of the society as a whole.

1.2 Efficacy and effectiveness

It is important that the characteristics and strength of the evidence regarding the benefits of early years programs for reducing longer term costs and enhancing social outcomes are more widely understood. This evidence comes from a number of different areas of basic and applied intervention research.

Basic research is the body of scientific research on child development that informs understanding of child development, determinants of risk and outcome and causal mechanisms. Basic research supports the formulation of hypotheses, that in turn underpin practices and interventions that are the subject of research trials of the specific interventions. These research trials can then either explore the efficacy or the effectiveness of the interventions or initiatives.[9]

Efficacy. The efficacy of an intervention refers to its capacity to yield benefits without doing harm under optimum conditions. Efficacy trials involve stringent experimental controls, usually randomised controlled trials which enable strong inferences about specific causal mechanisms to be drawn. Some of the most important evidence on outcomes comes from such high quality, stringently controlled trials.

Effectiveness. The effectiveness of an intervention refers to its capacity to yield benefits without doing harm under 'real world' conditions, which may include different contexts of service provision, wider and more variable client groups, different management structures, etc., such as are encountered when an intervention is replicated more widely. Effectiveness trials also involve rigorous experimental methods, including randomised controlled trials. The demonstration of the efficacy of an approach under highly controlled conditions is not sufficient to guarantee its effectiveness in all circumstances. An important element of the transfer of research into practice is the demonstration of effectiveness in real world conditions of service provision and clients in actual communities at sufficient scale to be able to demonstrate outcomes of significance for the population.

Applied implementation research involves empirical evaluation of new interventions tested in the field. This generally begins with small scale trials of the efficacy of a program delivered under optimal or experimentally controlled conditions. If effective, the next step is usually a larger-scale pragmatic trial of its effectiveness under real world conditions to establish the implementation costs and whether the programs benefits are sufficient to justify its wider implementation at scale. This of course should also be the sequence followed for most medical treatments but in many areas of health care practice, as well as in health promotion, educational or behavioural interventions, the development of new interventions has sometimes followed a reverse path whereby the general effectiveness of an approach may be demonstrated in the course of service development to a point at which an efficacy trial is warranted to verify and further specify the treatment mechanisms involved.

For accountability purposes, program evaluation should always include evidence of the program outcomes and the costs to achieve these outcomes. Program outcomes and costs are also important to measure in order to identify and improve the various factors that influence the quality of implementation and those that shape their outcomes. However, in the NT context there have been relatively few evaluations of early childhood services and programs which have included systematic evaluation of the quality of program/service delivery and/or their costs and effectiveness in improving developmental outcomes. This has occurred in both the evaluation of large-scale complex programs consisting of multiple components as well as in more purpose-specific locally developed administrative arrangement and initiatives with multiple stakeholder inputs.

Where whole community (or regional) initiatives involving several service components are evaluated, obtaining high quality evidence about outcomes can be difficult to achieve and to weigh-up. This makes the relatively small number of whole community programs which have demonstrated strong evidence of efficacy all the more important. Nevertheless, current public policy and service planning is increasingly emphasising the need for monitoring and accountability processes, both to maintain the quality of program delivery and to ensure that evaluation of outcomes are properly documented to justify on-going program funding.

2. The benefits of early childhood programs

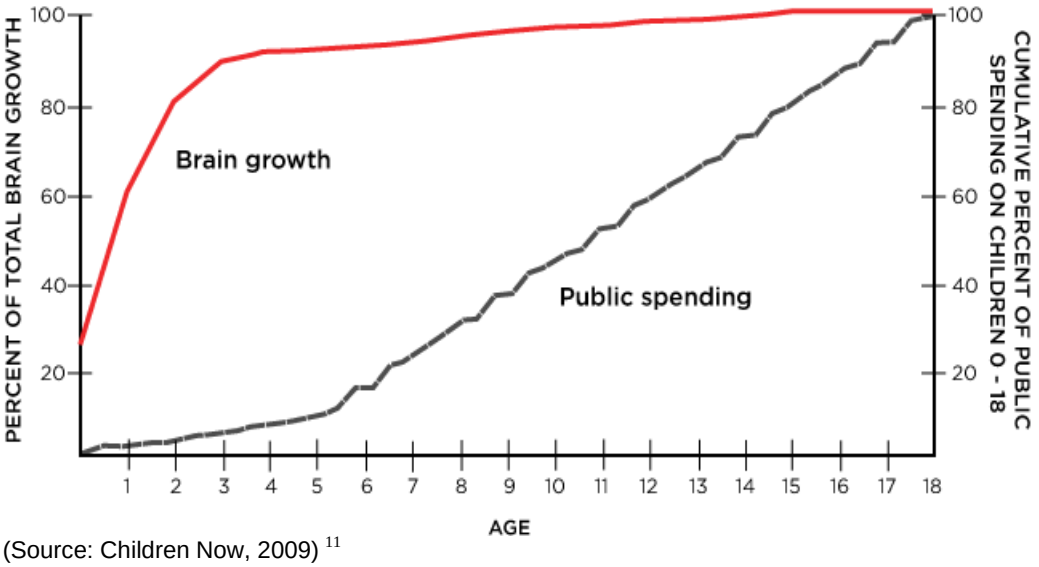
Effective early childhood programs offer a number of different benefits: returns related to child growth and development (benefits to participating families and individuals); returns related to economic activity (benefits to individuals and to society); and returns related to adult human capital development (benefits to society).[10] As returns on investment, these benefits also include: improved school readiness and performance of children at school; reduced conduct problems and aggressive behaviour leading to reduced incidence of antisocial behaviour, delinquency and school drop-out; improved parenting and parental efficacy; improved educational attainment, employment and earnings; and reduced incidence of arrests, crime and drug use.

At the level of the state, these outcomes translate into reduced costs of welfare dependence, remedial services in health and education and policing and criminal justice, together with improved workforce capability and taxation revenue. The benefits of these interventions are not confined to the educational domain, but extend to a wide range of important social outcomes. In economic analysis, the value of these benefits is calculated in terms of dollars to more accurately understand the return on investment of early childhood programs.

2.1 The return on investment in early childhood programs

Over many years it has become clear that society under-invests in early childhood and child development and over-invests resources in later years.[11] In the USA where the scientific evidence regarding the critical importance of children's early brain development has been available for well over a decade, the resources for services for children and young people and their families continue to flow to the older age groups where the capacity to benefit has reduced (Figure 3).

Figure 3. Brain growth and public investment, a mismatch



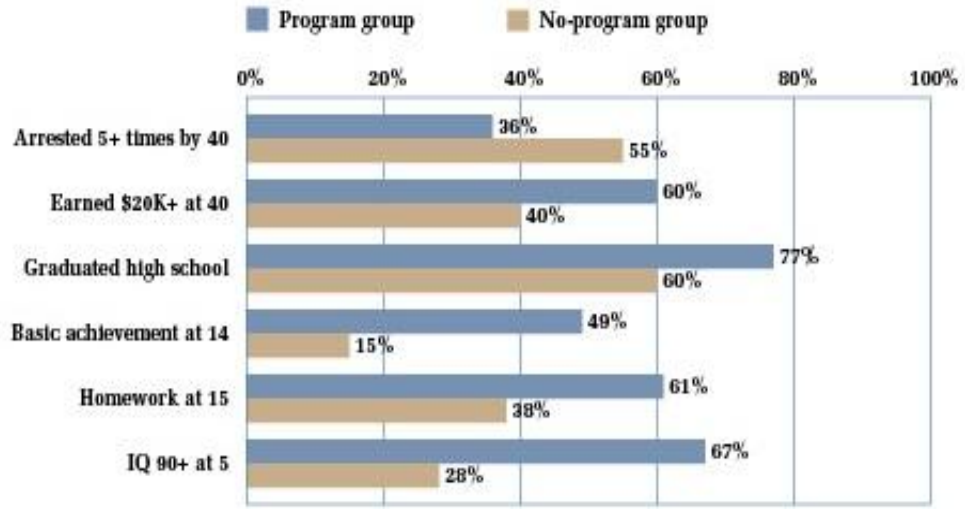
(Source: Children Now, 2009) [11]

Public investment in the early years is supported by the science of early childhood development, which clearly demonstrates that critical developmental periods in the first years of life are strongly linked to later cognitive and social and emotional development, and thus to later educational and social achievement. The ability to influence later outcomes by targeted action in the early years clearly represents an important opportunity which is not being adequately realised.

The growing consensus on the positive value of investment in the early years follows substantial economic studies of the costs and benefits of a number of high quality early childhood programs. Many of these benefits become more evident in later years as children reach adulthood. Evaluation of the long-term effects of a number of evidence-based programs in well designed randomised controlled studies and properly implemented programs have demonstrated strongly positive cost-benefit ratios.[12] [13]

For example the cost-benefit for every dollar spent in these programs ranged from $8.74 for the High/Scope Perry Preschool program, $7.08 for the Elmira and Memphis studies of the Nurse-Family Partnership program (prenatal and early infancy), $3.78 for the Abecedarian project and $7.14 for the Chicago Child-Parent Centers.[18] More recent data from the age 40 follow up of the High/Scope Perry Preschool program showed the original $8.74 cost-benefit ratio at age 23 had increased to $17 for each dollar originally spent.[15]. Figure 4 below details some of the differences observed between study participants and controls in their developmental, vocational and socioeconomic outcomes from age 5 to 40 years.

Figure 4. High/Scope Perry Preschool Study: Major findings at age 40 years



(Source: Schweinheart et al, 2010) [15]

More limited economic evaluation has been conducted for other large-scale government programs such as Head Start and Early Head Start in the USA, and Sure Start in Great Britain.[13-20] In Lynch's analysis, a publicly financed comprehensive early childhood development program for children of low-income families was found to be expensive and the net budget effect would only become positive after seventeen years, with savings exceeding costs after twenty-five years.[13] Lynch also argues that it is justified to extrapolate from high-cost, high quality programs with demonstrated efficacy, despite their relatively small sample sizes, arguing that there is sufficient evidence that comparable effects can be achieved at scale. He notes in particular the success of the Chicago Child-Parent Center program, a multi-component program implemented at scale in twenty-four urban centres.[19,20]

The importance of this initiative is that it is multi-component and provides comprehensive support for early education as well as parenting and family support for children from 3 to 9 years in up to six years of continuous intervention. Longitudinal evaluation showed strongly positive returns on investment.[20,21]

Chicago Child-Parent Center Program Components [20]

1. Structured and diverse language-based instructional activities to promote academic and social success.
2. Low child-teacher ratios in preschool (17 to 2) and kindergarten (25 to 2): intensive, individualized learning.
3. A multi-faceted parent program: parent room activities, volunteering in the classroom, school events, educational courses supervised by the Parent-Resource Teacher.
4. Outreach activities including resource mobilisation, home visitation, and enrollment of children most in need.
5. On-going staff development for all center personnel.
6. Health and nutrition services including health screening, speech therapy, shared nursing services, free breakfasts and lunches.
7. A comprehensive school-age program supports children's transition to elementary school through (i) reduced class sizes (to 25 children), (ii) the addition of teacher aides in each class, (iii) extra instructional supplies, and (iv) coordination of instructional activities, staff development, and parent-program activities by the free-standing Curriculum-Parent Resource Teacher.

http://www.waisman.wisc.edu/cls/component.htm

This suggests that early education, parenting and family support programs based on intensive, high quality implementation can be delivered at scale and achieve similar orders of benefit and return on investment.

However, Lynch's analysis also raises questions which need to be considered when weighing up the evidence about the effectiveness and transferability of early childhood programs.

- Which early childhood programs are effective and which generate a positive return on investment in key outcome domains? This is important as not all early childhood programs can be assumed to be effective.
- Is further evidence needed about the effectiveness of programs of proven efficacy in the specific conditions of the NT? Given the population characteristics of the NT population, the complex nature of the problems in some communities, the general underdevelopment of services in much of the NT, very careful consideration is needed in regard to the feasibility of proven or promising programs developed and evaluated in overseas or other Australian contexts (such as in large cities).
- What are appropriate frameworks for the successful implementation of effective programs? This requires consideration of the evidence for different implementation scenarios, including large scale public roll-outs and whole-of-community initiatives compared with evidence for the implementation of discrete interventions within an existing service provision framework.

2.2 Effective programs supporting child development

"Early childhood interventions can shift the odds toward more favourable outcomes, but programs that work are rarely simple, inexpensive or easy to implement."

(Shonkoff and Phillips, 2000) [22]

Implementation strategies can vary in terms of how they are targeted and where in the causal pathway they seek to effect change. Ideally, basic heath care, family services and early childhood programs should be available on a universal basis to support the healthy early development and learning of all children. Where children in particular population groups or communities have high rates of socioeconomic disadvantage or developmental vulnerability, selective or more targeted intervention strategies may be necessary to enable more equitable outcomes. An example would be the provision of intensive parenting support or enriched early learning and care for groups or communities identified as having higher need.

Other strategies aim to reduce the incidence of identifiable early problems that are known to predict later more serious problems that are more costly to treat. For example, interventions in the years before school to prevent early onset conduct disorder have been effective in reducing later antisocial behaviour, delinquency and crime.[6]

Some high quality early childhood programs offering enriched early education at, or before preschool, parenting and early intervention programs supporting early learning or targeting identified risks in child development have demonstrated capacity to deliver significantly improved developmental outcomes for children. These programs may work with the child or without parental involvement; they may work with parents and parenting directly, or may involve a combination of strategies directed at parent, child and parent-child interactions. They have been delivered both in centres and in homes in various combinations. The cost of delivery of these programs varies considerably and their cost-benefit ratios reflect both the costs of delivery, their capacity to deliver improved outcomes and the estimated value of the benefits achieved in specific population contexts.[19]

The efficacy and/or effectiveness of these programs have been demonstrated in trials using randomised designs with follow-up of outcomes over years. Effective programs utilise detailed training and explicit curriculum or manuals with stringent measures to maintain fidelity of delivery. Numerous other well-theorised and well-implemented programs exist which target improvements in the skills of parents to support their children's learning, but for many of these there is currently less robust evidence of effectiveness.[14]

Available evidence indicates that not all early childhood programs targeting key outcome domains – improved early learning and development; improved school readiness; reduced risk of neglect and abuse; reduced risk of clinically significant disorder – are sufficiently effective to generate a positive return on investment over time. For example, although early childhood programs, particularly programs that aim to improve parenting and parental self-efficacy, are often regarded as effective in preventing child abuse and neglect and reducing the need for costly child protection interventions, very few programs claiming to use a home-visiting approach have been shown to be effective. [22]

The Elmira Nurse-Family Partnership program demonstrated significant reductions in incidence of neglect and abuse, as well as reductions in presentations at hospitals for injuries or ingestion of poisons during the first two years of life. There were also reductions in placement of children in out-of-home care to age 4 years. However, by the fourth year, the differences in state-notified child protection episodes between treatment and controls tended to disappear.[24] The investigators suspected that this was in part because of the greater exposure of treatment families to services and monitoring likely to lead to higher rates of detection than among controls.[23] Another randomised controlled trial of the same nurse home visiting program implemented as a secondary prevention strategy with parents of newborns in families with a history of physical abuse or neglect found that the program did not prevent recurrence of physical abuse and neglect. [25]

A systematic review of economic evaluations of the Nurse-Family Partnership programs showed the highest return on investment for the high-risk sample of participants (5.7:1) with the lowest return for the low-risk sample (1.26:1) and a mean for the total sample at 2.88:1 (followed up to 15 years). Another meta-analysis of thirteen studies showed a mean return on investment for high-risk mothers of 2.24:1.[26] However, numerous nurse home visiting trials included in this study (followed up to 4 years only) yielded a barely positive return, leaving the overall outcome to rest on the effectiveness of the quality of delivery of the Nurse-Family Partnership program.

It is thus clear that variations in model programs cannot be simply transferred to service settings and community contexts without ensuring program integrity and effectiveness. The evidence is also clear that programs should be appropriately targeted. David Olds, the developer of the nurse home visiting program, has said of the pattern of results of the Elmira study that it:
"… challenges the position that these kinds of intensive programs for targeted at-risk groups ought to be made available on a universal basis. Not only is it likely to be wasteful from an economic standpoint, but it may lead to a dilution of services for those families that need them the most because of insufficient resources to service everyone well." [23]

Examples of programs with strong evidence of efficacy and effectiveness include: [12]

Enriched early learning programs

- **High/Scope Perry Preschool**: enriched intensive half-day, full-week preschool curriculum with home visits, attendance one to two years.
- **Carolina Abecedarian:** full-day day care for children aged 6 months to 5 years with enhanced learning activities and regular support for parents.
- **Chicago Child-Parent Centers**: half-day, full-year centre-based early education with parent involvement.

Parenting and parent/child programs

- **Nurse-Family Partnership**: parent home visiting support provided by nurses to low income, first-time mothers; duration antenatal to two years.
- **Triple P Positive Parenting Program**: multilevel, multi-age intervention to improve parenting and reduce conduct disorder; includes group and individual components; mode of delivery, duration and intensity vary at different levels.
- **The Incredible Years**: multi-component parenting program, targeting parenting training, children's social skills, and (indirectly) parent-child and teacher-student interaction; trialled with range of social and emotional and clinically diagnosed conduct disorders.

The more expensive the program, the more carefully its target group must be selected. For example, the Abecedarian program, an intensive full-week, full-year day care program, has demonstrated very significant outcomes with substantial cost-benefit ratios. However, it costs far more per participant than other early learning programs and entails significant investment in infrastructure and workforce capacity.[12] [13]

David Olds' comment should be borne in mind: "…diluted or half-cost versions of such interventions are unlikely to generate any positive returns at all". In this regard, the findings from the Australian developed Triple P Positive Parenting Program which was implemented in a population-wide trial with families of preschool children (3-5 years) in a south eastern state of the USA with random assignment of counties (average 96,000 people), to treatment and control conditions, are of particular interest. Counties receiving the intervention registered significant positive outcomes (with large effect sizes) in terms of improvements in the number of substantiated cases of child maltreatment, out-of-home care placements and hospitalisations for child injury.[27]

A Canadian systematic review of evidence-based interventions to prevent mental disorder in children – conduct disorder, anxiety and depression – found that interventions focusing on parenting and parent training, children's social skills training and, for anxiety and depression, cognitive-behavioural therapies, delivered significant preventive benefits, sufficient to justify investment in them.[25] For conduct disorder, four trials "were particularly noteworthy – for rigorously assessing diagnostic measures … or for measuring outcomes over 15 years of follow-up or more…". All four significantly improved outcome measures and two significantly reduced diagnostic measures of problems. For anxiety, one randomised controlled trial demonstrated diagnostic reductions for the whole sample that rose to 54% of the at-risk sample of children, while for depression, two trials developed significant gains that were sustained at one and two years follow-up. The study concluded that at the then current Canadian prevalence rates, incidence reductions of the order of 8-11% as reported in these trials would result in 24,000 fewer cases of conduct disorder, 27,000 fewer cases of anxiety, and 20,000 fewer cases of depression. The authors noted that prevention of just one case of conduct disorder may save an estimated $US1.5M in cumulative lifetime costs.[26] The study concluded that parenting training, children's social skills training and variants of cognitive-behavioural therapy are all effective preventive interventions for childhood behaviour and mental health problems.

2.3 Large scale program implementation

Other sources of evidence on the benefits of investment in the early years are derived from the evaluation of large scale public implementation programs. Since the 1960s, national governments have adopted public policies for early childhood that aim to improve the developmental outcomes of the children of the poor and disadvantaged. Among the best-known public programs are Head Start and Early Headstart in the USA, and Sure Start in the UK. These are large-scale long-term public programs that are key elements of national policies for early childhood.[12] They aim to provide a comprehensive range of services to disadvantaged families, targeting the provision of services by regional implementation in poor neighbourhoods or census districts, by means-tested eligibility or other criteria for determining access.

Examples of large scale childhood development programs and strategies

- **Head Start**: USA; early learning from 3 to 5 years preschool, centre-based and/or home visits, variable implementation across sites; includes Native American and Native Alaskan sites
- **Early Head Start**: USA; 0 to 3 years multiple early childhood strategies home or centre-based
- **Sure Start**: UK; area-based early childhood program, multiple strategies in core service areas
- **Family Support Program**: Australia; interventions and initiatives for children 0 to 5; includes the area-based strategy *Communities for Children*, implemented in sites across Australia, including the NT.

Policies supporting large scale initiatives with a range of program elements from early education classrooms, 0 to 3 years programs, play groups with opportunities for structured learning, parenting programs and improved child and family health services (delivered in home visits or in centres) have provided a framework within which some well-constructed interventions have been developed and evaluated using rigorous experimental designs. They generally involve implementation with a mix of methods that are less intensive and less rigorously monitored and evaluated. Australia has moved tentatively in a similar direction through recent national initiatives such as the Stronger Families and Communities Strategy (now the Family Support Program) beginning a decade ago.[18]

The evaluations of such large-scale public programs such as Head Start and Early Head Start in the USA and Sure Start in the UK have been equivocal, with some studies demonstrating failure to deliver meaningful returns given the scale of investment. Possible reasons for the apparent lack of demonstrated outcomes for large public programs have been extensively debated.[14 16 17 26] In general, the overall return on investment for community or area-based initiatives would be expected to be less than for consistently implemented, high quality model programs delivered under more controlled research conditions. The unevenness of both quality and type of services, combined with the overall lower investment per child offered in Head Start programs appears to be the main factor accounting for the unevenness of the outcomes reported.

Some of the described difficulties could also be due to deficiencies in their evaluations. In a review of evaluation studies of the impact of the Head Start program, it was found that the difference between the evaluation's intervention and control samples in terms of quality and hours of early childhood services received was very small – control group families had accessed other programs. It was then hardly to be expected that there would be significant differences in outcomes. Nevertheless, it has been claimed that there is still evidence of benefits in terms of children's school readiness, later educational attainment and arrest rates of former participants when compared with matched populations.[14]

Large scale publically funded early childhood development programs typically consist of a broad array of interventions and services, many of which are less well funded and of lower quality than model programs and research trials delivered to limited samples of participants. This was evident in the initial National Evaluation of Sure Start which showed that there was wide variation in coordination, management and targeting of services and initiatives in the first phase of the establishment of Sure Start Local Programs. This evaluation found very few significant differences between treatment and control families.[29] The benefits which were observed were among less disadvantaged families while some adverse effects were reported for some of the most severely disadvantaged families (such as young single mothers from very poor backgrounds).

Evaluation lessons from Sure Start [12]

- Programs that lack explicit curriculum and are variably implemented are impossible to evaluate in a manner that answers questions about mechanisms leading to benefits.
- Randomised controlled trials provide much better tests than non-experimental methods.
- It is better to determine efficacy before implementing at scale in multiple settings.
- For long-term effectiveness and to assess long-term benefits evaluation needs to be long-term (as with High/Scope Perry Preschool, Nurse-Family Partnerships etc.).
- Design must be able to identify subgroups who experience different effects and have different needs and for whom alternative strategies might be desirable.
- Research must be able to test whether findings apply across a range of different contexts.

Rutter reviewed the issues affecting the first phase of Sure Start. [30] Perhaps the most important of these issues was the political choices that constrained the design of Sure Start and its evaluation. The government had ruled out the use of randomised designs for the evaluation; this committed the evaluation to a model that was methodologically weakened. The implementation of manualised programs by Sure Start Local Programs was ruled out; this meant that proven evidence-based interventions were not implemented, and, more importantly, that there was no possibility to measure and maintain fidelity of implementation in the field across the five core services that Sure Start Local Programs were expected to provide. In short, policy decisions that impeded the adoption and implementation of quality evidence-based programs had a significant bearing on the reported outcomes.

These findings have been largely confirmed by a recent UK Audit Commission report on early childhood health care.[17] It noted that of over £10.9 billion spent over ten years on child health in the UK, 70% of which was for child health initiatives for the Sure Start program, there had been no detectable improvement in health outcomes for children in the UK.

Although identifying some areas of good practice, the report noted that there was wide variability of quality of implementation, little rigor in the selection and targeting of programs or adjusting practices to evidence, or in identifying and addressing gaps in the take-up of services.

Notwithstanding this lack of evidence for child health gains, an evaluation of the second phase of Sure Start by Belsky in 2006 did show that the introduction of multi-service children's centres enabled Sure Start Local Programs to reach a greater proportion of eligible children and families.[32] Evaluation of community-level program impacts was possible in this study because data on 9,000 children aged 9 months and their families living in English communities where Sure Start Local Programs were operating also happened to be available from the *Millennium Study* (a large-scale national longtitudinal study). This enabled relevant information being collected on the health, development and wellbeing of these children and families when the children were aged 3 and for longer-term follow-up data on their developmental outcomes being compared with children and families from other similarly disadvantaged areas who had not participated in any Sure Start Local Programs.

This later analysis demonstrated some positive effects associated with Sure Start Local Programs for seven of the fourteen intermediate outcomes assessed, including better social development i.e. more positive social behaviour and greater independence/self-regulation than their counterparts from communities where the Sure Start Local Program was not operating. Beneficial effects on parenting included less negative parenting and better parental involvement in the home learning environment. The analysis also showed that these parenting improvements appeared to be responsible for a higher level of positive social behaviour reported in children in Sure Start Local Program areas.[32]

The UK experience with Sure Start provides important lessons for Australian public policy initiatives such as the Communities for Children program of the Australian Stronger Families and Communities Strategy. This national program funded similar area-based initiatives, in which a lead local organisation was commissioned to facilitate the development of child and family services for the community and/or region in collaboration with other local providers and agencies. The national Communities for Children policy did not require high quality evaluation of the programs' implementation. Not unexpectedly, a methodologically limited national evaluation was only able to demonstrate marginal service delivery improvements and no meaningful improvement in population-level outcomes.[33]

However, where intensive high quality evidence-based interventions have been implemented within publicly funded, large scale, area-based programs, improvements in outcomes for children and families are more likely to have been demonstrated. Thus specific interventions implemented within the US Head Start, Early Head Start and Sure Start programs have shown clear evidence of benefit.[34, 35] Evidence from these programs also shows that where policy settings focus on the implementation of high quality evidence-based interventions, scaling up of these programs can be achieved by using professional development and quality assurance systems within national, regional or area-based programs.

Area-based initiatives involving community participation, collaboration between community agencies and service providers and some integration of services are often cited as having the potential to mobilise participation and engagement beyond what can be achieved by service providers working alone through existing systems. However, such approaches are politically and managerially demanding and are often unable to consistently sustain services that are capable of affecting change at the population level. Despite soundly based concerns about the limited evidence for their effectiveness, there remains considerable interest in area-based, community-level initiatives. Citing the proverb "It takes a village to raise a child…". Dorothy Scott argues that mobilising communities, rather than solely targeting individuals with interventions, is critical to reducing risks in child protection or to improving school readiness of children.[36] Similarly, Bruner and colleagues advocate 'village-building' strategies as a key to enhancing the school readiness of disadvantaged children, in addition to strategies focusing on school practices, families and individual children.[37] For them, school readiness is simultaneously a function of achieving ready schools, ready families and ready communities, rather than any of these in isolation.

While community or regional-level comprehensive interventions often seek to produce improvements in a number of domains of community capability these benefits are difficult to quantify and monitor.[38]

Although these benefits are difficult to quantify and monitor, they may include:

- Creating accessible, multi-service programs in community centres to improve engagement of clients otherwise out of reach.
- Reduce social exclusion by enhancing participation of cultural or social minorities through area-based initiatives that engage communities in decision making and delivery
- Developing community leadership, decision-making, knowledge about and responsibility for services.
- Facilitate collaboration between providers and enhance synergies between services on a community or regional basis through whole community initiatives.
- Professional development and training to systematically develop and support multiple service delivery objectives in a region or community.

The effects of community capability development approaches which seek to improve support for child development are mainly indirect, but are nevertheless important enablers supporting the implementation of effective programs. At the community level, this requires investment in building organisational capacity for effective program delivery and to provide local input into program leadership and governance.

In summary, there is little if any evidence to suggest that diffuse community-level strategies by themselves produce significant improvements in outcomes over the long-term. Integrated or collaborative initiatives at community or regional-level may be politically useful means of mobilising support and achieving improved collaboration and coordination between providers. However, such initiatives need to incorporate a clear commitment to the implementation of a core of well-designed and rigorously implemented programs and services with evaluation methodologies that can demonstrate their effectiveness in these contexts.

3. Implementation issues

"Poorly designed services delivered by staff who are inadequately trained, underpaid and/or overburdened with heavy caseloads generally cost less but are unlikely to produce significant benefits. Knowledge-based interventions that are funded sufficiently and delivered effectively by well-compensated staff with appropriate skills can produce important outcomes that generate a substantial return on the investment."

(Shonkoff, 2004) [39]

A major challenge in the NT derives from the fact that the majority of Indigenous and many non-Indigenous people live in small rural and remote centres where access to even basic services in child health, childcare, preschool and family support is limited. This limits the professional capacity available to be recruited to the workforce and also means that the service infrastructure may simply not have the capacity to support new interventions that are demanding in terms of the effort required to achieve results. The circumstances of the NT may thus set limits on the feasibility of implementing many of the services and interventions that research has shown to be most effective in other settings.

3.1 Characteristics of effective early childhood interventions

An important review of the science of child development edited by Shonkoff and Phillips [22] has identified the following essential features of effective interventions:

- *Individualisation of service delivery*. There is convincing evidence to suggest that programs that cannot respond to individual children's and families' needs are less successful. This includes not only adjustment to the specific developmental needs of children, but also recognition of features of the socioeconomic setting of parents and children, as well as the cultural backgrounds of individuals. Provision of generic advice and messages or pre-packaged interventions that are not responsive to context are less effective than those that are individualised and sensitive to context and need.
- *Quality of program implementation*. One of the most powerful and universally supported findings is that quality of implementation and delivery of high quality services and interventions are decisive for outcomes. This may involve explicit curriculum or clear, well-supported intervention protocols backed by training, appropriate staff-client ratios, experiential training and practice opportunities for parents.
- *Timing, intensity and duration of intervention*. Programs need to be appropriate for children's developmental level and of sufficient intensity and duration to achieve optimum effect. Loosely delivered programs of variable quality and intensity and insufficient duration are least likely to generate a significant effect at the population level.
- *Provider knowledge, skills and relationship with the family*. This entails qualifications, training and professional development of staff, as well as models of practice that promote continuity and quality of engagement with parents and children.
- *A family-centred community-based coordinated orientation.* Many of the most successful programs are centre-based or involve a mix of centre and home-based strategies that work best within a framework of community engagement and participation. This requires explicit coordination and arrangements for the integration of services and practitioners.

The evidence from implementation science about effective program implementation points to the importance of systematic program delivery methods to ensure that the implementation is capable of replicating the key program elements and ensuring that participants have sufficient exposure to and experience of the essential program features. This requires investment in establishing strong systems to support the fidelity, consistency and sustainability of program delivery. To optimise program outcomes the program delivery methodology requires careful specification of site requirements for program participation, defined processes of staff recruitment and training, professional program support, and information systems enabling the monitoring of program management, program delivery and program outcomes.[39]

Poor quality implementation of otherwise well-intended programs not only consistently fails to achieve positive outcomes, it can also significantly increase the risk of unintended harmful effects.

Much more is now understood about factors that enhance the likelihood of successful program roll-out to improve developmental outcomes for children. For example, if implementation occurs without linked strategies techniques of dissemination of information; training, laws, mandates and accountability; funding and incentives; and organisational change it is not likely to be successful.[40] Employing dedicated implementation teams can lead to accelerated and effective implementation efforts in a number of sectors. Successful teams are comprised of members who know the program well, know implementation well and understand improvement cycles that combine monitoring and feedback to inform and improve implementation efforts over time.[40]

Studies of effective programs have demonstrated that when implementation involves an implementation team, 80% saturation is obtained over three years compared with efforts involving more passive implementation (for example, roll-out of guidelines or provision of information or training alone), which obtain only 14% saturation over seventeen years.[40] While ongoing quality improvement strategies to support practice and incremental service improvement need to continue, passive implementation strategies do not achieve sufficient change in services or sufficiently clear targeting of risk and vulnerability to produce meaningful changes in outcomes.

Program fidelity, adherence to a program's specifications for practice and methodology is essential for replicating the effects of evidence-based programs and the ability to attribute those effects to the intervention as implemented. There have been debates about whether or how contextualising or adapting effective programs to suit specific contexts should be allowed.[39] However, it can be argued that adaptation is a condition of successful replication rather than the opposite, that is, some degree of adaptation may be needed if fidelity to the effective change mechanisms of the intervention are to be achieved.[41]

It may be tempting to consider picking interventions 'off the shelf' or adapting critical elements of well-known programs in order to be able to locate them in remote Indigenous communities flexibly and at low cost. Such a low-cost solution could involve permitting practitioners to adapt an intervention in any way that is compatible with attracting Indigenous clients to participate in a particular community context. Given the difficulties of practising in remote communities, particularly where the practitioners may be seen as community 'outsiders', there is often pressure to abandon any prescribed methods or practices in favour of adaptable and seemingly more 'culturally appropriate' strategies.

In such cases, implementers would not be able to have confidence that the selected programs would be consistently delivered with sufficient quality and integrity. It would also not be possible to know whether exposure of clients to the selected programs would consistently meet required thresholds of intensity, quality and duration sufficient to cause positive change. For these reasons, fidelity needs to be monitored and supported as a core feature of successful implementation and as a requirement for the evaluation of program outcomes.

Nevertheless, the circumstances and characteristics of the NT and its most vulnerable populations are such that no interventions are likely to be simply implemented without proper regard for local contexts. Significant effort will continue to be needed to systemically engage with community leaders and stakeholders in building local program delivery capacity and community understanding of the value of engaging with child development programs and services. This is particularly true when programs are being considered for implementation in communities which have not previously had experience of such programs.[37 43]

3.2 Models for effective implementation

As already described, the expense of highly targeted and resource-intensive single interventions is considerable and the more expensive the program, the more carefully its target group must be considered. This may work against the feasibility of high-cost, high quality programs in many settings. The cost of provision of comparatively expensive interventions (such as models based on Abecedarian or High/Scope Perry Preschool) in service delivery settings with small eligible populations may require considerable certainty about outcome (for example, verification through an effectiveness trial in a range of community settings) to justify the level of investment required.

An effectiveness trial in advance of wider replication would provide greater certainty about outcomes that can be delivered and increase understanding about the processes required for effective service delivery and implementation. The Canadian review of early intervention studies to support child mental health recommended implementation by way of randomised controlled trials to ensure high quality implementation. [28]

Other considerations also need to be taken into account in regard to the feasibility of delivery of some of these programs. While international evidence has demonstrated the efficacy of Triple P Positive Parenting Programs and its effectiveness as a population intervention in many service settings, some research suggests that it has proven more difficult to engage and retain Indigenous families in such highly structured programs, even where parents have sought help and assistance for child behaviour problems before seeking to join a program.[44] In other words, success at a population level may not necessarily translate into effectiveness for all high needs or disadvantaged groups without some adaptation of the approach. Contextual diversity between urban and remote settings and between clients of various cultural backgrounds remains a critical challenge for engagement of families and for their participation in early childhood programs.[45] These problems are exacerbated where the professional workforce is insufficiently large or stable enough to accommodate the training and practice requirements of the particular intervention.

Overall, the evidence suggests that effective early intervention and prevention in various formats and settings, and seeking to effect change in children and/or their parents, can significantly reduce the incidence of problems known to generate high future costs to society – and to individuals, their families and communities. Given the multiple causes of problems such as child neglect and abuse and even problems like anti-social behaviour, conduct disorder, anxiety and depression, it is suggested that prevention must be pursued through multiple strategies and in multiple settings. This requires striking an appropriate balance between universal strategies aiming at population-wide reach, and the more targeted programs aimed for individuals at higher risk, as well as for members of communities suffering higher levels of disadvantage and multiple concurrent sources of risk.

Given the challenge of underdevelopment of services in the NT, there is a high priority for greater investment in early childhood through the continued building of the capacity of universal children's services. This is consistent with key national and NT policy commitments to extend universal access to preschool and childcare and to develop Integrated Child and Family Centres in the 20 Growth Towns. Such services would be better positioned to provide the base around which more intensive targeted preventive programs for children with greater needs for developmental support would be delivered.

To optimise the return on these investments, models of quality practice, such as those developed for the High/Scope Perry Preschool, Abecedarian and Chicago Child-Parent Centre programs, should be utilised to build quality programs of early learning as the basis for curriculum and instruction in those services. Both targeted and universal programs of prevention and support need to be supported by rigorous quality controls and ongoing monitoring of outcomes through structured and systematic program evaluations.

Furthermore, to ensure value for money and to improve the evidence base of early childhood programs in the NT, the implementation of targeted and intensive services and interventions should include evaluation methodologies which enable their costs and effectiveness to be clearly established and reported.

4. Investing in the future of the children in the NT

A strategy to improve the developmental outcomes of the NT's children will require a balance of investments in new and improved systems, services and interventions across multiple sectors. The evidence reviewed in this paper suggests that to improve developmental outcomes of NT children, and for the most disadvantaged groups in particular, there needs to be significant 'upstream' investment in more effective preventive services that can be implemented for all sectors of the population.

These investments can build on the existing core commitments to extend publicly funded universal services in health, preschool education and childcare, to include new more effective preventive and supportive programs for children, parents and families. They can also be implemented together with, or alongside, existing primary services and be informed by the considerable evidence now available regarding effective early childhood interventions.

4.1 Incremental service improvement

The Health Canada Population Health template refers to the need to strike a balance between priorities which vary along an 'incremental-comprehensive' strategy continuum of service development. Incremental strategies tend to focus on a limited number of factors or issues, or a focus on incremental improvement of existing service delivery approaches, with the aim of creating conditions for new additions and options over time.[46] Continuing service improvement, for example, the ongoing implementation of best practice protocols in child health (and the training to support them) or step-by-step establishment of childcare centres in communities are two examples of an incremental approach to service development.

The continuous quality improvement systems developed to support evidence-based delivery of primary health care in the NT provide another example of this incremental approach.[47] These systems have proved to be a valuable technical support for monitoring and promoting the implementation of new services, adherence to evidence-based practice, and identifying areas for improvement in service delivery. They also constitute an important means of providing feedback to involved practitioners and service managers. The development of similar systems to support incremental service development and improvement in preventive early childhood health, family support, childcare and early education services warrants more detailed consideration. Similarly, there needs to be continuing development of better data systems to support improved coordination and integration of services and to improve capacity to monitor outcomes. Improvement in all of these domains is a necessary component of any investment in expanded early childhood services.

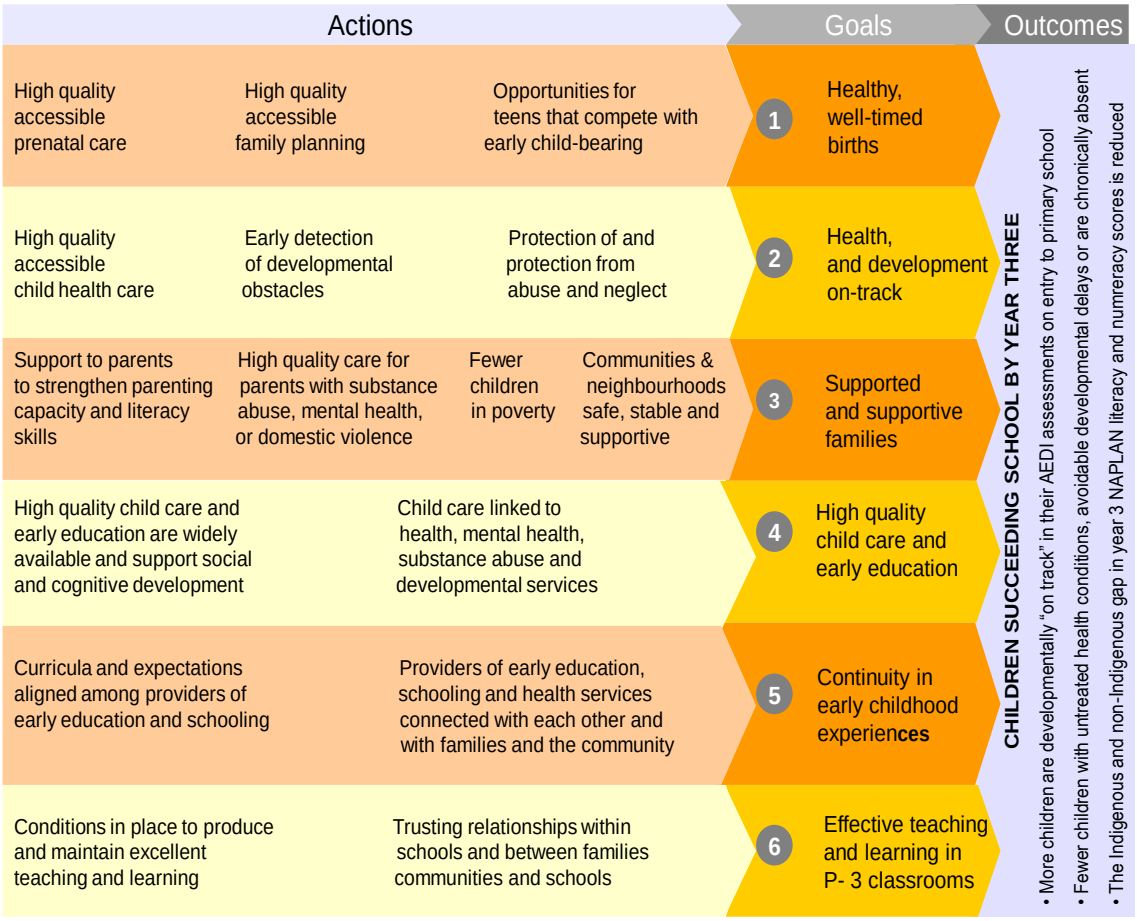
4.2 Comprehensive area-based strategies

Incremental improvement of early childhood services is not enough by itself to influence population outcomes. The circumstances of vulnerable families in the NT clearly calls for a mix of strategies that are each effective in different ways, with different target groups, and addressing specific developmental and family support needs at different points in the child development and family life cycle.

A good example of community planning and coordination of services and programs is the 'pathways to improved school readiness and success at school by year three' described by Schorr and Marchand's (see Figure 5).[48] The way in which the program logic for this model integrates the overlapping pathways to school readiness and academic success highlights the importance of coordinating policies and local programs to provide the developmentally appropriate support families and children need from before conception, during pregnancy, and through the years of infancy and childhood. These are all vital to enabling families in their care-giving roles, assisting children in meeting their developmental milestones and supporting them with high quality early education and care.

The interdependence of each of these areas for action makes it clear that setting children up for success is 'everyone's business'. It requires inputs from health, education and community services, as well as from communities and families themselves.

Figure 5: Actions overview. Pathway to children ready for school and succeeding in Year 3



(Adapted from Schorr & Marchand, 2007) [48]

The example of the Chicago Child-Parent Centers suggests that it is possible to achieve population-level outcomes through centre-based services that deliver multiple interventions, with centre-based and home delivered components that target these steps in the action pathway in an integrated approach, and that are delivered rigorously. This approach could potentially include models of practice based on high quality intensive programs such as High/Scope Perry Preschool, Abecedarian or Nurse-Family Partnership that have been shown to deliver long-term benefits with significant returns on investment.[21]

The implementation of such a model of service provision in the NT would require a long-term commitment to a coordinated expansion of more effective preventive and supportive services delivered from community centres with strong links to existing universal services. Given the geographic and other population characteristics of the NT, with its mix of small to medium-sized provincial, rural and remote population centres, the implementation of comprehensive centre-based programs able to support a limited number of high quality interventions would appear to be more promising than large scale regional or area-based roll-outs with their characteristically uneven performance.

The diversity of culture, language and community resources supporting child rearing and education across the NT will also mean that there may need to be more than one model for delivering integrated centre-based early childhood and family support services.

4.3 A recommended way forward

In conclusion, the evidence reviewed in this paper indicates that to improve the proportion of NT children achieving their developmental potential, a higher priority must be given to strengthening the reach and effectiveness of early childhood services.

This will require continuing investment in building the capacity of community organisations (as well as of government and non-government agencies) to sustain this expanded investment in children's futures.

These improvements can be enhanced by:

- Developing models for collaborative and integrated delivery of an expanded range of more effective early childhood services and interventions.
- Combining universal and targeted early childhood services for implementation at scale. New investment should aim to extend a core set of universal services needed by all children as well as developing targeted services for groups and communities with higher levels of need.
- Investing in, first proven and then promising early childhood programs where such programs can be shown to be feasible, culturally accessible and cost-effective for the NT context.
- Implementing strategic programs in the form of properly controlled trials to ensure that there is both effective implementation and robust evidence of effectiveness.
- Strengthening the capacity of community organisations, including professional resources, community leadership and local governance to ensure that they can support the delivery of high quality early childhood services at centres and in homes.
- Exercising political leadership to engage all stakeholders and the wider NT community in an informed discussion of the issues, challenges, and means of achieving better outcomes for children and the potential benefits for individuals and society.

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