"Improving children's outcomes depends on systemising evidence-based practice…"

PROOF POSITIVE

Michael Little

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Michael Little
The Social Research Unit at Dartington

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Foreword

Much of the work of the Annie E. Casey Foundation has been devoted to the improvement of public systems in the USA that serve low-income children and families. We have been particularly interested in those systems that have the most far-reaching impact on the lives of those they touch – child welfare (protective services, foster care and adoption) and juvenile justice. Almost by definition, the families that encounter these systems are among the most troubled in our society, and the children are at very high risk of a host of poor outcomes: poor health, school failure, anxiety and depression, and delinquent behaviour. But all too often, despite the extraordinary efforts of many committed people, their interactions with these systems leave them no better off.

It was fashionable, not long ago, to explain these poor results by claiming that 'nothing works' – that is, that we simply don't know how to help poor families resolve or ameliorate their sometimes very complex problems. That argument was wrong. We now have decades of research demonstrating very impressive results for a wide variety of interventions in multiple fields. There are no magic bullets; none of these interventions works for everyone, and when they do work they most often produce moderate rather than transformative change. But we now have a solid and growing evidence base for what to do about many serious problems.

We don't use it. We know that our public systems aren't producing the results we want; we know that there are tools that could lead to better results; why aren't those tools taken up by systems? That's the question that led to this monograph by the distinguished scholar and practitioner Michael Little. He offers us not only a compelling analysis of the problem, but also a promising set of recommendations for action.

The Annie E. Casey Foundation is the largest private foundation in the USA dedicated solely to improving the current conditions and future prospects of vulnerable children and families. In that effort, we've long been fortunate enough to work with a host of extraordinary partners – policy makers, community leaders, practitioners and public system leaders. Over the past year, we've begun to take up the challenge raised in this paper, and to consider what our own contribution can be to what will be a very long-term effort to bring together effective practices and public systems. We hope that this thoughtful paper will encourage many others to do the same.

Patrick McCarthy
President and CEO
The Annie E. Casey Foundation
October 2010

Summary

There are many groups of people working to improve the lives of children. I work closely with two groups. One group is engaged in what is called 'system reform'. The other develops and implements what are called 'evidence-based programmes'. I regularly meet people from each group, but seldom in tandem. This paper tries to connect these two worlds.

The paper starts with the usual litany of problems common to children's services. It then proposes three sets of solutions, combining the expertise of system reformers and the developers of evidence-based programmes.

The paper argues first for better understanding about how systems can be made more efficient. It then suggests two types of reform activity to improve children's health and development: one that makes better and more widespread use of evidence-based programmes within mainstream systems, and another that creates a new class of evidence-based activity that demonstrates how change in processes can impact on child outcomes.

Part 1
Problems and definitions

We know how to improve the well-being of children,[1] but we struggle to do this at scale. This paper explores two avenues of activity that might change this situation. One involves getting proven practices embedded in children's services systems. The other path looks at the potential to improve children's services systems in ways other than through the introduction of proven practices.

There are many routes to the destination of better outcomes for children. There are public health approaches that shift the balance of behaviour in a population. As Stephen Woolf likes to point out, less than 15 per cent of health outcomes can be attributed to health services.[2] Engineers in the nineteenth century who built the means to deliver clean water arguably had the greatest influence on our well-being.[3] Getting people, and especially health workers, to wash their hands has been another major public health triumph.[4] Another route is to reduce inequalities in wealth.[5] It is a hard lesson to learn, especially for the USA and the UK, that although inequalities produce greater material wealth for the majority, they shorten and reduce the quality of our lives. I could but will not extend this list. I simply wish to acknowledge at the outset that there are many ways of improving children's lives and not just those that interest me.

My starting point is evidence-based programmes. These are interventions that have a proven impact on children's health and development.[6] There are literally hundreds of examples of such interventions, each formulated with specific impairments to children's health and development in mind. All have been tested in experimental conditions to see if the desired effect is achieved. A handful has been further evaluated to discover if those effects are sustained with large populations. Some have established international reputations, such as Nurse-Family Partnership[7] and

cognitive behavioural therapy.[8] I will give examples of evidence-based programmes that prevent problems, intervene early in the development of a problem or treat it once it becomes entrenched.

But with a few exceptions, even the best known programmes are not widely implemented. Thanks largely to the funders of this inquiry, the Annie E. Casey Foundation, my research has led me to explore the role of system reformers in solving the problem of how to get these proven models more widely implemented. If evidence-based programmes were integrated into children's services systems would the breadth of their impact on child well-being be increased?

In trying to answer this question I was drawn to a second route to improve child outcomes. Can system reform minus evidence-based programmes reduce impairments to children's health and development?

Why the focus on systems? There are two prime markets for evidence-based programmes. The figures vary by jurisdiction and many commentators suggest figures that are both higher and lower than my own rule of thumb that the state spends between $7,000 and $9,000 per child per annum on things like schools, health, early years services and social care. This is true in the USA and in the UK. For children with significant impairments to their health and development, the state can invest these sums every month, often without any apparent benefit for the children concerned and sometimes generating political and public unease.

Again there is variation and disagreement about the amounts but it is not unreasonable to suppose that, on average, parents spend about the same yearly sum on their children as systems do. The money spent by parents is important and should be the focus of further analysis.

But my interest is in state expenditure, most of which is dispensed through systems. Some evidence-based programmes, such as multi-systemic therapy (MST),[9] are designed to be delivered through youth justice, mental health or social care systems, but none has succeeded in becoming core to a system. Market penetration of MST is about 1 per cent.[10] Most evidence-based approaches do not even engage with a market. To my eye, this partly explains the limited take-up of their wares.

Engaging with systems is not easy. Systems have natural processes that have to be navigated. These natural processes flow from the history, structures and beliefs of children's services. To be system-ready, evidence-based programmes need to know about these processes.

The other side of this coin is the question of whether systems can be made ready for evidence-based programmes. This is where system reform fits in. There is a set of activities undertaken by system leaders, advocates for reform, researchers and technical experts who seek to make systems more effective and efficient. Their work has led to the de-institutionalisation of mental illness[11] and, to a lesser extent, youth justice, as well as to major changes in education, such as the charter school movement in the USA. Improved access to services for the economically disadvantaged is a common system reform activity. System reform has been more preoccupied with altering outputs than with improving child outcomes. A shift in focus could lead it to play a pivotal role in making evidence-based programmes go to scale.

The examination of the potential of system reform to promote evidence-based programmes uncovers other opportunities to better the lives of children. That is to say, could system reform improve child outcomes without evidence-based programmes?

So that is the basic argument. To give it some weight and depth I am going to define some of the terms – systems, system reform, prevention science, evidence-based programmes, natural processes and so on. I then go on to suggest how new ways of working for programme developers and system reformers will lead to improvements in the lives of children. Hopefully the arguments will be sufficient to encourage the testing of these ideas. But first some definitions.

What are systems?

Let us start with some rough descriptions of systems about which I have some knowledge. One is in the USA and the other in the UK. An illustration from each side of the Atlantic is as

good a way as any to tip-toe into a definition of systems for children.

Children's services are big businesses. In Wisconsin, USA, 1.3 million children are supported by a set of systems. From data at hand it appears that federal, state, county and municipal government spends about $11.75 billion on Wisconsin's children. Education accounts for the lion's share of this outlay, about 87 per cent of the total. Publicly financed health ($580 million – 5 per cent), child care ($350 million – 3 per cent) and juvenile delinquency ($190 million – 1.6 per cent) are the other big categories. Back of the envelope calculations suggest to me that annually the state spends $9,000 per child. Birmingham, UK, is the largest local authority in Europe. It spends £1.3 billion – roughly $1.8 billion at current exchange rates – on the 260,000 or so children for whom it shares responsibility with parents. This adds up to about $7,000 per child. The system offers education, health, social care and youth justice services. More than 50,000 people in Birmingham work in this industry.

A subset of children, about 3,000–5,000 in Birmingham, will receive intensive and costly interventions provided by health, youth justice and child welfare systems. For these children annual expenditure will frequently be ten times the average and for a smaller sub-group much more. There are plenty of indications, falling short of robust evidence, that interventions with these 'high-end' cases do not routinely lead to better child outcomes.

These funds are dispensed through children's services 'systems'. These systems provide the mechanisms that facilitate state involvement in children's lives. Generally speaking, in most western developed nations these systems extend to children's health, education and social well-being, such as mental health and protection from maltreatment. There are also systems for children who break the law.

Although most of these systems have been established with children in mind, their functions are more expansive. Schools teach children in part because society depends on educated people. Early years provision can boost children's health and development but it also allows parents to work. Training schools

for delinquent boys in nineteenth-century England prepared adolescents to fill gaps in the labour force. (Some were designed as and functioned as ships, readying the inmate for a place in the much-depleted merchant navy). The primary heritage of foster care is the safety net, catching children before they hit the bottom. The prospect of using foster care or other systems to improve child well-being or reduce impairments to children's health and development is relatively recent. For the most part, these systems have been set up as much to meet the needs of adults and society, as to meet those of children.

Once established these systems endure. Child welfare arrangements formed in the nineteenth century persist today. The skeletons of universal education and juvenile justice constructed at the beginning of the twentieth century remain the backbone of today's more extensive arrangements. The core processes established to respond to the sudden recognition of the extent and consequences of child maltreatment in the 1960s will, without huge effort and radical reform, remain unchanged a century from now.

As well as evolving slowly, these systems do not die of natural causes and are seldom killed off. There is much to sustain them: laws, funding streams and bureaucracies. There are leaders with allegiances to staff whose livelihoods depends on the system in which they work. They are a vehicle for a public service ethic. All of that and more feeds the heart, lungs and arteries of systems and provides them with the strength to demand sustenance.

In these descriptions of Wisconsin and Birmingham, the elements of a system begin to emerge, as does the reason for drawing attention to systems and not, say, to organisations or governments or a series of services.

I have talked about the system behaving, as in the way 'it' demands sustenance for growth or survival. I have talked about 'it' having a structure, a skeleton, that holds everything together. I have talked about the system having several purposes – to prepare children to contribute to the economy, to give parents time to work, to hide away those who might embarrass ordinary society – over and above child outcomes.

I could use a cliché and talk about an 'integrated whole' (it appears that everything these days is either integrated or whole or both). A metaphor more meaningful to me at least is the human body with different parts, functions and bones, which operate as a single entity. The components of a system are organisations and people (consumers, workers and leaders) rather than organs and blood. Laws, guidance, evidence and resources are the food of systems.

The point I want to convey in this analogy is that tampering with one part of the system will cause the rest to react. Stand on someone's toe and their leg pulls away and their mind considers a range of verbal responses. Similarly, putting an extra lesson into a school curriculum will produce reactions on the areas of teachers, children and parents that may be felt in other organisational parts of the system such as youth justice or mental health. Likewise, reducing the number of children in state care, something that can be achieved with relative ease by system reformers, will produce reverberations in schools (having to cope with difficult pupils).

The strength of systems is their ability to 'systematise'. There are routine mechanisms in most systems that get children to school at a set age, put them in front of trained teachers, select a subset for extra help, establish procedures such as assessment and legal mandate to sanction additional support, and so on. Systems 'systematise'. When something is systematised it becomes resistant to adaptation.

So on the one hand there are big systems that react as one when prodded and poked. On the other there are prevention science and evidence-based programmes. This is activity that beyond reasonable doubt improves children's health and development. But by my estimation it is seldom systematised and to have any chance of becoming so it must prod and poke big systems.

Prevention science and evidence-based programmes

Over the last three decades a group of people who can be categorised as prevention scientists have been producing what

are known as evidence-based programmes. As it turns out, not all the products are preventative, but that is another matter. The point is that scientists, mostly employed in universities, have been working to understand the potential causes of impairments to children's health and development, and one by-product of their investigations has been interventions that alter the causal mechanisms that lead to poor child outcomes. Being scientists, the originators of these programmes go to the bother of working out in a rigorous way whether there is any impact on children's health and development. And often there is.

Structures have emerged to support this activity. In the USA, The Society for Prevention Research has over 1,000 members. Around the world, there are two dozen or more cutting edge institutes specialising in evidence-based programmes. In the UK, the Dartington-based Social Research Unit's online news publication *Prevention Action* reports daily on breakthroughs emerging from this body of work.[12] There have been two reports by the National Academy of Sciences on the prevention of mental ill-health, one in 1994[13] and another in 2009.[14] These tomes, supplemented by others on various aspects of child health and development, reflect an organised and developing body of knowledge.

Box 1   **Step by step to improved child well-being**

The primary function of prevention science is to understand better the causes and sequelae of children's health and development. Testing what happens when the causal pathway is altered is one route to improved understanding. It is from this work that the by-products of evidence-based programmes emerged. Over time the production of evidence-based programmes became an end in itself, and scientific knowledge a welcome spin-off.

There is now a broadly agreed model about how evidence-based programmes are designed and what kinds of research are needed at each stage of the production process. As illustrated in figure 1, it begins with pre-intervention studies

such as epidemiological or longitudinal investigations based on robust samples and using reliable and valid methods.

The prototype evidence-based programme will reflect these pre-intervention studies. At the next stage the prototype will be evaluated in what is called an efficacy study, which means finding out whether the intended impact on well-being is achieved. A randomised controlled trial is the method of choice here.

If there is an impact, the next question is whether this can be sustained at scale. This is what effectiveness studies do. They find out if the programme works in the real world. The approach taken at this stage involves more experiments, with larger samples, conducted by independent evaluators and applied with typical children and families in the places they normally go. Adding up the results in a meta-analysis is a bonus.

Increasingly we are learning to distinguish between type 1 translation – getting from the laboratory bench to the bedside – and type 2 translation – getting from success at a few bedsides to every patient who might reasonably be expected to benefit. In figure 1 this is the section described as 'dissemination and implementation studies'. As far as child well-being is concerned, this is the most underdeveloped area.

The type 2 stages require different methods. In addition to effectiveness studies there is research into how many evidence-based programmes have been adopted, and whether they are sustained over time. The barriers that stand between a low level of adoption – which is the level achieved by most of the best-known evidence-based programmes – and getting them to their intended market on a larger scale is identified as a priority in the recent US National Academy of Sciences report, Preventing Mental, Emotional and Behavioral Disorders Among Young People.[15]

As might be expected given its scientific origins, these steps are linear and methodical. But from a systems perspective it looks a little suspect. Does innovation really develop in this orderly way?

Figure 1 **Type 2 Translation, from the laboratory bench to the bedside**
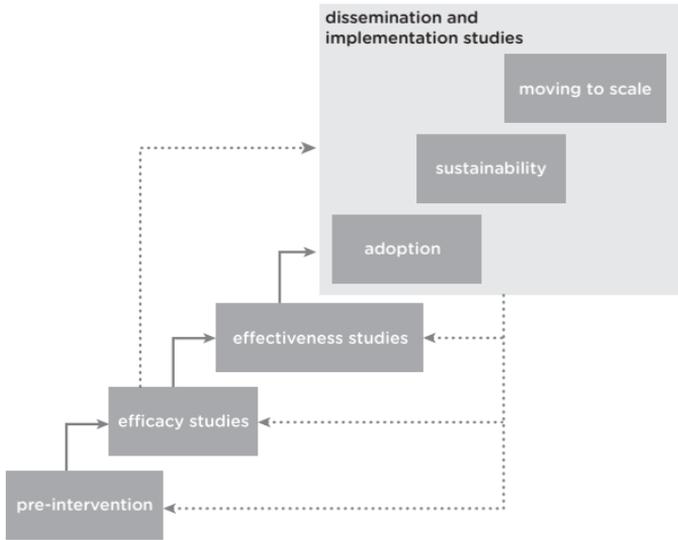
A commonly understood model underpins the work. As summarised in box 1 it starts with a well-researched idea and ends with better outcomes for society's children. Readers used to the complications of bureaucracies may find the model hopelessly linear; indeed, many prevention scientists are questioning its validity. Nonetheless it has defined the development of evidence-based programmes.

So what is an evidence-based programme? If we think of systems as a body with interdependent organs and limbs then evidence-based programmes might be likened to stem cells that are able to repair and replenish the body without upsetting its basic functioning. Like adult stem cells, evidence-based programmes might have the potential to engender an entirely new organism but nobody has yet seriously explored this proposition. The last line of this paper recommends that this be tried.

Evidence-based programmes vary considerably in their make-up but share a number of common features.[17] They are

targeted at a well specified problem. This is typically an aspect of children's health or development, often at a particular stage in the child's growth. The programme will be underpinned by a statement of logic about what is to be achieved (child outcomes), how (what risks will be modified) and why (the evidence on the way the intervention mediates the relationship between risk and outcomes). Some programmes seek to prevent impairment before it occurs, others to intervene early in its gestation, while another set respond once the problem is deep seated. Because evidence-based programmes involve an experimental stage there is generally attention to the ethics of intervention.

When stem cells are injected into the body it is taken for granted that somebody will have responsibility for finding out the repercussions, good and bad. So it is with evidence-based programmes. The work is buttressed by good measurement tools, a common lens to catalogue the level of impact, calculating effect size for example, and a broadly held view, in the scientific community at least, about the type of research methods needed to find out if the programme works. This meeting of minds means that, for the most part, the calculation of effectiveness is more rooted in facts than in subjective opinion. No amount of scientific discussion will turn a programme shown in randomised controlled trials to have no impact on child well-being into a success. On the other hand, it should be recognised that the benefits of some programmes are marginal and when several trials produce contradictory results, claims and counter-claims can muddy the scientific waters.

The creators of evidence-based programmes know from bitter experience that an absence of consumer testing or attention to what is called 'fidelity to the model' – making sure that the intervention is delivered as intended, to the group of children for which it was intended – has ramifications for programme success.[18] Methods to engage children and families are increasingly common traits of evidence-based programmes. The training and coaching of practitioners and the preparation of manuals that specify programme delivery are typically used to boost fidelity.

Why do evidence-based programmes have so little impact?

It is increasingly recognised that the story of evidence-based programmes is one of success and failure. In 1975 Douglas Lipton and colleagues reviewed rigorous evaluations of criminal rehabilitation programmes and concluded that 'nothing works'.[19] Other scientists vied for similar recognition by showing the absence of effective responses in other areas of human development. Today there are enough evidence-based programmes spanning most domains of children's health and development to require databases of proven models such as Blueprints (which covers violence prevention) and the foundation of bodies such as the Campbell and Cochrane Collaborations to promote, undertake and catalogue systematic reviews of multiple trials of programmes or classes of programmes.

Depending on which standards of evidence are applied, there are between 50 and 200 evidence-based programmes in existence.[20] All have 'proven' impact on child outcomes.

Recent evidence about the impact of one set of evidence-based programmes – those that operate to be part of the school curriculum and alter children's social and emotional regulation – gives one indication of the potential to apply what has been learned in the last three decades.[21] There are now around 20 proven models in this category. Applied well, they will boost the performance of a school whose pupils are on the 50th percentile to put them at the 61st percentile. This gain is produced thanks to better behaved and happier pupils. At first glance these findings, which are just a snippet from the volumes of other good news on which I could draw, appear as a miracle cure. What head-teacher would eschew a programme proven to boost school performance by such a margin?

But like stem cells, evidence-based programmes are some way off realising their full potential. Only a tiny proportion of children experience an evidence-based programme, and many that do have done so as subjects in experimental trials. The plain truth is that evidence-based programmes are not being delivered at scale and the diminishing returns associated with comprehensive delivery are as yet untested.

With important exceptions, there have been three approaches to the problem of going to scale. First, some researchers are better than others at promoting their wares. This has reaped varying degrees of reward and some unintended consequences (see box 2). Second, there have been many attempts to build support for evidence-based programmes in local communities and schools and so address locally identified needs. The PROSPER project, sponsored by Penn State and Iowa State universities and funded by state governments and philanthropy, is a typical example. It has led to a higher incidence of evidence-based programmes in the places where it has been used.[22] But the primary accountability in these projects is to communities and not mainstream systems, and funding remains short term and subject to political vicissitudes. Third, there is now a good deal of research under way to find out why good ideas are not translated into mainstream practice.

Box 2   **The trouble with selling scientific products**
Good science is at the core of evidence-based programmes. There is science to design the programmes and science to evaluate them. But as with stem cell research, there are also politics and commercial prospects to account for. How do these figure?

Evidence-based programmes often tip conventional ideas upside down. We are beginning to get used to thinking differently about how and where to intervene, for example altering parenting practices or using schools to improve children's behaviour. These ideas are not intuitive. When we see anti-social behaviour our first instinct is to discipline the child, and it takes time for professional and lay people to alter long-standing ways of working.

Unsurprisingly, scientists get impatient and some are drawn in to promoting their well-researched ideas. In the nineteenth century John Snow not only had to prove that cholera was transmitted by water, not air: he also had to advocate strongly for a change in policies.[23] So it is with the designers of some evidence-based programmes.

Nurse-Family Partnership is one of the most widely applied proven models, and current US government plans will see it spread more widely. It is supported by an organisation that actively, cleverly and successfully engages with federal and state funders. They are selling 'their product'. Other evidence-based programmes are embedded within commercial enterprises with which children's services must contract. Some programme developers benefit personally from the sale of their intellectual property (although it should be stressed that no sensible person would enter this market if their goal was to get rich quick – or slowly for that matter).

It is only natural for people with good evidence about ways of improving children's well-being to encourage the application of that evidence. But pushing an idea can confuse the onlooker. There are people whose jobs in children's services systems are to commission interventions. Often what they see is the careful manoeuvring of a 'ways and means' committee or an expert media strategy marshalled by a slick private (albeit in most cases not-for-profit) organisation.

Lost in the translation are the years of back-room science, the multiple experimental trials and the conservatively calculated savings to the public purse.

Does this matter? If the engagement is fought on the grounds of presentation and marketing, evidence-based programmes become equivalent to all well-resourced ideas. In other fields there are mechanisms that separate the science from the selling, while rewarding programme developers for the use of their intellectual property. These may have value in the context of child development.

Systems don't 'do' evidence-based programmes

A fourth possibility is to find a better fit between evidence-based programmes and systems. As I have shown, systems have the money. They are established, have longevity and, for better or worse, reach large numbers of children and families.

But thinking about these two worlds as one produces some harsh realities. With a few exceptions, systems do not 'do'

programmes, evidence-based or otherwise. Systems are made up of things like education bureaucracies, schools and teachers. Systems comprise child welfare departments, group homes, foster placements, social workers and substitute carers. Systems sit around mental health agencies, doctors and psychologists. Youth justice is a system. It has courts, police and jails.

Some evidence-based programmes fit naturally within a system, as when social and emotional regulation programmes take up a single school lesson each week for an entire school year. But the same cannot be said of mentoring programmes, or targeted home visiting models or parenting interventions. There is no Department of Parenting. We do not have parenting schools. And, as yet, there are few parenting practitioners.

Finding a fit means looking for points of connection between evidence-based programmes and what can be called the 'natural processes' of systems. Each part of a system behaves almost by reflex. Anything that seeks to operate within a system must understand this reflex and be able to get it to adapt or be able to adapt to it.

Box 3   **Natural processes**

I have introduced the idea of natural processes in systems and other places where evidence-based programmes might be located, such as the family home or a community. I am hypothesising that evidence-based programmes will not go to scale unless they fit within or adapt these natural processes. So what are they?

They can be separated into objective and subjective dimensions. The objective dimensions deal with the who, what, where and why of the context into which evidence-based programmes are to be located. In table 1, I have separated the objective into place – where is this evidence-based programme going to be delivered; people – who is going to deliver the programme or be asked to support it; relationships – what are the professional affinities and rivalries that might stand in the way of the programme; structure – which agencies will be involved and how will the programme serve their

accountability; and resource – how much of the $8,000 per year per child can be redirected towards the evidence-based programme, and what needs to stop in order for these funds to be switched?

Then there is the subjective dimension. The contexts into which evidence-based programmes are introduced 'think'. They have attitudes, ideas and prejudices. Possibly the most important thing for scientists to know about systems is that they are not set up to improve child outcomes. They may contribute towards children's health and development but they serve all kinds of other functions as well. This is how a system 'thinks' when confronted with an evidence-based programme.

Table 1 provides another example: less eligibility. This is the concept that the state should not provide support for disadvantaged children greater than that the family itself could provide, for fear that families will abandon their children to the state so their children can enjoy a better life. This concept is now officially outlawed in England. But it is over a century old, and it colours the way systems 'think' about children. And this bears on the introduction of evidence-based programmes.

If these ideas are right, in order to be effective – as opposed to efficacious – evidence-based programmes must fit into or adapt the natural processes of the context in which they are located.

Mary Jane Rotheram-Borus and Naihua Duan, writing in 2003 about the next generation of evidence-based programmes, talk about market research to develop interventions that intuitively make sense to the people who buy and use them.[24] We might think of this research as finding out about natural processes. In his commentary on the paper, Peter Jensen, building on earlier work by Whalen and Haker, draws attention to the value of finding interventions that are 'applicable *to person, disorder and setting in question;* compatible *with the patient's needs;* communicable *and* understandable *to the subject, family and treatment team;* available *and* provisible *across a large array of settings;* feasible *across settings in which the child interacts;* palatable *to patients and families; and* trainable'.[25]

Table 1

	Systems	Families
Place	Schools, hospitals, GP surgeries	Home
People	Psychologists, social workers, doctors, teachers, etc; their training and competencies	Parents Children Extended family Neighbours
Relationships	Professional rivalries and 'pecking order'	Ubiquitous family conflict Normative aggressive conflict resolution Gender roles
Structure	Agencies of education, health, social care, police and youth justice Accountabilities, eg local autonomy of schools Health serves adults as well as children Purchaser and provider and commissioner arrangements	Family structures
Resource	$8,000 per annum, most of which is tied up in current resources	$8,000 per annum on average Huge variance in expenditure on children
Subjective	The legacy of less eligibility Competing objectives of children's services Variance in standards of evidence	Aspirations for children Views about parenting

The idea can be illustrated with respect to two aspects of system thinking and behaviour. First, since systems must

respond to wider demands as well as better outcomes for children, evidence-based programmes will not always be viewed as a premium product. Systems must also take into account the needs of staff, the demand of political masters, the expectation of consumers and the roller-coaster of public opinion. Reducing anti-social behaviour may be one objective but so too is assuaging the public desire for punishment and retribution for young offenders. The broader demands on systems are evident in government targets or in the scandals that so often are the catalyst for change. When a child known to children's services dies, the public and politicians included, tends to demand more stringent monitoring, not the prevention of abuse.

These wider demands are reflected in a catholic taste for evidence. Systems people have to balance legal, pragmatic and consumer considerations alongside the 'what works' evidence, and are required to make sagacious judgements about timing, funding and staffing. Leaders of systems are interested not only in facts but also in how to formulate a 'story that will sell'. My now retired boss used to say, only partly tongue in cheek, 'don't let the data get in the way of the story'. By managing and packaging evidence he helped to close the UK training schools.[26] By plucking from the air a figure that reflected his data but also would not embarrass civil servants, he conspired to keep the number of secure accommodation beds in England to a minimum.[27] He tapped into the natural processes of the system in question.

Why might systems adapt natural processes to incorporate evidence-based programmes? One driver may be the 'outcome' zeitgeist. Measuring outputs – what is done for people, how well and in what period of time – has become a natural part of systems. In some jurisdictions this interest has narrowed, in rhetoric at least, to outcomes. In the case of children, this usually means how to improve their health and development. In England, for example, the goal of achieving better outcomes for children is a stated national policy. Improved well-being is unlikely to become the 'be all and end all' of children's services systems, but it may become more prominent, in which case there may be a greater appetite for evidence-based programmes.

For the purveyors of evidence-based programmes the incentive is clear. Children's services, evidence-based programmes included, are purchased by governments, systems, insurance companies and, arguably, parents. Philanthropy can kickstart an interest in evidence-based programmes, in local communities for example, but sustained investment for the most part probably depends on large-scale systems.

So how will the natural processes of systems be adapted to make space for evidence-based programmes? Or how will evidence-based programmes adjust to the natural processes of systems? Step up, system reformers.

Part 2
Possible solutions

I have stressed the longevity of systems. The vertebrae of education, social care and youth justice systems erected a century or more ago exist more or less intact today. Without much needed change, in 50 years from now child protection systems will be propped up by a backbone formed half a century ago. Systems seldom die but they can be and have been reformed. In this second part of the paper I am going to talk about how systems can be helped to adapt to evidence-based programmes. I will then discuss other reform work supported by a high standard of evidence that can also make a contribution to better child outcomes.

There is a set of activities called system reform. It is not a discipline. There is a strong literature on organisational change but there is no 'Handbook of System Reform' and there are few descriptions of its methods. But there is a cadre of people in academia, philanthropy and politics, along with individual activists, who see their work as system reform. They understand the natural processes of systems and their reflexes. In all likelihood, reform has contributed to the long life of systems.

Since there is no stated common goal, I shall say that the purpose of system reform is to make health, education, youth justice and child welfare arrangements work more effectively and efficiently. The word 'reform' indicates that the systems are needed and should not be eradicated, but that they can function differently. Just as systems have been established to meet the needs of adults and society as much as the needs of children, so the purpose of reform is similarly broad. Dealing with the unreasonable demands of staff, getting better value for money, reducing inequalities and improving human rights are among the many goals of system reform. To this the word 'fashion' could be

added. Because systems consume so many resources, politicians feel obliged to effect change and are often drawn to the latest zeitgeist.

By default, system reform necessitates engaging with central or local government structures that sanction and pay for intervention in children's lives, and with the state, private and voluntary agencies that provide the service.

Traditionally, as might be expected, system reform has concentrated on changing outputs. As I illustrate below, it has reduced or increased the volume of provision, changed accountabilities, made new connections between parts of the system or between systems, and much more.

It is not that, historically, system reform has been unconcerned about children's health and development. It is that better outcomes, if they occurred, were a welcome by-product of another objective, such as greater efficiency, improved staff satisfaction or reduced political risk.

This traditional form of system reform can be thought of as the reform of system outputs. It is important work, as the following examples illustrate.

Reform of system outputs

System reform has had much success in reducing the size of or eradicating parts of children's services. In England in the 1970s researchers and policy makers collaborated to close residential training schools for delinquent young people.[28] Policy makers twice – once in the 1970s and again in the late 1990s – asked my centre for a number, based on rapidly assembled administrative data, to act as the upper limit for secure accommodation and youth custody places in the UK.[29] There are plenty of examples of reform efforts reducing the number of children in state care or shrinking the volume of residential places in the child welfare system.[30] The Annie E. Casey Foundation has collaborated with states to curb the use of detention centres for young people arrested for crime and, along with many organisations, sought to minimise young offenders' exposure to the adult court.[31] Atlantic Philanthropies is one of several bodies contributing to the recent

termination of the right to execute young people convicted of capital offences in the US.[32]

Adjusting the accountability of systems and integrating of services is another reform activity. Altering responsibilities has had political functions, as when the closing of the training schools in England was initiated by shifting responsibility from the Ministry of the Interior (Home Office), which dealt with crime, to the Ministry of Health (Department of Health). The schools were starved of children and then culled.[33] Making schools individually accountable for the ability of their students has been at the heart of the standards movement to improve educational achievement.[34] Creating local governance was one of the mechanisms that aided reductions in the number of children in state care in New York in the 1990s.

There have been a multitude of attempts to integrate children's services, for example in Connecticut, Vermont, Washington and Wisconsin, in the USA.[35] Since the late 1990s, the UK government has talked about 'joined-up solutions for joined-up problems'. Having apparently contemplated the creation of a national child protection system in response to a major maltreatment scandal it instead brought together education and child welfare (and to a lesser extent health and youth justice) systems in single departments of children's services with local accountability.[36]

The success of integration is mixed. There is no consensus about what should be connected and what should be left alone. Most contemporary discussions tend to conclude with the need for cross-agency work. There is little evidence that service integration in itself leads to any form of efficiency. Too much departmental reorganisation becomes an end instead of a means to an end. It is hard to disagree with Mark Friedman's conclusion in *Trying Hard is Not Good Enough* that this type of reform is seldom worth the effort.[37] Nonetheless, the holy grail of centralisation versus decentralisation has kept and will continue to keep many system reformers gainfully employed.

More efficient and effective use of data produced by children's services is another class of traditional system reform. Systems generate a lot of information. Practitioners make

assessments. Agencies make returns to their funders summarising their work. Governments find out whether agencies have met their targets. Then there is research and evaluation. The information technology revolution has created both industries that digitalise paper records and largely unrealised expectations about connecting data across systems. Less well heralded but more promising are reforms that seek to reduce the amount of data collected and introduce smarter analysis and utilisation. The Annie E. Casey Foundation's Casebook project is testimony to this trend, as are pioneering efforts to better link and exploit the potential of administrative data, by Chapin Hall at the University of Chicago for example.

In the UK, the word 'refocusing' has been associated with system reform for nearly two decades. In the mid-1990s, the UK government helped children's services departments see how family support could be an effective mechanism for protecting children from maltreatment, and in the middle of the subsequent decade demonstrated to another group of practitioners how prevention and early intervention could release pressure on provision for children with multiple or significant impairments to their development.[38] Both initiatives were described as 'refocusing'. The work of the Annie E. Casey Foundation in demonstrating, via Casey Family Services, new emphases in substitute family care arrangements is another illustration. The refocusing is more about the ethos – in these illustrations encouraging a focus on needs, prevention and permanency – than the activity – child protection, mental health services and foster care.

Shifting the groups of children that systems relate to is another class of reform enterprise. In the USA much effort has been invested in creating universal health care for children and reducing the inequalities and inefficiencies concomitant with private insurance. In most economically developed nations there has been a shift since the middle of the twentieth century towards keeping children with disabilities or impairments to their health and development, in mainstream schools.[39] Landmark legislation in England and Wales in the 1980s introduced a single set of legal orders for all children and, four

years into this century, a single set of services for all children[40] (using the concept of 'progressive universalism' to boost provision to the economically disadvantaged). The new status quo replaced, theoretically if not yet in practice, separate arrangements for economically poor and other children. Many of these initiatives have a rights-based flavour.

In these examples what is being reformed, why, how and with what result? The arrangements to support intervention as opposed to the interventions themselves are being reformed. The cynosures are laws, rights, administrative structures, staff ethos, and accountabilities and data systems. The ambition may include better outcomes for children but since system reformers are dealing with real world constraints, such as limited resources and the need to build or maintain political support, economic and bureaucratic efficiency, staff satisfaction and rights, realpolitik is a vital ingredient in the mix. The endeavour draws on evidence – such as ethnography of how systems work or administrative data on who is getting what – and is usually intellectually rigorous and performed by people who understand social policy and children's services systems and who can collaborate naturally with and alter the perspective of those employed by systems. The results are not unimpressive. Changing laws, closing or withering sectors such as training schools and re-orienting the focus of several hundreds of thousands of staff is no mean feat.

But evidence of the impact on child outcomes of this traditional system reform is scant. Some point to evidence of system reform for health outcomes being iatrogenic. Others might counter this by referring to Miller's reform of state training schools in Massachusetts.[41] They were closed without any apparent impact on the crime rate. Hopefully in the future more reference will be made to the success of initiatives like Project Re-Direction in Florida, which combines several evidence-based programmes to take the place of expensive and potentially harmful training centres.[42] But evidence of sufficient quality does not exist and the cynic might observe that, for all the fuss, the essential shape of systems and services remains largely unaltered.

System reform for better outcomes

The preceding discussion was about reform for better outputs. I will now attempt to show how system reform activity can be used to improve children's health and development, or their outcomes. I will offer two sets of illustrations. The first better connects evidence-based programmes with systems, getting each ready for the other. The second reforms systems using the rigour of prevention science to produce another class of evidence-based activity with proven impact on child well-being.

Connecting evidence-based programmes and systems

The marrying of systems and evidence-based programmes requires one or both of the following. Systems have to be made ready for evidence-based programmes. Evidence-based programmes have to be made ready for systems. Both tasks suggest adapting and developing some of the reform ideas described above. Both might also benefit from greater interchange between people who describe their work as system reform and those who design or provide technical assistance to implement evidence-based programmes.

Getting systems ready for evidence-based programmes

Let it be supposed that there is a group of evidence-based programmes ready for implementation in children's services systems. What needs to happen within these systems to prepare for the arrival of such new technology? In making these calculations I have assumed an exchange in which every dollar invested in an evidence-based programme involves taking a dollar away from an existing activity.

A good place to start might be the natural catalysts for change within systems, such as scandals and changes in political or administrative leadership. When there is a child death what potential is there to improve child outcomes as well as to respond to other political demands for change? There are natural opportunities for change within systems that can be exploited by those wishing to promote evidence-based programmes.

Implicit in this endeavour will be analysis of the links between outcomes, outputs and other system objectives such as efficiency and the satisfaction of staff and consumers. Evidence-based programmes are designed to deliver improvements in children's health and development, which increasingly is of interest to systems' managers but not by any means their sole interest. Keeping the workers and the punters happy, making better use of scarce resources and in the process cheering up the politicians: all of this and more matters to systems people. Outcomes need not be at odds with outputs or other objectives. But the points of connection have to be worked out.

Tapping into the processes by which large systems spend money is another target. Some promoters of evidence-based programmes have used political influence on ways and means committees of state and federal bodies to get their way. But in the long run this tactic depends on their lobby being stronger than others with perhaps equal claims. Sustained change will come from business processes that favour better outcomes for children. Cost-benefit analysis is part of the answer. There is a reasonable degree of confidence now that investment in some (not all) prevention programmes will generate savings to the public purse. In Washington State they are testing this proposition by abandoning prison building plans and investing instead in evidence-based programmes that reduce adolescent and therefore adult offending.[43] In the UK, Birmingham has tried to take this idea further by building a business model that requires disinvestment in existing parts of a system on demonstration of cashable benefits from evidence-based programmes.[44] Box 4 spells out this method in a little more detail.

Box 4   **Business models that support evidence-based programmes**

Systems do business. Large amounts of public money are spent by systems on behalf of children and their families. Systems do not have shareholders, but there are many stakeholders with a keen interest in how resources are spent.

To an extent, a primary motive of a public system will be to spend all of its resources, and no more. There are penalties

for under-spending and for over-spending. There is no profit motive, and the rewards for investing smartly are negligible.

So when a technology such as cost-benefit analysis comes along, a business model is required to make it work in a systems context. If systems were a private enterprise, the incentive would be obvious. If the same outcomes could be achieved with a less expensive programme, the private enterprise would make more money.

But public systems do not have a profit motive. One way to make cost-benefit analysis work is to engage politicians and convince them to make some high stakes decisions. Washington State, for example, has used cost-benefit data from its own research centre to justify reducing its prison building plans in favour of more investment in evidence-based programmes. The politicians have sanctioned expenditure on programmes like Functional Family Therapy, and one prison that would have been built will now not be built. The proof of the pudding will be in the eating. If in a decade from now lots of criminals that need to be locked up are wandering the streets, then the politicians will not be very popular with their voters.

Another route is to develop a business model within a system that provides a structure for commissioners and managers of services to alter their investment decisions.

Birmingham, UK, has been testing such an approach. They call the method 'Business Transformation'. It ties investments to future savings that accrue as a result of more efficient working practices. The approach has several manifestations. It is used, for example, to bring efficiencies in the information technology sphere. But it is the application to children's services that is of interest here. The core elements are as follows.

The starting point is the investment of new monies in more efficient ways of working. Funds may come from a variety of sources, such as saving a small proportion of overall turnover over a three to five-year period for future innovation. In Birmingham £41.7m (about $68m) was put into the Business Transformation programme for children.

The next stage is to build a portfolio of evidence-based

programmes and to calculate conservatively the financial benefits that these programmes will bring to the system budget. In Birmingham these estimates were made using evidence from Washington State and other reliable sources of data on cost benefits. Birmingham is banking on £101.2m of what are called 'cashable benefits' to children's services over a 15-year period. Cashable benefits are reductions in costs to the system, as opposed to non-cashable benefits, such as improving the lives of parents or the child making a larger contribution to the tax burden in adulthood.

The next step is to find out whether these benefits are realised. There is a huge incentive for systems people to find out because every dollar that is proven to be saved comes back to commissioners for reinvestment.

In order to boost the chances of generating savings, Business Transformation ensures that individual projects are carefully planned and resourced and that staff are properly supported to implement the work efficiently. This involves a service design process that ensures high practitioner involvement, adherence to the evidence base and fidelity during implementation.

Each evidence-based programme, adapted for local conditions and supported by local practitioners, is then subjected to an experimental evaluation to work out if the programme can be delivered as planned, what impact it has on child outcomes and, crucially, the actual amount of cashable benefits that will be generated. If the programme is promising on all three fronts, then plans are made to move it to scale.

Fundamental to the scaling up of programmes is a process called 'benefit realisation'. The experiment provides a reasonably clear indication of the amount of cashable benefits that will come to the system as a result of implementing widely, for example, an evidence-based parenting programme. Managers and commissioners in the system then have to meet and specify how those benefits will be realised. That is to say, how will the savings be made real? Benefit realisation can mean something as simple as not filling vacancies for psychologists or social workers on the basis that demand for

such services will be reduced as a result of a parenting programme.

Put plainly, benefit realisation is that part of the process that sees evidence-based programmes go to scale using savings from less efficient parts of the system. This is different from the dominant model, which uses evidence-based programmes as marginal additions to systems. Decisions are evidence-based and have the support of senior systems managers who are held to account by politicians keen to know the return on their investment.

Exploring the fit between evidence-based programmes and mainstream services, which by default are supported by the natural processes of systems, is another potential avenue for reform. It is perhaps unsurprising to discover that systems employ people whose duties are similar to the tasks prescribed by evidence-based programmes. For example, many systems employ nurses to visit the homes of newborn children, as does the proven model Nurse-Family Partnership[45] (see box 5). There is a long tradition of family therapy in the USA and Europe, and then there is the programme known as Functional Family Therapy.[46] Many systems pay for patients, children included, to sit on the psychiatrist's couch, but increasingly many are asking psychologists to deliver cognitive behavioural therapy (CBT), a strategy backed by many experimental trials and systematic reviews.[47] Rather than introducing programmes, can it be more productive to think in terms of retraining children's services staff to apply routinely, techniques known to achieve improvements in health and development?

Box 5   **The health visiting paradox**

Introducing something new will threaten the old, especially if the old bears some resemblance to the new. What I call the 'health visiting paradox' in England helps to explain the point. As has been stressed several times in this paper, Nurse-Family Partnership is a well-established evidence-based programme.

Nurses work with young, extremely poor and generally single mothers. The nurses improve participants' parenting skills; they encourage mothers back into work, which boosts their income and ability to care for the child. Nurse-Family Partnership is one of the most widely utilised proven models.

Nurse-Family Partnership is now being tried and rigorously evaluated in the UK. It will be used to complement a health visiting programme which for over 40 years has brought a nurse to the home of every new parent in the UK, rich or poor, experienced or inexperienced. Health visiting is much appreciated by parents and often viewed as a core element of the universal health care offered in the UK, although some system budget holders view the provision with suspicion. Health visiting has not, however, been evaluated using experimental methods.

Inevitably, Nurse-Family Partnership is seen by some as a rival to 'ordinary' health visiting. But the comparison is no more sensible than seeing trees as a rival to grass. Nurse-Family Partnership would likely have negligible effects on the well-being of children born to older, well off, two parent families. It is reasonable to hypothesise that health visiting would be similarly unsuccessful with Nurse-Family Partnership's target group.

Evaluating the impact of Nurse-Family Partnership on child and parent outcomes in the UK is one part of the careful introduction of the programme into mainstream systems. Another is understanding the fit between it and other parts of the system, especially universal health visiting.

It might be argued that systems want to make smarter decisions about children's well-being but lack the intelligence to do so. It is not that systems lack information; indeed, it might be argued that they have too much. But the available data says little about patterns and trends in child well-being or the effectiveness of services in improving child outcomes and hardly anything about the financial costs or gains resulting from various investment strategies. There is insufficient access to the 'what

works' evidence base, most of which is presented in a format that does not fit with system processes. (For example, there is no single place that will enable a system employee advocating on behalf of an evidence-based programme to discover what resources will be needed to get the intervention off the ground). Box 6 describes some of the information capabilities being assembled by English children's services systems interested in making more use of evidence-based programmes.

Box 6 **What makes for an 'intelligent' system?**

Children's services systems use data to make intelligent decisions, although they devote far less of their turnover to research and evaluation than, say, private sector organisations. The knowledge collected reflects the demands on these systems. There is a preponderance of output data, with particular stress on information about performance targets set by political masters.

Introducing evidence-based programmes puts new demands on systems. Problems arise when they try to use existing research and development data to make decisions about which evidence-based programmes to introduce, where and at what volume. Administrative data has its functions but it is, for example, a poor substitute for epidemiology.

Some systems have begun to consider the kinds of intelligence they will need for the appropriate increase of evidence-based practice. Their reconnaissance leads to lists that include most of the following:

· *epidemiology to formulate priorities for intervention, estimate likely impact on child well-being and monitor trends*
· *systematic reviews and databases of proven models with clear standards of evidence to identify potential proven models for intervention*
· *economic analysis that predicts the costs and cashable benefits of introducing various evidence-based programmes into local systems*

- *service design methods to ensure that selected programmes are appropriately adapted for local needs and are implemented with fidelity*
- *experimental evaluation to estimate the impact of locally implemented evidence-based programmes on child outcomes, and the actual costs and cashable benefits*
- *high quality dissemination to share the results of local experiments with system staff and consumers, and to inform other systems*
- *quality assurance procedures to ensure that programmes that have been proven locally, and that are taken to scale, are consistently implemented as intended.*

If these resources are to be used optimally, then technical expertise has to be embedded within the system. In England, children's services employees are being trained to Masters level to take up posts with titles like 'prevention specialist' or 'outcomes technician' to support the sustainable use of evidence-based programmes. These people understand the language of prevention, early intervention and treatment. They know how to distinguish between an outcome and an output. They are practised in bringing together the stakeholders needed to support the local adaptation and implementation of evidence-based programmes, and will generally have the technical know-how to deliver training or coaching for at least one of the programmes. Such developments must protect the integrity of the technical advisor. Embedding expertise within a system can dilute the quality of advice. Separate accountability and enforcement arrangements will be required to achieve optimal impact.

There may also be mileage in developing what David Hawkins calls an 'operating system' or a way of thinking that helps diverse groups of people come to a common understanding about what is to be achieved for children, how and with what resource.[48] There are understandable disagreements and misunderstandings within systems about these questions. There are several operating systems, three of

which are described in box 7, that help to generate a common purpose. Each has strengths and weaknesses. The most pervasive is Results Based Accountability, which is used primarily to resolve disputes within systems rapidly.[49] Communities that Care is the only one with proven impact on child outcomes. Its primary application is in building governance arrangements that support evidence-based programmes outside or on the edges of mainstream systems.[50] Common Language has been designed to operate within systems but is extremely demanding on the resources and vision of children's services leaders.[51] The development of these and other approaches into a new model may be overdue.

Box 7   **Operating systems**

Sometimes people disagree about how to improve child well-being. Some, for instance, think that prevention is crucial. Others do not. More commonly, people think they agree but misunderstand each other. So a police chief and a superintendent of schools agree that prevention is crucial, but it turns out that they have very different ideas about what is meant by prevention.

Such misunderstandings are at the heart of the failures of all kinds of initiatives, including the introduction of evidence-based programmes and other system reform efforts. Having a common way of thinking is one way to overcome this problem. As has been mentioned, David Hawkins, co-developer of Communities that Care, coined the term 'operating system' to describe methods that better connect people wanting to improve children's lives.

There are several such operating systems. Just three are described here. They all have strengths and weaknesses with respect to bridging the gap between evidence-based programmes and children's services systems.

In one respect, the most effective operating system is Communities that Care, pioneered by David Hawkins and Richard Catalano. It is unique among operating systems in that it has been evaluated using experimental methods. There is

data to show that it has a positive impact on child well-being over and above the evidence-based programmes that it fosters. Communities that Care helps a community in a specified geographical area to identify risk and protective factors in the lives of local children. It then helps leaders in the community decide which evidence-based programme will reduce risks and boost prevention. Decisions are rooted in data from a youth survey that measures the incidence and prevalence of substance use, delinquency and related problem behaviours and the risk and protective factors that predict them. Other methods and toolkits, together with lists of evidence-based programmes known to reduce risks and increase protective factors, are also available. Governance arrangements are then put in place to manage the innovation, maintain fidelity and estimate the impact on child outcomes.

The most pervasive operating system is Results-Based Accountability. Whereas Communities that Care functions primarily in neighbourhoods and small towns, Results-Based Accountability is mainly used within large systems. It rapidly resolves disputes within systems. It leads to improvements in outputs, the current stock in trade of large systems. It helps local government and agencies focus on issues that are important to ordinary citizens, such as children succeeding in school. It then finds low-cost ways of achieving that end and holds local people accountable for executing a broadly agreed plan of action. This 'way of thinking' replaces multiple performance targets and fuzzy, inadequately implemented and sporadically supported action plans.

If Common Language has a unique selling point it is that it was designed to work within systems as well as within communities. The method includes a range of clinical and planning functions across health, education, social care and youth justice efforts aimed at improving child outcomes, all supported by a single conceptual framework. Like Communities that Care, Common Language uses epidemiological data on the children it is applied to as the basis for all deliberations. Primary stakeholders in children's lives use this evidence, qualitative information on consumer views

and a 'what works' knowledge base to devise strategies to improve the health and development of children. Each strategy is rigorously evaluated. Service design methods ensure that programmes are implemented with fidelity, and evaluated by randomised control trial. In its latest iteration, Common Language has been used alongside the 'business transformation' methods described elsewhere in these pages. This strengthens its value in large-scale investment strategies that seek to embed evidence-based programmes and other innovations in large systems.

Whereas Communities that Care is mostly, but not exclusively, used with local neighbourhoods and towns, Common Language – like Results-Based Accountability – is mostly but not exclusively used within large-scale systems.

The time is arguably ripe for the preparation of a new operating system designed for health, education, social care, police and youth justice systems. There is no need to start from scratch. The three methods described in this box, and others such as Getting to Outcomes, have much to commend them and their originators have much to contribute. Developing a non-proprietorial platform that can be adopted across a range of systems would greatly aid children's services departments. If the ideas described in this paper are correct, the parameters are clear. It should be outcome driven. It should connect the worlds of systems and evidence-based programmes. It should link outcomes and outputs. It should connect neighbourhood change with system reform. For the purposes of system reform it must extend to clinical decision making as well as aggregate planning. Given the common challenges across the economically developed world, there is much to be said for an international approach to this problem. It is a challenge that a large independent foundation that straddles system reform and evidence-based programme communities would be well placed to take on.

This set of ideas about how systems could be more ready for evidence-based programmes is not intended to be exhaustive,

but hopefully it will sponsor new ideas and proposals within children's services. Now let us consider the other part of the equation. What needs to happen to evidence-based programmes?

Getting evidence-based programmes ready for systems

To be effective, evidence-based programmes have to be delivered with fidelity.[52] This area of science is still developing but most people agree that delivering half a proven model does not reap half of the effects; it will typically reap none.

The idea of changing evidence-based programmes to get them ready for systems might be a little contentious. On the other hand, if these programmes continue to exist on the margins of mainstream services their effectiveness will be severely limited. I will only make a couple of suggestions for development here. I am working on the assumption that any adaptation will be rigorously evaluated at scale.

Using the dimensions of natural processes as a guide, it would be beneficial for system reformers and programme developers to explore whether proven models could be adapted in order that they can be delivered in the places where mainstream children's services are delivered by teachers, social workers, psychologists and other professionals using the support structures for recruitment and training that systems provide. Once again, the analysis should assume that every dollar spent on a system-ready, evidence-based programme would replace a dollar spent on existing services.

In some areas, such as school-based programmes, the challenges may be few, although there is much scope to move from several externally supported models to an integrated curriculum backed by formal teacher training arrangements. In other areas substantial barriers will be faced, particularly by parenting programmes for which there are few system supports. But there are examples from which lessons can be drawn. One is Judy Hutchings' work in Wales to embed the parenting programme Incredible Years into children's centres – what North Americans would recognise as Headstart projects.[53] Parents were recruited by screening children attending the children's centres in all economically disadvantaged communities. Children's centre

staff were trained to deliver the parenting programme. The intervention was evaluated by experiment, demonstrating significant impact on children's emotional and behavioural development, and is being replicated in Birmingham, UK. A system spin-off has been to get children's centres to serve the neediest children.

A second area of enquiry for system reformers and programme developers should be the technical assistance and resources recommended for each evidence-based programme. A scan of the Blueprints for Violence Prevention database, which brings together information on 11 'model' programmes and 17 'promising' programmes, illustrates the potential for maturation.[54]

Each entry carries with it information on the curriculum and other materials, plus training and coaching arrangements necessary for the successful implementation of the programme. In some cases those arrangements involve support or accreditation by a small not-for-profit organisation established by the programme developer. This is a little like requiring people who want to use the spreadsheet Excel to go on a three week course delivered by a small NGO in Seattle. It would be hard for children's services organisations with, say, 5,000 staff which may benefit from Excel to get the support they need. And when they learn that it is another NGO, this time perhaps in Cupertino, California, that supports the word processing programme that the same 5,000 and maybe another 7,000 staff need, then irritation is likely to be considerable. This is not a sensible way to do business.

Excel, Word, Outlook and other programmes designed and sold by Microsoft are complex. But they have common features, such as 'File' and 'Window', so we know where to look on the screen. There are courses and books but most of the training is available online. People with a reasonable education quickly pick up what they need to know to get the programmes to meet their needs. In time, using these programmes becomes intuitive. The programme developers make sure their wares will operate on lots of platforms, because that is good for business.

Perhaps the comparison is feeble. We are dealing here with people, not computer code. On the other hand, are there not

common features in the technical support for evidence-based programmes? The time is ripe for a major experiment to test the benefits of making a training and support entity available to systems that seek embedded evidence-based programmes. Masters courses that provide graduates working in systems with ways of thinking, explanations about the logic behind proven models and practical skills to aid their implementation offer one avenue that is worth exploring. To what extent will this training or other variants, together with the resources described in box 6, boost the successful implementation of evidence-based programmes? It would be relatively straightforward to find out. At the very least, the core elements of social and emotional regulation curricula, or parenting programmes or other classes of intervention, should be better disseminated across systems. In both cases, new ways to deliver training and user advice so that it is system ready must be found.

Evidence-based process

My analysis began with the barriers to getting evidence-based programmes into the systems that sit around children's services. This led me to the world of system reform. That train of thought heads for the track in which system reform improves child outcomes independent of evidence-based programmes. This is a potential supplement to and not an alternative to evidence-based programmes.

Given that this additional proposal comes towards the end of an already long paper, I will keep my observations short and append a longer taxonomy, to use a smart word, or list, to use a more accurate noun, to capture some of the detail (see box 8).

Box 8   **A sketch of a taxonomy of system reform to improve child outcomes**

     1   *Changing the shape of the system*

         1.1   *Creating systems*

                Developing children's centres in every disadvantaged community in England (1998–2012)

1.2 *Reducing systems*
   Closing of training schools in England
   (1970–1980)
2 *Changing access to the system*
   2.1 *Changing consumers' relationship to the system*
      Increasing parental rights to access their
      children absent in care
      Giving children rights under the UN
      Convention
      Improving staff 'bedside manner'
   2.2 *Changing access to the system*
      Diverting young people away from youth justice
      systems
      Using screening and other tools to better match
      children's needs with interventions
      Improved triage to better prioritise which
      children need urgent help
      Extended schools and other changes in location
      of services
   2.3 *Altering assessment procedures*
      Introducing clear and consistent thresholds to
      determine impairment to health and
      development
      Introducing clear and consistent thresholds to
      decide access to services
3 *Changing what the system does*
   3.1 *Getting evidence-based programmes into the heart of
   the system*
      Getting systems ready for evidence-based
      programmes, such as using children's centres as
      a base for Incredible Years
      Getting evidence-based programmes 'system
      ready', such as finding the right point of access
      for proven interventions
      Getting evidence-based programmes like
      cognitive behavioural treatment embedded in
      clinical practice

Diverting children from systems to save for investments in evidence-based programmes

3.2 *Reconfiguring parts of the system*
Integrating services better
Using multi-professional teams

3.3 *Changing system priorities*
Altering resource allocation, such as class size and caseload
Changing pay and conditions of staff
Changing the ways staff 'think' about children, eg more emphasis on child development
Changing responsibilities within parts of the system, eg giving schools permission to invest in children's social and emotional development

3.4 *Using outputs to alter outcomes*
Making outputs look more like outcomes
Getting more children at home, in school and out of court

4 *Changing support to the system*

4.1 *Altering support to staff*
Improving staff training
Paying attention to practitioners' needs, eg more rapid assessment or better risk assessment tools
Changing staff attitudes towards outcomes
Improving mental health of staff
Making better selection of clinicians

4.2 *Business models that promote outcomes*
Invest to save methods
Business transformation methods

4.3 *Research and evaluation*
Evaluating existing services to estimate impact on outcome

In contrast to traditional system reform, which is geared to improving outputs such as fewer separated children or quicker response times, the illustrations that follow are all focused on

improved outcomes. This means better child health or development, proven to a high scientific standard.

I have reckoned on about a dozen system reform strategies brought together under four main headings.

Changing the shape of the system

A starting point is changing the shape of the system by adding to it or subtracting from it. From time to time, systems form new limbs – fingers or toes at least. The emergence of Headstart in the USA and children's centres, formerly Sure Start Local Partnerships, in the UK are good examples from recent history. These are now fully integrated into children's services and there is reasonable if mixed evidence that they contribute to child well-being. Then there are amputations. There are fewer de-commissions of sectors of services than might be justified if children's health and development were the sole concern. The most significant in recent history is probably curtailing the reform schools for delinquent youth in England in the 1960s and 1970s. It is not known whether this change improved the behaviour of young people, but it would be reasonable to hypothesise that it did, and if the work were being done today, it would be relatively straightforward to establish an evaluation to prove or disprove that hypothesis.

I want to convey the idea of innovation through subtraction. Most people associate innovation with addition, say of a new policy, programme or funding stream. Most people associate the removal of provision with the negative. The need for rigorous evaluation of something new is increasingly understood. But the idea of using a randomised controlled trial to estimate the effect of stopping an intervention is seldom contemplated. Why? Most policy makers and practitioners accept that some services may be ineffective and some harmful. So why not test their hypotheses by subtracting services at random and evaluating the effects? There is no reason why we cannot discover if doing less can achieve more for children's health and development.

Altering the way people engage with and get into systems presents other opportunities to enhance child well-being. Giving children and parents more rights, for example during separation proceedings or to have equal access to services, might reasonably be expected to improve outcomes. If there were a will, we could find out. There are several possibilities with respect to the way children and families access systems. Diverting youth away from potentially harmful interventions such as detention is one. Getting youth to potentially beneficial interventions is another. We know how to do this effectively but do not yet know whether it improves child well-being.

Within this category are the huge windows of opportunity for change surrounding screening, triage and assessment. The recent US National Academy of Sciences report on prevention put great store in screening as a mechanism to make better use of evidence-based programmes, but there is also the opportunity to alter radically how systems decide when to intervene.[55] For some reason triage is a word largely foreign to large systems with the possible exception of health, but much more could be done to introduce efficiencies in sifting through the many children and families who are asking for help. And then there is assessment, working out what children and families need, the severity of those needs, how they can best be met and with what intended effect.

Altering how the system behaves

Then there is altering what the system does, how it behaves. In addition to getting systems ready for evidence-based programmes reformers could test other process changes predicated on improving child outcomes. It is generally accepted that integration in itself does not in itself improve child outcomes. But what happens when teams working with children are reconfigured, say to bring family therapists, social workers and youth workers together to engage with children referred to state care and youth justice systems? There is some research on the impact of altering class size on educational outcomes and much more could be done to evaluate the effects of reducing caseloads, increasing remuneration or improving the social status of practitioners.

Consistent with earlier sections of the paper there is much scope to understand better the relationship between outputs and outcomes. Systems are driven by outputs that describe how many people are doing how many things in what period of time and at what cost. These data do not tell us about outcomes, but they may be related to outcomes. In Birmingham, for example, as a statement of values the Department of Children's Services is attempting to support more children 'at home, in school and out-of-court'. If there is improvement in any or all of these outputs, will there be an improvement in children's health and development? When the number of children in state care in New York City was reduced by system reformers from 50,000 to 18,000, did outcomes for the hundreds of thousands of children who have remained with their parents over the years since the policy was implemented get better or worse?

Altering the support for children's services

The last category in the taxonomy is altering the support for children's services. Much of this is to do with staff, about making them happier, reducing their stress and helping them do their job better. There is also the tricky question of staff selection and accountability. There is an emerging science that demonstrates that a small proportion of well-trained practitioners not only fail to improve child outcomes, but also cause health and development to deteriorate. There is a body of economic research bringing into view the limited pool of staff with competencies to achieve beneficial change with children and families. These are all system reform issues directly related to child outcomes.

Some system reformers may look at this list and ask how it differs from their current work. The first distinction is to design the reform around child outcomes. The second distinction would be a determination to find out, using the best science, whether these activities made any difference to children's health and development. Instead of just advocating for and building support for wholesale change of systems, the reformers would first find out if their hypotheses about change in child well-being worked. This would lead to a third difference, namely a series of

evidence-based products not comprising programmes like Nurse-Family Partnership but instead utilising processes that produce similar effects. Arguably such products would come more naturally to systems and will therefore be easier to take to scale. If that happens, prevention scientists will come knocking at the door of system reformers trying to comprehend the essence of their success.

Conclusion

There is a scientific term I have avoided using until now that captures much of the focus of this paper: ecological validity. Roughly translated it means 'measuring whether results hold true in the real world'. I started off by exploring what needs to happen to make evidence-based programmes operate in the real life context of systems that spend roughly $7,000 to $9,000 per annum per child. (With a little more indulgence I might have repeated the analysis by asking what was needed to make evidence-based programmes work in the real life context of family homes, which on average spend a similar amount of money to systems). I ended the discussion by asking whether changes in the real life of these systems, effected by a little-recognised group of people called system reformers with their own methods and procedures, would lead to improvements in children's health and development. Much of what has been said in these pages has been about connecting science to real life.

My aspirations are for the most part modest. There are two worlds here that can benefit from working more closely with each other. Prevention scientists can learn from system reformers, and vice-versa. I might go further and say that evidence-based programmes need systems. And it is already broadly acknowledged that systems ought to make more use of evidence-based programmes.

Perhaps more will come from this enquiry. There is the germ of something valuable in the concept of natural processes. Understanding the causal mechanisms that lead to maladapted development or poor health is vital. But maybe we need also to comprehend how people go about their lives, at home with their

children and, for a sub-population, at work operating the systems that help children? Maybe we need to tie these two bits of knowledge more closely together?

There are few greater advocates for evidence-based programmes than me. But we may find that most of these products cannot be taken to scale. Maybe the extent of adaptations to make them viable within children's services systems will eliminate their effectiveness? Perhaps they will all be absorbed into professional training? Or possibly it will be found that some of the system reform efforts described in the last part of the paper will lead to much more widespread improvements in the well-being of children than can be achieved via evidence-based programmes?

Or let us close by contemplating another possibility. Maybe we need to start from scratch? Maybe the programmes are all wrong? Mary Jane Rotheram-Borus at the University of California, Los Angeles, was the first among a number of researchers to ask whether product development in prevention science, in which the product is an evidence-based programme or practice, should mirror the situation in other areas of innovation and begin with market surveys and end with something that people will buy and use, as well as having the desired effects on child outcomes.[56]

Or maybe the systems are all wrong. The Annie E. Casey Foundation's project Blue Sky was an effort to bring together three evidence-based programmes – Multi-systemic Therapy, Functional Family Therapy and Multi-dimensional Treatment Foster Care – and to create an alternative to the usual functioning of the juvenile justice system.[57] It would be interesting to take this idea further, and to bring together a group of programme developers, systems leaders and reformers to design a completely new way of supporting the health and development of our children.

Notes

1   For the sake of brevity I will use the term 'children' to refer to people aged 0–21 years, in other words to include 'youth' (to use the US vernacular) or 'young people' (in the UK).

2   S Woolf et al, 'Giving everyone the health of the educated: an examination of whether social change would save more lives then medical advances', *American Journal of Public Health* 97, no 4 (2007).

3   R Porter, *The Greatest Benefit to Mankind: A medical history of humanity* (London: HarperCollins, 1997).

4   Ibid.

5   R Wilkinson and K Pickett, *The Spirit Level: Why equality is better for everyone* (London: Penguin Books, 2010).

6   M Little and K Mount, *Prevention and Early Intervention with Children in Need* (Aldershot: Ashgate, 1999).

7   D Olds et al, 'Effects of nurse home-visiting on maternal life course and child development: age 6 follow-up results of a randomized trial', *Paediatrics* 114, no 6 (2004).

8   AACJ James, A Soler and RRW Weatherall, *Cognitive Behavioural Therapy for Anxiety Disorders in Children and Adolescents: The Cochrane Collaboration* (London: John Wiley & Sons, 2005, updated 2009).

9   C Borduin, C Schaeffer and N Heiblum, 'A randomized clinical trial of multisystemic therapy with juvenile sexual

offenders: effects on youth social ecology and criminal activity', *Journal of Consulting and Clinical Psychology* 77, no 1 (2009).

10 Figure based on a reanalysis of data from Kids Count, http://datacenter.kidscount.org (accessed 27 April 2010).

11 A Scull, *Decarceration: Community treatment and the deviant – a radical view* (New Jersey: Prentice-Hall, 1977); A Scull, *Museums of Madness: The social organization of insanity in nineteenth century England* (London: Allen Lane, 1979).

12 Social Research Unit, Prevention Action, www.preventionaction.org.

13 P Mrazek and R Haggerty (eds), *Reducing Risks for Mental Disorders: Frontiers for preventive intervention research* (Washington DC: The National Academies Press, 1994).

14 ME O'Connell, T Boat and KE Warner (eds), *Preventing Mental, Emotional, and Behavioral Disorders Among Young People: Progress and possibilities* (Washington DC: The National Academies Press, 2009).

15 Ibid.

16 Ibid.

17 M Little and B Maughan (eds), *Effective Interventions for Children in Need* (Aldershot: Ashgate, 2010).

18 JA Durlak and EP DuPre, 'Implementation matters: a review of research on the influence of implementation on program outcomes and the factors affecting the implementation', *American Journal of Community Psychology* 41, nos 3–4 (2008).

19 D Lipton, R Martinson and J Wilks, *The Effectiveness of Correctional Treatment: A survey of treatment evaluation studies* (New York: Praeger, 1975).

20 LINKS (Lifecourse Interventions to Nurture Kids Successfully) Database, www.childtrends.org/links/ (accessed 29 April 2010).

21 J Durlak et al, 'The impact of enhancing students' social and emotional learning: a meta-analysis of school-based universal interventions', *Child Development* (in press).

22 R Spoth et al, 'PROSPER study of evidence-based intervention implementation quality by community-university partnerships', *Journal of Community Psychology* 35, no 8 (2007).

23 Porter, *The Greatest Benefit to Mankind*.

24 M Rotheram-Borus and N Duan, 'Next generation of preventive interventions', *Journal of the American Academy of Child and Adolescent Psychiatry* 42, no 5 (2003).

25 P Jensen, 'Commentary: the next generation is overdue', *Journal of the American Academy of Child and Adolescent Psychiatry* 42, no 5 (2003) (emphasis in the original).

26 S Millham, R Bullock and P Cherrett, *After Grace – Teeth: A comparative study of the residential experience of boys in approved schools* (London: Chaucer Publishing Company, 1975).

27 S Millham, R Bullock and K Hosie, *Locking up Children: Secure provision within the child-care system* (Farnborough: Saxon House, 1978).

28 L Ohlin, R Coates and A Miller, *Reforming Juvenile Corrections: The Massachusetts Experience* (Cambridge MA: Ballinger, 1977); N Tutt (ed), *Alternative Strategies for Coping with Crime* (Oxford: Blackwell, 1978); R Coates, A Miller and L Ohlin, *Diversity in a Youth Correctional System: Handling delinquents in Massachusetts* (Cambridge MA: Ballinger, 1978); DH Thorpe et al, *Out of Care: The community support of juvenile offenders* (London: George Allen & Unwin, 1980).

29 Millham et al, *Locking up Children*.

30 K Taylor, 'Performance based contracting: aligning incentives with outcomes to produce results' in M Testa and J Poertner (eds), *Fostering Accountability: Using evidence to guide and improve child welfare policy* (New York: Oxford University Press, 2010); Illinois DCFS, *Signs of Progress in Child Welfare Reform* (Springfield IL: Department of Children and Family Services, 2001, updated 2006); NYCACS, *Protecting Children and Strengthening Families: A plan to realign New York City's child welfare system* (New York: New York City Administration for Children's Services, 2005).

31 R Mendel, *Two Decades of JDAI (Juvenile Detention Alternatives Initiative): A progress report* (Baltimore MD: Annie E. Casey Foundation, 2009).

32 A Conner and B Williams, 'Banning the juvenile death penalty: success through funding of nonprofit advocacy and coalition work', *Responsive Philanthropy*, Summer, 1 (2005).

33 S Millham, 'An embarrassment of riches or a rich embarrassment? Four decades of social policy research', inaugural lecture by Spencer Millham, Professor of Social Policy, University of Bristol, May 1992 (Dartington: Social Research Unit, 1993).

34 Department for Education and Science, *A New Partnership for our Schools* (Taylor Report) (London: HMSO, 1977); Ofsted and DfES, *A New Relationship with Schools*. London: Office for Standards in Education and Department for Education and Skills, 2004).

35 Connecticut DCF, *Strategic Plan 2010–2014* (Hartford CT: Department of Children and Families, 2009), www.ct.gov/dcf/lib/dcf/homepage/pdf/complete_strategic_plan_dec09.pdf (accessed 29 April 2010); Vermont DCF, *Vermont's Success by Six Initiative: Annual report* (Waterbury VT: Department of

Children and Families, 2004), http://humanservices.
vermont.gov/publications/vermont-s-success-by-six-initiative
(accessed 29 April 2010).

36 Lord H Laming, *The Victoria Climbié Inquiry* (London: The
Stationery Office, 2003).

37 M Friedman, *Trying Hard is Not Good Enough* (Crewe: Trafford
Publishing, 2005).

38 Department of Health, *Child Protection: Messages from research*
(London: HMSO, 1995); N Axford and M Little, *Refocusing
Children's Services towards Prevention: Lessons from the literature*,
Research Report 510 (London: Department for Education
and Skills, 2004).

39 Department for Education and Science, *Special Educational
Needs* (Warnock Report) (London: HMSO, 1978); J Visser
and G Upton (eds), *Special Education in Britain after Warnock*
(London: David Fulton, 1993); J Fish, *Special Education: The
way ahead* (Milton Keynes: Open University Press, 1985).

40 Children Act 2004, www.opsi.gov.uk/acts/acts2004/
20040031.htm (accessed 28 April 2010); see also Children Act
1989, www.opsi.gov.uk/acts/acts1989/Ukpga_19890041_en_
1.htm (accessed 28 April 2010).

41 LE Ohlin, RB Coates and AD Miller, 'Evaluating the reform
of youth correction in Massachusetts', *Journal of Research in
Crime and Delinquency* 12, no 1 (1974).

42 G Hand et al, *Project Re-direction Evaluation Report*
(Tallahassee FL: Justice Research Centre, 2009).

43 See Washington State Institute for Public Policy,
www.wsipp.wa.gov (accessed 27 April 2010).

44 Birmingham City Council, *A Brighter Future for Children and Young People: The Birmingham Strategy – the story so far* (Dartington: Social Research Unit, 2009).

45 D Olds, 'The Nurse-Family Partnership: an evidence-based preventive intervention', *Infant Mental Health Journal* 27, no 1 (2006).

46 J Alexander et al (1998) 'Functional family therapy' in DS Elliott (ed), *Blueprints for Violence Prevention*, book 3 (Golden CO: Venture Publishing, 1998).

47 James et al, *Cognitive Behavioural Therapy for Anxiety Disorders in Children and Adolescents*.

48 D Hawkins and R Catalano, *Communities That Care: Drug abuse prevention* (San Francisco CA: Jossey-Bass, 1992); D Hawkins, R Catalano and M Arthur, 'Promoting science-based prevention in communities', *Addictive Behaviors* 27, no 6 (2002); A Fagan et al, 'Bridging science to practice: achieving prevention program implementation fidelity in the community youth development study', *American Journal of Community Psychology* 41, nos 3–4 (2008).

49 M Friedman, *Trying Hard is Not Good Enough*.

50 D Hawkins et al, 'Results of a type 2 translational research trial to prevent adolescent drug use and delinquency: a test of communities that care', *Archives of Paediatrics & Adolescent Medicine* 163, no 9 (2009).

51 N Axford et al, 'Linking prevention science and community engagement: a case study of the Ireland Disadvantaged Children and Youth Programme', *Journal of Children's Services* 3, no 2 (2008).

52 Durlak and DuPre, 'Implementation matters'.

53 J Hutchings et al, 'Parenting intervention in Sure Start services for children at risk of developing conduct disorder: pragmatic randomised controlled trial', *British Medical Journal* 334 (2007).

54 Blueprints for Violence Prevention, www.colorado.edu/cspv/blueprints/ (accessed 28 April 2010).

55 Special issue of Prevention Action on the National Academies of Science report *Preventing Mental, Emotional and Behavioural Disorders Among Young People*, http://preventionaction.org/node/5002 (accessed 28 April 2010).

56 Rotheram-Borus and Duan, 'Next generation of preventive interventions'.

57 Prevention Action, 'Casey Foundation hopes three heads are better than one', 28 May 2010, www.preventionaction.org/prevention-news/casey-foundation-hopes-three-heads-are-better-one/5334 (accessed 28 May 2010).

References

Alexander, J et al (1998) 'Functional family therapy' in DS Elliott (ed), *Blueprints for Violence Prevention*, book 3 (Golden CO: Venture Publishing, 1998).

Axford, N and Little, M, *Refocusing Children's Services towards Prevention: Lessons from the literature*, Research Report 510 (London: Department for Education and Skills, 2004).

Axford, N et al, 'Linking prevention science and community engagement: a case study of the Ireland Disadvantaged Children and Youth Programme', *Journal of Children's Services* 3, no 2 (2008).

Birmingham City Council, *A Brighter Future for Children and Young People: The Birmingham Strategy – the story so far* (Dartington: Social Research Unit, 2009).

Borduin, C, Schaeffer, C and Heiblum, N, 'A randomized clinical trial of multisystemic therapy with juvenile sexual offenders: effects on youth social ecology and criminal activity', *Journal of Consulting and Clinical Psychology* 77, no 1 (2009).

Coates, R, Miller, A and Ohlin, L, *Diversity in a Youth Correctional System: Handling delinquents in Massachusetts* (Cambridge MA: Ballinger, 1978).

Connecticut DCF, *Strategic Plan 2010–2014* (Hartford CT: Department of Children and Families, 2009), www.ct.gov/dcf/lib/dcf/homepage/pdf/complete_strategic_plan_dec09.pdf (accessed 29 April 2010).

Conner, A and Williams, B, 'Banning the juvenile death penalty: success through funding of nonprofit advocacy and coalition work', *Responsive Philanthropy*, Summer, 1 (2005).

Department for Education and Science, *A New Partnership for our Schools* (Taylor Report) (London: HMSO, 1977).

Department for Education and Science, *Special Educational Needs* (Warnock Report) (London: HMSO, 1978).

Department of Health, *Child Protection: Messages from research* (London: HMSO, 1995).

Durlak, JA and DuPre, EP, 'Implementation matters: a review of research on the influence of implementation on program outcomes and the factors affecting the implementation', *American Journal of Community Psychology* 41, nos 3–4 (2008).

Durlak, J et al, 'The impact of enhancing students' social and emotional learning: a meta-analysis of school-based universal interventions', *Child Development* (in press).

Fagan, A et al, 'Bridging science to practice: achieving prevention program implementation fidelity in the community youth development study', *American Journal of Community Psychology* 41, nos 3–4 (2008).

Fish, J, *Special Education: The way ahead* (Milton Keynes: Open University Press, 1985).

Friedman, M, *Trying Hard is Not Good Enough* (Crewe: Trafford Publishing, 2005).

Hand, G et al, *Project Re-direction Evaluation Report* (Tallahassee FL: Justice Research Centre, 2009).

Hawkins, D and Catalano, R, *Communities That Care: Drug abuse prevention* (San Francisco CA: Jossey-Bass, 1992).

Hawkins, D, Catalano, R and Arthur, M, 'Promoting science-based prevention in communities', *Addictive Behaviors* 27, no 6 (2002).

Hawkins, D et al, 'Results of a type 2 translational research trial to prevent adolescent drug use and delinquency: a test of communities that care', *Archives of Paediatrics & Adolescent Medicine* 163, no 9 (2009).

Hutchings, J et al, 'Parenting intervention in Sure Start services for children at risk of developing conduct disorder: pragmatic randomised controlled trial', *British Medical Journal* 334 (2007).

Illinois DCFS, *Signs of Progress in Child Welfare Reform* (Springfield IL: Department of Children and Family Services, 2001, updated 2006).

James, AACJ, Soler, A and Weatherall, RRW, *Cognitive Behavioural Therapy for Anxiety Disorders in Children and Adolescents: The Cochrane Collaboration* (London: John Wiley & Sons, 2005, updated 2009).

Jensen, P, 'Commentary: the next generation is overdue', *Journal of the American Academy of Child and Adolescent Psychiatry* 42, no 5 (2003).

Laming, H, *The Victoria Climbié Inquiry* (London: The Stationery Office, 2003).

Lipton, D, Martinson, R and Wilks, J, *The Effectiveness of Correctional Treatment: A survey of treatment evaluation studies* (New York: Praeger, 1975).

Little, M and Maughan, B (eds), *Effective Interventions for Children in Need* (Aldershot: Ashgate, 2010).

Little, M and Mount, K, *Prevention and Early Intervention with Children in Need* (Aldershot: Ashgate, 1999).

Mendel, R, *Two Decades of JDAI (Juvenile Detention Alternatives Initiative): A progress report* (Baltimore MD: Annie E. Casey Foundation, 2009).

Millham, S, 'An embarrassment of riches or a rich embarrassment? Four decades of social policy research', inaugural lecture by Spencer Millham, Professor of Social Policy, University of Bristol, May 1992 (Dartington: Social Research Unit, 1993).

Millham, S, Bullock, R and Cherrett, P, *After Grace – Teeth: A comparative study of the residential experience of boys in approved schools* (London: Chaucer Publishing Company, 1975).

Millham, S, Bullock, R and Hosie, K, *Locking up Children: Secure provision within the child-care system* (Farnborough: Saxon House, 1978).

Mrazek, P and Haggerty, R (eds), *Reducing Risks for Mental Disorders: Frontiers for preventive intervention research* (Washington DC: The National Academies Press, 1994).

NYCACS, *Protecting Children and Strengthening Families: A plan to realign New York City's child welfare system* (New York: New York City Administration for Children's Services, 2005).

O'Connell, ME, Boat, T and Warner, KE (eds), *Preventing Mental, Emotional, and Behavioral Disorders Among Young People: Progress and possibilities* (Washington DC: The National Academies Press, 2009).

Ofsted and DfES, *A New Relationship with Schools*. (London: Office for Standards in Education and Department for Education and Skills, 2004).

Ohlin, L, Coates, R and Miller, A, *Reforming Juvenile Corrections: The Massachusetts Experience* (Cambridge MA: Ballinger, 1977).

Ohlin, LE, Coates, RB and Miller, AD, 'Evaluating the reform of youth correction in Massachusetts', *Journal of Research in Crime and Delinquency* 12, no 1 (1974).

Olds, D, 'The Nurse-Family Partnership: an evidence-based preventive intervention', *Infant Mental Health Journal* 27, no 1 (2006).

Olds, D et al, 'Effects of nurse home-visiting on maternal life course and child development: age 6 follow-up results of a randomized trial', *Paediatrics* 114, no 6 (2004).

Porter, R, *The Greatest Benefit to Mankind: A medical history of humanity* (London: HarperCollins, 1997).

Prevention Action, 'Casey Foundation hopes three heads are better than one', 28 May 2010, www.preventionaction.org/prevention-news/casey-foundation-hopes-three-heads-are-better-one/5334 (accessed 28 May 2010).

Rotheram-Borus, M and Duan, N, 'Next generation of preventive interventions', *Journal of the American Academy of Child and Adolescent Psychiatry* 42, no 5 (2003).

Scull, A, *Decarceration: Community treatment and the deviant – a radical view* (New Jersey: Prentice-Hall, 1977).

Scull, A, *Museums of Madness: The social organization of insanity in nineteenth century England* (London: Allen Lane, 1979).

Social Research Unit, *Prevention Action*.

Spoth, R et al, 'PROSPER study of evidence-based intervention implementation quality by community-university partnerships', *Journal of Community Psychology* 35, no 8 (2007).

Taylor, K, 'Performance based contracting: aligning incentives with outcomes to produce results' in M Testa and J Poertner (eds), *Fostering Accountability: Using evidence to guide and improve child welfare policy* (New York: Oxford University Press, 2010).

Thorpe, DH et al, *Out of Care: The community support of juvenile offenders* (London: George Allen & Unwin, 1980).

Tutt, N (ed), *Alternative Strategies for Coping with Crime* (Oxford: Blackwell, 1978).

Vermont DCF, *Vermont's Success by Six Initiative: Annual report* (Waterbury VT: Department of Children and Families, 2004), http://humanservices.vermont.gov/publications/vermont-s-success-by-six-initiative (accessed 29 April 2010).

Visser, J and Upton, G (eds), *Special Education in Britain after Warnock* (London: David Fulton, 1993).

Wilkinson, R and Pickett, K, *The Spirit Level: Why equality is better for everyone* (London: Penguin Books, 2010).

Woolf, S et al, 'Giving everyone the health of the educated: an examination of whether social change would save more lives than medical advances', *American Journal of Public Health* 97, no 4 (2007).

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We know a fair amount about what works in improving the well-being of children, but we struggle to do this at scale. This is illustrated by the significant socioeconomic inequality between children that exists today in spite of a decade of ambitious public service reform and increased investment.

Proof Positive explores two questions. First, how do we get practices that are proven to improve children's outcomes embedded within services for children, such as children's centres and schools? What kinds of systemic reforms can be successful in spreading evidence-based, effective programmes at the local level? Second, what is the scope of other types of systemic reform in improving children's outcomes?

The pamphlet argues we need a better understanding about how systems can be made more efficient. We need systems that make better and more widespread use of evidence-based practice. But we should not underestimate the impact that changing processes and structures can have on child outcomes – and the evidence base around this needs further development.

Michael Little is Co-Director of the Social Research Unit at Dartington.