

Smart & Connected: Safeguarding our children



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01 Foreword



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Safeguarding children is one of the most important, and most sensitive, responsibilities of public services. It demands a rigorous but carefully balanced approach in spotting signs of concern and making difficult judgements with far reaching implications, all the while maintaining privacy around children and their families. It also has the most potential for damage; to children's lives, organisational reputations and a breaking of the trust between citizens and state.

Safeguarding children is undeniably complex. To gain a full picture of a child, its family and the combined vulnerability a multi-agency response is essential. It cannot be done by local authorities - or any other part of the public sector – in isolation.

Local authority children's services are responsible for supporting and protecting vulnerable children – and in an increasingly complex world of inter-linked dependencies and risk, their families. Where children are thought to be at risk of harm, children's services must take steps to keep them safe.

Findings from numerous serious case reviews and public inquiries have highlighted the

importance of effective communication and of professionals working together to safeguard and protect children. Several high-profile cases, including the death of four-year-old Daniel Pelka, have highlighted the tragic consequences which can result when information indicating risk is held by one agency and not appropriately shared with others.

Everyone who comes into contact with children and families has a role to play in safeguarding and promoting the welfare of children. The Children Act 2004, as amended by the Children and Social Work Act 2017, strengthens the already important relationship between the police, clinical commissioning groups (CCGs) and the local authority.

It places them under a new duty to make arrangements to work together, and with other partners locally, to safeguard and promote the welfare of all children in their area:

- protecting children from maltreatment;
- preventing impairment of children's health or development;
- ensuring that children grow up in circumstances consistent with the provision of safe and effective care;
- taking action to enable all children to have the best outcomes.

Data and insight is required to help identify, prioritise and target the right services,

interventions and support to address problems early and before they escalate. This will help to enable improved outcomes for children, while ensuring targeted services offer value for money in these continually budget-constrained times.

Effective use of technology to enable collaborative and modern working, collate and analyse information from multiple sources, can help safeguarding partnerships to:

- make best use of, and augment, professionals' skills and time;
- create intelligence from data;
- find connections that might have been missed;
- build a picture and understanding of local need;
- identify current and potential future risk;
- better understand the outcomes of frontline practice;
- enable development of well-informed priorities;
- identify action to improve frontline services.

Technology can never replace the skills and professionalism of social workers, police and NHS staff. But it can empower them. It can give them back time, it can enable secure collaboration, it can deliver insight and analysis. It can augment the collective skills and knowledge required to keep vulnerable children safe.

Effective exchange of information keeps key officials informed of relevant factors. Information must be delivered in a secure manner that controls access to appropriate people only. Fears about harnessing data and intelligence cannot be allowed to stand in the way of the need to safeguard and promote the welfare of children and young people at risk of abuse or neglect.

This paper explores the potential for new and evolving technologies to augment and

support the effective safeguarding of the most vulnerable in our society. It doesn't advocate a 'new system / rip and replace' approach, rather an evolving integration with existing systems to expand, enhance and augment collective capabilities.

I hope that it provides ideas, insight and inspiration in the quest to ever improve the identification and protection of children at risk.

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02 Introduction

Serious case reviews have repeatedly highlighted how opportunities to intervene and save a child's life have been missed. The tragic roll call of names is familiar to us all, from Victoria Climbié to Baby P (Peter Connelly), Khyra Ishaq, Daniel Pelka, Keanu Williams and Hamzah Khan.

Common to the findings in these reviews are that information was either not reported or not linked, enabling the perpetrators to manipulate and deceive practitioners again and again. A culture of optimism was highlighted in some reviews, and reference was made to both the complexity of child protection and the high volume of case workers' workloads. Children were described repeatedly as 'invisible'.

For example, the serious case review in 2013 into the death of four-year-old Daniel Pelka at the hands of his mother and her partner the previous year, found that he was 'invisible' at times and that 'no professional tried sufficiently hard enough' to talk to him due to language problems.

In the months before he died Daniel had seen a doctor in hospital for a broken arm, arrived at school with bruises and facial injuries, and was seen scavenging for food. A teaching assistant described him as "a bag of bones" and at the time of his death he weighed just over a stone-and-a-half. His lack of English meant that he was not given a voice; no one had spoken to him properly about his home life. Police were called to 26 separate incidents at the family home, many involving domestic violence and alcohol abuse.

The Keanu Williams case review similarly found that there were 'a number of significant missed

"We need to create a coherent and comprehensive cross agency capacity, led by a forensic analysis of the data and intelligence received, to move in a timely manner from referral to analysis to action. This should be a core strategic requirement on each of the three key agencies. Our multi-agency arrangements need to be underpinned by such a new, intelligence led approach."

Alan Wood, Wood review of local safeguarding children boards, May 2016

opportunities' to save the two-year-old boy from being beaten to death by his mother in 2011. The familiar failings identified in the 2013 review included poor communication between and within agencies; a lack of analysis of information; and shortcomings in recording systems.

At the end of 2015 ministers asked Alan Wood CBE to undertake a fundamental review of the role and functions of Local Safeguarding Children Boards (LSCBs) within the context of local strategic multi-agency working.¹

In his wide-ranging review, he suggested reforming the boards into strategic partnerships involving local authority, police and CCG. He made wide-ranging recommendations but, of key interest to this paper, he came to a number of conclusions and recommendations about the use of data to identify potential risk and to collaborate around the child, advising that strategic partnerships focus on:

¹ <https://www.gov.uk/government/publications/wood-review-of-local-safeguarding-children-boards>

- the strategy for information and data sharing, including to allow for identification of vulnerable children in need of early help;
- risk strategy, identifying and adapting to challenges including new events, and establishing a core intelligence capacity.

Pointing out that “sharing information is not a barrier to those who combine to exploit and abuse children”, he stated: “We need to create a coherent and comprehensive cross agency capacity, led by a forensic analysis of the data and intelligence received, to move in a timely manner from referral to analysis to action. This should be a core strategic requirement on each of the three key agencies. Our multi-agency arrangements need to be underpinned by such a new, intelligence led approach.”

Wood recommended that the Home Office and Departments of Communities and Local Government (now the Ministry of Housing, Communities and Local Government), Health, and Education issue joint advice and guidance on the critical importance of effective and speedy sharing of information and data in relation to protecting and safeguarding children. This should focus on the expectation that unless there is specific legal impediment information must be shared.

In addition, the Department for Education should review what approaches to early cross agency intervention and intelligence gathering to identify children and young people at risk are most effective, including considering whether the Multi-Agency Safeguarding Hubs (MASH) model offers an effective approach.



03 Rising safeguarding pressures

In November 2018 the Association of Directors of Children's Services (ADCS) published the latest iteration of its Safeguarding Pressures research, comprising qualitative and quantitative data from local authorities to evidence and better understand changes in demand for, and provision of, children's social care. This sixth phase of the study draws together survey responses from 92% (140) of all local authorities in England with responsibility for children's services, covering 11.3 million (95%) children and young people under the age of 18.

Data over a ten-year period shows an escalation in demand for support from children's services:

- an estimated 2.4 million initial contacts were made to children's social care in 2017/18, a 78% increase over the past ten years;
- referrals to children's social care went up by 22% in the last decade;
- the number of children subjects of child protection plans increased by 87% in ten years;
- abuse and neglect continue to be the primary reason for referrals to children's social care and for children becoming looked after;
- twice as many children became subjects of a child protection plan due to neglect in 2017/18 compared to ten years ago and emotional abuse continues to increase;
- an estimated 644,430 Child in Need assessments were completed in 2017/18 and over 170,000 assessments included domestic abuse as a factor;

- it is estimated that 75,480 children were in care in 2017/18 - an increase of 24% in ten years;
- significantly more 16 to 17 year olds were subject of a child protection plan from 0.5% of all children subjects of child protection plans in 2007/8 to 4% in 2017/18.

Financial pressure

Local authorities have a legal duty to keep children safe from harm and to promote their welfare. However, since 2010 there has been a 50% reduction in local authority budgets, coupled with reductions in other public agencies, including police, health and education services. Meanwhile, ADCS estimates over one hundred new duties have been placed on children's services since 2011.

The research shows that investment through the Troubled Families programme has enabled local authorities to work creatively, with half of respondents stating that this vital funding underpins their early help offer. This investment has facilitated better joint working and co-location with other professionals as well as the ability to fund much needed family support workers. This funding is set to end in 2020 and the majority of respondents said this will have a negative impact with three quarters stating that nearly all early help services would be cut in their local area.



04 Multi-agency safeguarding reform

Subsequent to the Wood review of Local Safeguarding Children Boards, the Children and Social Work Act 2017² makes strengthened provision for: looked after children; the welfare of children; the regulation of social workers.

Importantly, in relation to safeguarding, it effectively abolishes the Local Safeguarding Children Boards, removing the Children Act 2004 duties relating to them. In their place, it puts legal duties on three safeguarding partners to lead a more flexible system of multi-agency arrangements:

- the local authority chief executive;
- the accountable officer of a clinical commissioning group;
- a chief officer of police.

These three partners will be jointly responsible for setting out local plans to keep children safe and improve their wellbeing, and will be accountable for how well agencies work together to protect children from abuse and neglect. They will also be responsible for identifying serious child safeguarding cases which raise issues of importance in relation to the area and review these where appropriate.

The law underpinning the new safeguarding arrangements came into effect on 29 June 2018.

Local areas in England have up to 12 months from this date to develop and publish their arrangements, and a further three months to implement their plans in full - safeguarding partners must publish their arrangements by 29 June and have implemented new arrangements by 29 September 2019.

² <http://www.legislation.gov.uk/ukpga/2017/16/contents/enacted>

³ <https://www.gov.uk/government/news/strengthened-guidance-to-protect-children-at-risk>

⁴ <https://www.gov.uk/government/publications/working-together-to-safeguard-children--2>

"We all have a responsibility to promote the welfare of children and protect those at risk of harm. It is important that young people can grow up in an environment that is as safe and stable as we would want for our own children. That's why we have changed the law to create a stronger safeguarding system, placing greater accountability on the key professionals involved so vulnerable children can get the support and protection they deserve."

Children and Families Minister Nadhim Zahawi MP

Guidance to this end was published in June 2018.

Working together to safeguard children

A press release from the Department of Education, Department of Health and Social Care and the Home Office on 4 July 2018³



launched the strengthened guidance to protect children at risk. 'Working together to safeguard children'⁴ sets out the new legal requirements for improved partnerships to protect children. The new safeguarding arrangements replace existing Local Safeguarding Children Boards,

taking into account recommendations made in the 2016 review by Sir Alan Wood.⁵

Each of the new statutory partners in an area - the police, health and the local authority - now have legal duties which require them to take joint responsibility for ensuring multi-agency safeguarding arrangements in an area are effective.

The new advice is aimed at all professionals who come in to contact with children and families and includes guidance on current threats to child protection, such as sexual and criminal exploitation, gangs and radicalisation.

Key changes include:

- equal duties placed on the police, CCGs and local authorities to work together on safeguarding decisions and to promote children's welfare;
- placing greater accountability on senior leaders for each agency: the council chief executive, the accounting officer of a CCG and a chief officer of police;
- strengthening expectations on schools and other educational settings that they must co-operate with the multi-agency safeguarding arrangements;
- extending safeguarding responsibilities to sports clubs and religious organisations in recognition of their important role in working with and protecting children and young people;
- new duties on CCGs and councils to carry out reviews of child deaths, instead of children's services, in line with evidence that only a small number of these incidents relate to safeguarding concerns;
- better reviews of complex or nationally important cases, and improving

identification of the lessons learnt from these, led by the new Child Safeguarding Practice Review Panel chaired by Edward Timpson and replacing Serious Case Reviews.

Launching the guidance, children and families minister Nadhim Zahawi said, "We all have a responsibility to promote the welfare of children and protect those at risk of harm. It is important that young people can grow up in an environment that is as safe and stable as we would want for our own children. That's why we have changed the law to create a stronger safeguarding system, placing greater accountability on the key professionals involved so vulnerable children can get the support and protection they deserve."

Multi-Agency Safeguarding Hubs (MASH)

Many local authorities and partners have established Multi-Agency Safeguarding Hubs (MASH) in recent years. These bring together a team of multi-disciplinary professionals from partner agencies into the same room to deal with all safeguarding concerns where someone is concerned about the safety or wellbeing of a child.

Within the MASH, information from partner agencies will be collated to assess risk and decide what action to take. As a result, the agencies will be able to act quickly, in a coordinated and consistent way, ensuring that vulnerable children and families are kept safe.

Partners can include: children's social care (including children with disabilities and integrated homeless team); youth offending services; police; probation; early help service and specialist family focus team; housing; voluntary groups; community health and midwifery; mental health services; substance misuse.

⁵ <https://www.gov.uk/government/publications/wood-review-of-local-safeguarding-children-boards>

It can be expected that these hubs will evolve to accommodate the new approach to safeguarding partnerships.

Child protection – information sharing project

Initiated in 2013 and overseen by NHS Digital, the Child Protection – Information Sharing project⁶ (CP-IS) is the first national safeguarding system which shares information between health and social care. It works by linking up the information held by local authorities on looked after children, and those on current child protection plans, with systems at NHS unscheduled care settings such as emergency departments and minor injuries units.

"Keeping children safe is absolutely vital and we want a world-class child protection system that makes sure our vulnerable children get the support they need, when they need it."

"A key part of this is access to information, and the Child Protection Information Sharing project is an important tool in joining up our systems so doctors, nurses and social workers have a more detailed picture about the vulnerable children they care for."

Children and Families Minister Nadhim Zahawi MP

If a vulnerable child known to a local authority attends an unscheduled care setting, a notification is generated and sent to the child's social worker. It also alerts clinicians that they are dealing with a vulnerable child. This enables health and social care staff to work more closely together to protect children most at risk of abuse, harm and neglect.

This means that health and social care staff have a more complete picture of a child's interactions with health and social care services. This enables them to provide better care and earlier interventions for children who are considered vulnerable and at risk.

The CP-IS project is linking the IT systems used across health and social care and helping organisations to change business processes, so this basic information can be shared securely between them. The information can only be accessed securely by trained professionals involved in a child's care.

As of June 2018, 109 (72%) authorities with responsibility for children's services and 174 (65%) of healthcare organisations were live with the CP-IS. In May 2018, 5,285 notifications were sent through the system.

⁶ <https://digital.nhs.uk/services/child-protection-information-sharing-project>

05 Information sharing

According to guidance on information sharing⁷ published at the same time as Working Together to Safeguard Children, 'Information sharing is essential for effective safeguarding and promoting the welfare of children and young people. It is a key factor identified in many serious case reviews (SCRs), where poor information sharing has resulted in missed opportunities to take action that keeps children and young people safe.'

Indeed, sharing information is an intrinsic part of any frontline practitioner's job when working with children and young people. Decisions about how much information to share, with whom and when, can have a profound impact on a child's life. Information sharing helps to ensure that an individual receives the right services at the right time and can prevent a 'need' from escalating. As a number of SCRs have highlighted, sharing information can be the difference between life and death.

Fears about sharing information, therefore, cannot be allowed to stand in the way of the need to safeguard and promote the welfare of children at risk.

Lord Laming emphasised that the safety and welfare of children is of paramount importance and highlighted the importance of practitioners feeling confident about when and how information can be legally shared.⁸ He recommended that all staff in every service, from frontline practitioners to managers in statutory services and the voluntary sector, should understand the circumstances in which they may lawfully share information, and that it

Information sharing is essential for effective safeguarding and promoting the welfare of children and young people. It is a key factor identified in many serious case reviews (SCRs), where poor information sharing has resulted in missed opportunities to take action that keeps children and young people safe.

Information sharing - Advice for practitioners providing safeguarding services to children, young people, parents and carers, July 2018

is in the public interest to prioritise the safety and welfare of children.

Whilst non-statutory, the advice on information sharing has been produced to support practitioners in the decisions they take to share information with the aim of reducing the risk of harm to children and young people and promoting their wellbeing.



⁷ <https://www.gov.uk/government/publications/safeguarding-practitioners-information-sharing-advice>

⁸ <https://www.gov.uk/government/publications/the-protection-of-children-in-england-a-progress-report>

Seven golden rules

Government's advice on information sharing⁹ contains seven golden rules:

1. The General Data Protection Regulation (GDPR), Data Protection Act 2018 and human rights law are not barriers to justified information sharing, but provide a framework to ensure that personal information about living individuals is shared appropriately.
2. Be open and honest with the individual (and/or their family where appropriate) from the outset about why, what, how and with whom information will, or could, be shared and seek their agreement, unless it is unsafe or inappropriate to do so.
3. Seek advice from other practitioners, or your information governance lead, if you are in any doubt about sharing the information concerned, without disclosing the identity of the individual where possible.
4. Where possible, share information with consent and, where possible, respect the wishes of those who do not consent to having their information shared.
5. Consider safety and wellbeing: base your information sharing decisions on considerations of the safety and wellbeing of the individual and others who may be affected by their actions.
6. Necessary, proportionate, relevant, adequate, accurate, timely and secure: ensure that the information you share is necessary for the purpose for which you are sharing it, is shared only with those individuals who need to have it, is accurate and up-to-date, is shared in a timely fashion, and is shared securely (see principles).
7. Keep a record of your decision and the reasons for it – whether it is to share information or not. If you decide to share, then record what you have shared, with whom and for what purpose.

Information sharing principles

The guidance emphasises that the most important consideration is whether sharing information is likely to support the safeguarding and protection of a child. To this end it then sets out a series of principles to help practitioners share information between organisations.

Necessary and proportionate: Information must be proportionate to the need and level of risk.

Relevant: Only information that is relevant to the purposes should be shared with those who need it. This allows others to do their jobs effectively and make informed decisions.

Adequate: Information should be adequate for its purpose. Information should be of the right quality to ensure that it can be understood and relied upon.

Accurate: Information should be accurate and up to date and should clearly distinguish between fact and opinion. If the information is historical then this should be explained.

Timely: Information should be shared in a timely fashion to reduce the risk of missed opportunities to offer support and protection to a child. Timeliness is key in emergency situations and it may not be appropriate to seek consent for information sharing if it could cause delays and therefore place a child or young person at increased risk of harm.

Secure: Wherever possible, information should be shared in an appropriate, secure way.

Record: Information sharing decisions should be recorded, whether or not the decision is taken to share.

⁹ [Information sharing - Advice for practitioners providing safeguarding services to children, young people, parents and carers \(July 2018\)](#)

Data sharing myth-busting

The guidance contains a 'myth-busting' section, emphasising that fears about sharing information cannot be allowed to stand in the way of the need to safeguard and promote the welfare of children and young people at risk of abuse or neglect:

GDPR & Data Protection Act 2018 ARE NOT BARRIERS to sharing information: Neither regulation prohibits the collection and sharing of personal information, rather they provide a framework to ensure that personal information is shared appropriately. In particular, the Data Protection Act 2018 balances the rights of the information subject (the individual whom the information is about) and the possible need to share information about them.

Consent is NOT ALWAYS NEEDED to share personal information: Wherever possible, consent should be sought. However, there may be some circumstances where it is not appropriate to seek consent, either because the individual cannot give consent, it is not reasonable to obtain consent, or because to gain consent would put a child or young person's safety or wellbeing at risk.

Personal information collected by one organisation CAN BE DISCLOSED to another organisation: In the case of children in need, or children at risk of significant harm, it is difficult to foresee circumstances where information law would be a barrier to sharing personal information with other practitioners.

The common law duty of confidence and the Human Rights Act 1998 DO NOT PREVENT the sharing of personal information: In addition to the GDPR and Data Protection Act 2018, practitioners need to balance the common law duty of confidence, and the rights within the Human Rights Act 1998, against the effect on children or individuals at risk, if they do not share the information. It can be overwhelmingly in the information subject's interests for this information to be disclosed. It is also possible that a public interest would justify disclosure of the information (or that sharing is required by a court order, other legal obligation or statutory exemption).

IT Systems ARE NOT A BARRIER to effective information sharing: IT systems, such as the Child Protection Information Sharing¹⁰ project (CP-IS), can be useful in supporting information sharing. IT systems are most valuable when practitioners use the data that has been shared to make more informed decisions about how to support and safeguard a child. Evidence from the Munro Review¹¹ is clear that IT systems will not be fully effective unless individuals from organisations co-operate around meeting the needs of the individual child.

¹⁰ <https://digital.nhs.uk/services/child-protection-information-sharing-project>

¹¹ <https://www.gov.uk/government/publications/munro-review-of-child-protection-final-report-a-child-centred-system>

06 Enabling Technologies

Advances in technology are opening up new possibilities for better, more streamlined processes with a more intelligent use of the information at hand. Developments in data sharing, artificial intelligence and analytics, robotic process automation and chatbots are making it possible to sift information, support workers in all agencies, and ensure that safeguarding measures are targeted more quickly and more effectively at children in need of support.

Technology advances are raising the potential for new approaches to safeguarding that can contribute to better lives for vulnerable children.

Practitioners can spend days collecting information that is held across different systems in different organisations. By using technology to automate intelligence gathering and analysis professionals have insight at their fingertips, freeing limited time to instead prioritise conversations with other services to better understand families' needs and spend time working directly with children and families.

The use of analytics and predictive analytics can also inform safeguarding partnerships as to which interventions work best. It can also identify families that may not need support today but may be at risk of future need and would benefit with early help. By predicting need, cost-effective support can be given



earlier, reducing the likelihood of future, more expensive, high level support.

New insight from data also has the potential to help redesign services to focus on those that are most impactful and provide a base for more efficient outcomes-based commissioning.

Another important feature is the ability to share and collate 'soft intelligence' about specific risks. This can be difficult because the people in the agencies with a direct role in child protection do not always have the connections with people who are aware of the signs of a problem. It needs a solution to draw those officials from trusted agencies into providing the intelligence about where there could be concerns. An effort to apply this approach in fighting child exploitation has been pioneered in Rotherham (see box on page 15).

There are a number of acknowledged flags for potential need for early help that practitioners should be alert to, including:

- is in a family circumstance presenting challenges for the child, such as drug and alcohol misuse, adult mental health issues and domestic abuse; is misusing drugs or alcohol themselves;
- is disabled and has specific additional needs; is showing signs of being drawn into anti-social or criminal behaviour, including gang involvement and association with organised crime groups;
- is frequently missing/goes missing from care or from home;
- is at risk of modern slavery, trafficking or exploitation; is at risk of being radicalised or exploited;
- has special educational needs (whether or not they have a statutory Education, Health and Care Plan); is a young carer;
- has returned home to their family from care; is a privately fostered child.

Additional information on health, school absences or exclusions, housing, council benefits and council tax information, debt and information from other council systems, can be used to build a profile of risk.

Of course, alerts from the CP-IS project on looked after children and those on current child protection plans, warrant immediate investigation.

Breaking down data silos

Gaining a full picture of a child's risk requires access to and sharing of trustworthy data from multiple sources to create new insights, to then drive responsive and responsible action.

Modern data platforms can enable safeguarding partnerships to access data, derive intelligence and gain actions for professionals to review. They can take data from multiple sources to provide daily snapshots and history of activity.

Of course, data sharing is challenging at the best of times, but legal and policy requirements within the safeguarding arena can make this even harder. Solutions here must meet GDPR requirements, encrypt data at all times and have robust, secure access capabilities giving an audit trail of who has looked at information and when.

Solutions have been developed, or are under development, across the country using Microsoft platforms to add new dimensions to the collaboration between the organisations involved in safeguarding partnerships and others, such as schools, youth organisations and community groups, that can contribute to child welfare.

Their key feature is managed data sharing, giving the appropriate people as clear a view as possible of the information that they need to carry out their roles; and the focus is often providing a single view of the child

and other relevant information such as family history and changes of circumstance, with the aim of strengthening the lead practitioner's understanding of a case.

Along with this it has become common practice to ensure the systems can be accessed through mobile devices, enabling workers to access and update the information while out in communities and spend less time in the office.

Examples of these approaches can be seen in the boxes in this section.



Rotherham gains soft intelligence to counter child sexual exploitation

Rotherham Council issued the Nimos safeguarding app from [risual](https://www.risual.com/), in a pilot to selected people working in agencies other than social care – such as housing, mental health services and the voluntary sector – who have strong connections with vulnerable people in the community. It enables sharing of 'soft intelligence' quickly and securely and provides a tool for the prevention of child sexual exploitation.

Nimos enables people to report any causes of concern, adding any details they possess such as the date, time and location of an incident, an image if available and any further detail. It does not necessarily trigger action, but it does make children's services teams, multi-agency safeguarding hubs and police officers aware of a potential problem and can lead them to investigate further or take preventative action.

It is not intended to replace existing processes for sharing information through, for example, safeguarding or information sharing forms, but instead complements these methods to deliver the missing pieces of the jigsaw. A more comprehensive intelligence rich picture allows for better strategic decisions relating to resourcing and services conditioning, as well the tactical delivery of safeguarding of vulnerable children.

A report by the police Child Exploitation Unit that evaluated the effectiveness of the application and the pilot project is [available to download](https://www.risual.com/)

<https://www.risual.com/>

Cloud, analytics and AI

The evolution of cloud technologies has opened up new opportunities for handling vast amounts of data to deliver important insights to augment professionals' decision making - helping to understand what happened in the past, or at this moment, and predict what may happen in the future.

Artificial Intelligence is essentially built through combining algorithms and data. Designing AI to be trustworthy requires creating solutions that combine this data and algorithms to reflect the ethical principles that are deeply rooted in the public sector. AI systems should augment, not replace, professional judgement. They should treat all people fairly, and perform reliably and safely. They must be transparent and understandable, and they must be secure and respect privacy.

In safeguarding, AI can enable practitioners to take a more proactive, predictive approach to monitoring risk and intervening earlier – you can read more about Liverpool's journey into AI in the box below.

Data enables proactive approach in Liverpool

Liverpool City Council wanted to develop a more proactive approach to protecting children, developing ways to enhance referrals, building family intelligence by making more data available to inform partnership teams. In the summer of 2018 the Liverpool Families Programme Data Team worked with Sentinel Partners to deploy its Troubled Families data integration solution.

The system takes in data on specific incidents or contacts with public agencies and uses a rules-based process to match it against a child and provide a single view of the circumstances. Staff are trained to configure the rules for relevant data to be added, cleaned, validated and matched.

This comes with a scoring mechanism, based on levels of risk in different factors, to flag up issues such as exclusion from school and signs of criminal exploitation and informs lead professionals that a family needs support. Different scoring rules can be applied to different scenarios and to the different teams – such as early help, safeguarding and partners working with families in a single focused approach.

The system immediately produced positive results – the day it went live it alerted children's services to concerns around 8,300 families, up from 5,400 already on the radar – and has been seen as a success. Liverpool and Sentinel are now looking at ways to use AI in prediction profiling scenarios, identifying patterns of incidents that lead to concerns. This has the potential to support earlier and better targeting of interventions to protect children.

<https://www.sentinelpartners.co.uk/>



Bots support and report

In our increasingly time-poor world, organisations across the public sector are harnessing bot technology to create applications which can respond to natural language input from end users. With the advantage of being always on bots can be used to provide instant, standard responses to queries or access to expert knowledge relating to complex legislation or guidelines – for example, about whether something should be reported to a MASH or safeguarding team (see box below).

Bots can also be used to automate simple, repetitive tasks, such as gathering profile information, removing the need for direct human intervention. A bot interaction can be a quick question and answer, or it can be a sophisticated conversation that intelligently provides access to information.

Indeed, bots can do the same things other types of software can do - read and write files, use databases and APIs, and do regular computational tasks. What makes bots unique is their use of mechanisms generally reserved for human-to-human communication.

Chatbot knowledge dialogue on decisions to report

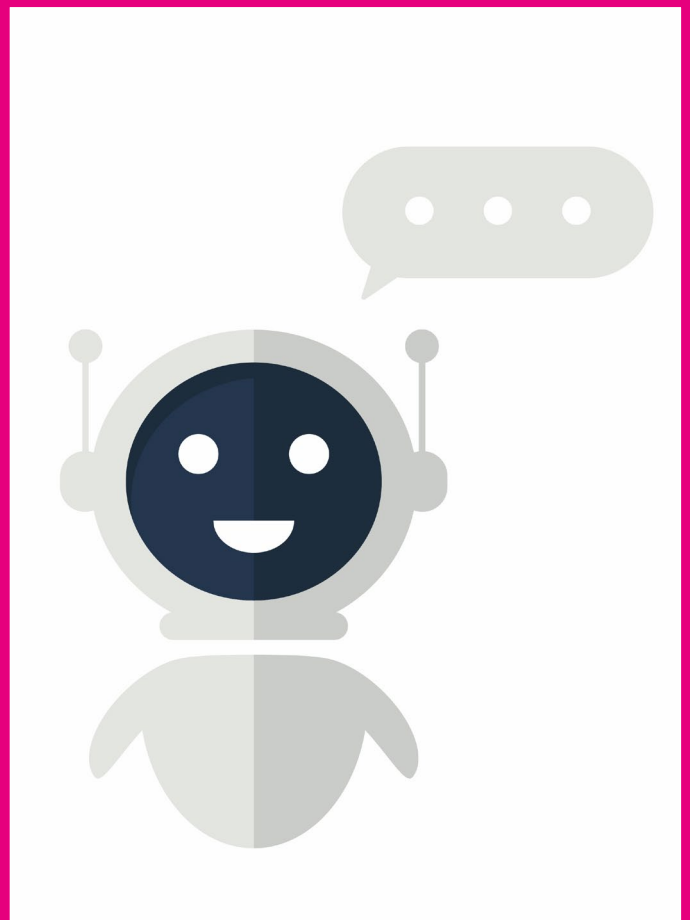
Safeguarding is a prime example of an area where legal requirements and guidelines are complex and the implications of taking the wrong action, or no action, can be significant. It can be difficult to ensure that all staff in organisations such as schools or youth clubs are fully aware of the formal procedures and decision trees.

Chatbot specialist [DF2020](https://www.df2020.com/), a member of the Microsoft Interoperability Programme, has developed a prototype of a process to inform and record decision making regarding an initial approach about possible child abuse. It uses a specially programmed chatbot – built on Azure and which can be integrated into the Microsoft stack through the Azure Bot Service – to shift the emphasis away from what it describes as a ‘knowledge monologue’ about what to do to a ‘knowledge dialogue’.

This prototype can be configured by social workers to help authorised officials from other agencies to establish whether a child may be subject to abuse. It can be configured in various ways to use a series of knowledge maps that illustrate and document choices, pathways and outcomes, helping the official run through the process much more quickly, informing them whether their concerns are valid and guiding them to the next step.

The bot can be programmed to work with text or voice to help understand and contextualise the answers provided, and then records every step of the interaction as a record of compliance with procedures. This can help to provide a reliable result along with full transparency and the security for employees raising concerns. As it operates through an omni-channel framework it can be accessed through any digital device, and the company sees it as a generic solution that could be used by a range of agencies for a range of guidance.

<https://www.df2020.com/>



Cognitive services

Real-world data is messy. It often spans media types (eg text documents, PDF files, video, images, databases), changes constantly, and carries valuable knowledge in ways that are not readily usable in traditional systems.

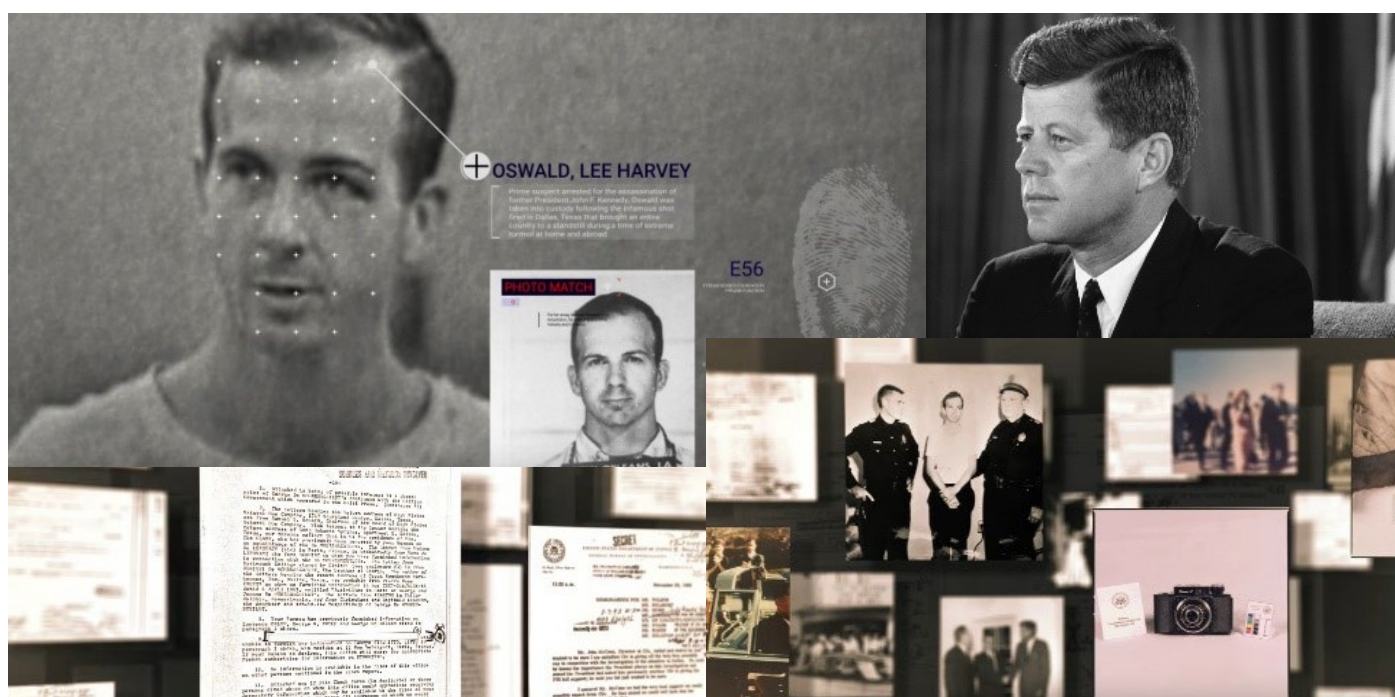
Advances in AI however are powering new Cognitive Services such as Microsoft's Cognitive Search, which can pull data from a variety of structured and unstructured data sources and apply a set of composable cognitive skills to extract knowledge. This knowledge is then organised and stored in a search index enabling new experiences for exploring and extracting intelligence from data. The power of this technology is evident in its recent use to unlock the information in the JFK files (see box below).

AI-based Cognitive Services can also translate and transcribe in real time what has been said into a text document and coherent report, and power real-time conversation translation in Skype.

Collaboration around the child

A significant number of local authorities, CCGs, police forces and other organisations involved in safeguarding children are today using Office 365.

In addition to empowering staff with modern and mobile working capabilities, the platform provides cost neutral collaboration tools enabling multi-agency teams to work in an agile way, creating secure teams as needed around the child.



The JFK Files

Ingest, Enrich, Explore: In 2017 the US government released more than 34,000 pages related to the assassination of JFK. Like everyone in the country we were curious to know what's inside them, but it would take us months to read through these. The files consisted of a mixture of typed and handwritten pages that were 60 years old which were scanned into PDF files, along with evidence photos. We applied the full power of Microsoft's AI to understand what was in those files and the vast scale of the Azure Cloud to handle the continual flow of data. Cognitive Search is powered by Azure Search with built in Cognitive Services. It pulls data from almost any data source and applies a set of composable cognitive skills which extract knowledge. When we first applied Cognitive Search to the JFK files, it was incredible to see what emerged. Not only could we answer so many interesting questions, we could see the answers and relationships in context with the original documents.

Practitioners can collaborate more effectively using the Microsoft Teams hub, with team chat, video calling, online meetings, co-authoring and sharing files securely with others in 'the team' - whether they be inside or outside the organisation.

Information protection technologies in Office 365 by default help to ensure that important data stays secure and only the right people have access to it. It lets users seamlessly exchange encrypted and rights-protected email to help prevent inappropriate sharing of sensitive data in documents and emails.



Cambridgeshire focuses on early learning

Cambridgeshire's Assessment System for Early Years (CASEY) has enabled early years providers to assess children and exchange progress data with the council's early years service and schools. Developed by the county council and Sentinel Partners, it enables real-time information sharing and can be used to compare the child's development against their expected stage in relation to their age. To support this, relevant information is collected directly from the authority's own systems to provide a complete picture of everything that is known about a child. Charts at individual and summary level also enable the wider view to be taken, and an analysis function allows specific target groups to be identified and monitored. This means that managers can quickly identify those children for whom an intervention could be needed. An underlying strength of this approach is that it has facilitated the data sharing without requiring an overarching system, but used a hub that links with existing sources of data and that can be used alongside established collaboration tools.

<https://www.sentinelpartners.co.uk/>

Data helps London council's most at risk children, families and adults

A London borough is working with EY & Xantura to transform its front-line services using data. This programme is in association with London Ventures, an EY and London Councils programme.

The aim is to combine professional judgement with data driven insight and secure information governance to better support vulnerable children who are at risk of abuse or neglect and families at risk of homelessness, supporting professionals to make informed decisions and deliver targeted interventions earlier and improve outcomes for children and families.

The platform brings together over 40 sets of data from a range of sources, across the local authority and its partners agencies (e.g. schools). This provides front line professionals with a better understanding of contextual vulnerabilities and historic interventions; and strategic managers and commissioners a better understanding of the needs of their local communities and what interventions will make a difference. It is embedded into many processes within the council; the Multi-Agency Safeguarding Hub (MASH) and front door, assessment teams and care managers. A summary view is also available for partners and other professionals with key information about lead professionals and current interventions to prevent the need for families having to repeat their story.

Data is combined and given to professionals using Natural Language Processing, giving them access to household composition and sequence of events across services. Risk stratification and analytics is used to inform professionals when there is a change in risk which coupled with professional judgement could lead to a step up or down in targeted support. Information is also shared securely with partners when there is a legal or consent based gateway to do so. This enables professionals to move to proactive, as oppose to reactive, support and supports better partnership working while ensuring that personal data is protected and only ever shared on a need to know basis.

Overall, the intention is to reduce numbers of children and families requiring statutory intervention by focussing on providing early help at the right time. Alongside a 30-50% time saving for professionals on administrative tasks enabling them to focus on building relationships rather than administrative process. This will result in cost savings to the council - an estimated annual saving of 10%+ operational spend as well as a better understanding of the efficacy of commissioning decisions. The functionality is being continuously developed and optimised, with the council being better able to understand who is accessing their services and what their needs are.

[Visit EY for more information](#)



Birmingham children's data hub

Birmingham Children's Trust came into being in April 2018, formerly being Birmingham City Council's Children's Services. It is owned by, but independent from, the council and is responsible for supporting disadvantaged children and young people in the city. It has been working throughout this transition with Microsoft partner, [Sentinel](#), and the council to create a data hub for children and families that enables professionals to all access the same accurate data collated around the child.

The hub provides a single view of a child and all relevant factors – from wider family group, police, education and other information - that might point to a risk for children's services teams. It can collate data on a child and their families from over 100 sources, using complex algorithms to match features such as the spelling of names and addresses and merging it into a single view. It then risk scores information to identify and highlight children that may be at risk, or may become so in future.

This information is then fed to the children's services and other teams through a configurable portal to make each screen appropriate to the respective team. This means it is possible to ensure that they only see the data that is appropriate to their purpose. It can also be configured for outside teams to simply provide an alert message that there is an issue without sharing any sensitive data.

The data feeds are updated daily from any incidents and reports – such as a child being excluded from school or the police being called to the home – and the portals also provide a full chronology of events relevant to each family. This fulfils the need of child protection teams to become aware as soon as possible of any factors that have significantly increased risk to a child, and when there is a need for urgency in taking action.

The next phase of this work is the Birmingham Pupil Portal, which will open up a new secure data-sharing platform with all schools across the city in support of the safeguarding of vulnerable children. In the first stage this new platform will enable the city's obligations under Operation Encompass by providing automated alerts to schools for any of their pupils who have been involved in a domestic abuse incident.

Operation Encompass is a police and education early information sharing partnership enabling schools to offer immediate support for children and young people experiencing domestic abuse. Information is shared by the police with a school's trained Key Adult (DSL) prior to the start of the next school day after officers have attended a domestic abuse incident thus enabling appropriate support to be given and further safeguarding concerns to be monitored.

<https://www.sentinelpartners.co.uk/>



Thurrock combines data with predictive analytics

The potential to improve safeguarding through the use of predictive analytics is at the centre of a project involving Thurrock Council and [Xantura](#). Over three years they have developed a system that uses data from multiple agencies to identify children who are statistically most at risk of maltreatment, identifying and joining up small signals and triggering a request for an intervention from MASH, Early Help or other local teams.

It uses Xantura's platform to take in the data, now totalling 45 sets, and provide a single view for social workers and other front-line staff. It brings the data together and uses natural language processing to condense it into a chronology of the family's contact with public agencies and a summary of the case, in the local context of what happens in similar cases. The case summaries can be used by workers in triage, full assessment or within early intervention as a tool to support professional judgement. Importantly, the system does not make any decisions – just provides an alert that a professional should assess something and a case summary that shows the data in an accessible way.

A partner information portal facilitates the sharing of relevant data. It has a series of information governance protocols built that enable authorised people from other public agencies to view the information appropriate to their roles, seeing a specific case related to the bigger picture of risk to assess whether a referral to social services is necessary. Thurrock are using the portal as part of their Brighter Futures interventions where Lead Professionals can access information that is relevant to their role with the family and use it to support multi agency discussions about the families risk and needs.

A pilot programme of predictive modelling without using it to trigger any action was run over 12 months to March 2018 and proved to be over 80% accurate. It has since gone live with the aim of picking up cases early enough to prevent escalation into statutory social care. It also involves the use of intervention analytics on how well services are working for groups of families, with clustering and segmentation techniques to provide an understanding of how impacts occur across various groups. This has the potential to feed into decisions on commissioning services.

<https://www.xantura.com/>



Enfield and Kent explore data lakes and analytics

Microsoft partner [itelligent-i](http://www.itelligent-i.com/) has been working with a number of councils, including Enfield and Kent, to create an intelligent dashboard using the Microsoft platform to pull the strands of data together and give different teams a view of what they need to know. It has enabled secure sharing of data through a data lake and Azure Active Directory, taking in not just council and NHS sources but also from other organisations such as the police and sensors in people's homes.

The platform draws on this data to provide actionable insights, identifying cohorts and individuals at risk and packaging the data in different ways for teams with different responsibilities.

The company builds and configures truly scalable, resilient and secure analytics platforms using Microsoft Azure PaaS services. These can include Azure Data Lake Store, Azure SQL Data Warehouse, Azure SQL Database, Azure Data Factory, Azure Data Lake Analytics, Azure Blob Storage, Azure Data Catalogue, Machine Learning, IoT HUB and Microsoft Power BI. Due to its development in Azure, the platform can deliver an enhanced digital capability via the Azure Bot Framework for Artificial Intelligence (AI) and Predictive Analytics using Azure Machine Learning or IoT.

In the case of Enfield, the council wanted to ensure that its strategic and operational decisions were driven by intelligence and insight. It also wanted to predict future volumes to inform design of its digital Enfield programme, which had to be built on quality and up to date data. It was also keen to use AI, IoT and Azure Machine Learning to help it maintain services in the face of 40% budget cuts at a time of unprecedented demand for statutory services.

Enfield now has a single version of the truth, refreshed nightly from all the key systems relating to children's services and education, adult services and housing, revenues and benefits with more systems able to be included, as well as the council's digital service platform built on Dynamics CRM. This data can be analysed and contrasted individually and collectively at the highest strategic level to the most granular level of operational detail.

Meanwhile, Kent is working with itelligent-i to create a data lake platform 'fit for the future of analytics' encompassing adult and children's services, early help, troubled families, other council services, health and data sources in order to provide an holistic family and child view. This will enable early identification of children and families in need of support and intervention.

<http://www.itelligent-i.com/>

07 Transforming safeguarding

There are signs of an increasing number of local authorities exploring the potential of digital technology in safeguarding to improve outcomes, and that central government is ready to get behind some of the efforts to develop solutions and spread best practice. It is notable that two of the projects to receive funding near the end of 2018 under the Ministry of Housing, Communities and Local Government's Local Digital Fund¹² programme focus on children's social care.

A consortium in the Manchester area, led by the Greater Manchester Combined Authority, has been awarded £80,000 for a project aimed at improving decision making in children's services departments. It aims to give them comparable data on the needs, services and outcomes for children in care that will in turn support more appropriate decisions in commissioning.

The focus will be developing a common data model and standardised reporting approach for SSDA903 statutory returns and identifying the unmet data needs in current processes.

The second project is being led by Stockport Metropolitan Borough Council and is aimed at helping frontline workers in early help and social work to obtain information on what services are engaged with a child's family. This responds to a lack of information when the child is referred – prompting a time-consuming process of phoning around to get the information – and involves building a prototype to give the professionals an informative view of the family. It will involve contact details for the lead professional in each team and begin with a set of core services common to all councils. Initially it is aimed at providing the tool for

frontline workers in four councils – Stockport, Leeds, Surrey and Worcestershire. The ultimate aim is to help social workers assess the safeguarding risk more thoroughly and make informed decisions on what support to offer.

The MHCLG is supporting both projects in the hope they will provide solutions that can be widely shared between councils, and it indicates a recognition of the role that digital has to play in more effective safeguarding.

We believe that the potential will be greatest when new solutions are designed to be used with existing sources of data and digital infrastructures. If they can be integrated with an authority's technology stack and legacy systems it will enable a cost-effective and low risk way forward. In today's modern, open standard technology world there is no need for a high risk 'rip and replace' approach.

As the pressure on children's services increases and the squeeze on public sector finances continues, technology offers new and compelling opportunities for improving safeguarding. And as technology evolves it is imperative that we use its power wisely to protect our vulnerable children.

¹² <https://localdigital.gov.uk/fund/projects-submitted/page/2/?keyword&type=funding&stage&status=funded&service>



A white paper researched and created by UKAuthority with support from Microsoft.

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