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Systematic review of models of analysing significant harm

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The views expressed in this report are the authors' and do not necessarily reflect those of the Department for Education.

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Terminology

The terminology used in this report has been standardised for reading ease. For example: terminology such as “where children are vulnerable or have been maltreated” will be referred to as “children suffering, or likely to suffer, significant harm”. This latter terminology is accordance with the Children Act 1989 which sets out the duties on local authorities and other agencies in England and Wales to safeguard and promote the welfare of children.

Executive Summary

Background

Section 47 of the Children Act 1989 places a duty on local authorities to make enquiries where it is suspected that a child is suffering, or is likely to suffer, significant harm, to enable it to decide whether it should take any action to safeguard and promote the welfare of the child. The framework for assessing such children is set out in chapter 5 of Working Together to Safeguard Children (HM Government 2010). This states that the assessment should "*draw together and analyse available information on the child's developmental needs, parenting capacity, and family and environmental factors in order to provide sound evidence on which to base professional judgment about whether, and how best, to intervene to safeguard the child's welfare*."

Evidence from a range of sources has identified that although practitioners are good at gathering information about children and families, they find it challenging analysing complex information in order to make judgments about whether a child is suffering, or is likely to suffer, significant harm. This is consistent with recent research highlighting the poor accuracy of much decision-making in the child protection field, with assessments being 'only slightly better than guessing' (Dorsey et al 2008).

There is also increasing consensus about the need to move toward the development of Structured Professional Judgment in which professional decision-making is supported by the use of standardised tools. A number of such standardised tools have been developed for assessing and analysing information gathered about whether a child is suffering, or likely to suffer significant harm, and recent additions include Safeguarding Assessment and Analysis Framework (SAAF) (Tapp et al 2010); Signs of Safety (Turnell 2010; Turnell and Edwards 1997; Turnell and Edwards 1999); and the Graded Care Profile (Srivastava and Polnay 1997).

There is a need now to examine the potential benefits of such tools alongside evidence about their rigour, and this review aims to build on the conceptual model established by *The Framework for the Assessment of Children in Need and their Families* (Department of Health, Department for Education and Employment and Home Office 2000), hereafter known as the 'Assessment Framework'. The main rationale for this approach is that the Assessment Framework (ibid) comprehensively captures accepted knowledge and best understanding about the range of influences on child development, and provides a concise conceptual model that is accessible and comprehensive for practitioners to use.

Aims

The aim of this review was to identify, critically appraise, and evaluate the potential role of all available tools for assessing/analysing data about the likelihood of significant harm to children.

We aimed to identify the adequacy of these tools in terms of their consistency with the principles of the Assessment Framework (Department of Health, Department for Education and Employment and Home Office 2000), and their potential to be used as part of a process of Structured Professional Judgment and their rigour.

Methods

This study involved a systematic review of published evidence. We searched a wide range of electronic databases, alongside a number of other sources. The included tools were critically appraised using an appraisal instrument that was developed for the purpose of the study. Critical appraisal of the included tools assessed the following:

- the adequacy of the domains that indicate what is to be assessed;
- the provision of behavioural descriptors that define and operationalise the categories/domains of assessment;
- the procedures and calculations for determining the nature and severity of harm associated with the above domains and with the overall score produced by the scale;
- the standardised forms provided to capture and record the information;
- the rigour of the tools in terms of reliability, validity, acceptability, equitability and impact.

A summary of the included tools and their strengths/weaknesses has been provided, alongside recommendations about the potential for implementing such tools in England and further research that is needed.

Findings

Review of Tools for Assessing Likelihood of Harm

- The review identified 3 systems of tools: 11 individual tools and 2 audit tools (see Table 1). These all consist of:
  a) methods of **assessing** a range of aspects of harm at different stages in the assessment process;
  b) criteria for **operationalising** the above assessment domains; and
  c) guidance about the synthesis and **analysis** of the data collected following the assessment, alongside data collection forms.

The above comprise the following types of tools:

1. **RISK ASSESSMENT TOOLS** – measure ***a small number of historical and static factors*** that research has shown to be strongly associated

with future risk of harm. They are for use at the initial stages in terms of identifying children for whom there is need of further assessment. Some of these tools were developed using empirical techniques and are as such evidence-based (i.e. actuarial) such as the Structured Decision-Making system of tools, but some are also consensus based (see chapter 1 for further detail).

2. **STRENGTHS AND NEEDS ASSESSMENT TOOLS –** typically measure ***dynamic factors*** that are often defined as 'needs', and which if remedied can reduce the risk of harm posed. They range from fairly brief tools that have been developed alongside the above actuarial Structured Decision-Making (SDM) system of tools, to brief mapping tools (e.g. Resilience Framework), and more comprehensive assessment and analysis tools (e.g. Safeguarding Assessment and Analysis Framework (Tapp et al. 2010).

3. **RESPONSE PRIORITY DECISION TREES** - these tools are used to improve the consistency across workers and to prioritise decisions about initial reports of abuse and neglect, in order to focus the workload on the most relevant cases, and aid decision-making about the rapidity of the response that is needed. They comprise decision-trees for each of the different types of abuse or neglect (for example emotional, physical and sexual abuse, and neglect), aimed at creating clarity about what should or should not be assessed at the time the child enters the social care system. All of the response priority tools that were identified have been developed as part of the Structured Decision-Making systems.

4. **PERMANENCY/PLACEMENT AND REUNIFICATION CHECKLISTS** – these tools are based on the same principles as the other Structured Decision-Making tools and have been developed as part of these systems. They focus explicitly on the likelihood of recurrence of harm in relation to decisions about permanency/placement and reunification.

5. **AUDIT TOOLS** – these are very similar to the risk checklists in that they comprise lists of empirically based risk factors. However, they have been used to date, as a means of auditing retrospectively whether cases have been classified accurately. For example, Ward et al (2012) recently used a set of empirically based risk factors developed by Jones, Hindley and Ramchandani (2006) and Jones (1991; 1998) to identify and classify cases into four categories of risk, and then to analyse whether the actions taken were consistent with these ratings.

Table 1: Systems and Tools

Included Tools			
	Tool	**Content**	**Analysis**
Systems of tools			
Systems	**Comprehensive Assessment Tool (CAT)**	5 tools: • Response Determination Assessment • Emergency Response Assessment • CAT Continuing Services Assessment • CAT Case Closure Assessment • CAT Placement Assessment.	Decision-tree. Quantitative
	Children's Research Centre-Structured Decision-Making (CRC-SDM) (also **Ontario Risk Assessment Model (ORAM); CALSWEC-SDM**)	6 tools: • Connecticut DCF Response Priority • California Family Risk Assessment • Safety Assessment • Virginia DSS Family Strengths and Needs Assessment/Review* • Placement/permanency Plan • Reunification Model (4 assessment tools).	Decision tree. Quantitative
	Victorian Risk Framework (VRF)*	3 tools: • Intake Case and Risk Assessment (CARAS) • Initial/investigation CARAS • Case progress CARAS.	Descriptive
Individual Tools (i.e. not included in the above systems)			
Risk/safety Checklists	**Child Abuse Risk Evaluation-Netherlands (CARE – NL)**	14 items	Numeric summary score
	Child at Risk Field (CARF)	14 items	Numeric summary score
	Child Endangerment Risk Assessment Protocol (CERAP)	15 items + mitigating factors	Data not synthesised numerically, Descriptive data used to classify child as 'safe' or 'unsafe'.
	Manitoba Risk Estimation System (MRES)	22 items	Numeric summary scores for vulnerability, reoccurrence, severity.
	Signs of Safety (SoS)	2 domains: Safety; Contextual factors	Map
	Resilience Matrix (RM)	2 domains: Resilience/vulnerability; Protective environment/adversity	Map
	Washington Risk Assessment Matrix (WRAM)	37 items over 7 domains	Numeric score obtained by summing items from 7 domains

Family Assessment	**California Family Assessment and Factor Analysis (CFAFA)**	23 items over 5 domains	Data from 23 items summed numerically.
	Graded Care Profile (GCP)	13 items over 4 domains	Numeric summary for 13 sub-areas of 4 key domains + map.
	The North Carolina Family Assessment Scale (NCFAS); (NCFAS-R) Scale-Reunification; (NCFAS-G) General Services; (NCFAS-G+R) Strengths and Stressors Tracking Device (SSTD)	10 domains 4 domains – 26 items	6 point Likert scale for each item but no summary score; uses clinical judgment of practitioner
	Safeguarding Assessment & Analysis Framework (SAAF)	120 items over 20 domains	5 point scale to depict level of concern: 3 point scale to depict overall rating for harm, risk of harm and prospects for successful intervention. Descriptive.
Audit	**Corby (2003)**	Schema involves assessing age, seriousness of abuse or concerns, whether there had been prior concerns or contact with social care, record of who reported the concern and what the initial response had been. Numbers are assigned to each of these dimensions and the total determined whether the case was to be considered child protection one or one involving a child in need.	Descriptive summary of level of risk of harm
	Ward et al (2012)	30 items over 7 domains	Descriptive summary of level of risk of harm

* Numerous variations of this tool existing including the FRAAN with variations developed in South Australia (SA-FRAAN); California (C-FRAAN); Minnesota (Min-FRAAN); Michigan (Mic-FRAAN); New South Wales (FSNA) etc.

Critical Appraisal of Included Tools

- The **domains being assessed** as part of many of the risk and need assessment tools are on the whole limited, and most are considerably less comprehensive than the two UK developed tools (Graded Care Profile and Safeguarding Assessment and Analysis Framework). While brevity and the use of static and historic factors is acceptable as part of a brief

risk assessment procedure for use at referral/initial assessment stages, tools that are designed to assess the needs of children and families should ideally be more comprehensive, as is the case with these two UK tools.

- In terms of **operationalisation of the above domains** we again found that some of the Structured Decision Making (SDM) tools provided a highly structured (i.e. tick box) approach with few accompanying descriptors. Only one SDM system of tools (Ontario Risk Assessment Model) provided extensive descriptors. Again, the two UK developed tools provided the most comprehensive descriptors alongside a comprehensive set of assessment domains.

- In terms of the **procedures and calculations for analysing** the above data, the (actuarial) SDM risk and need assessment tools were the most highly structured and quantitative, while many of the (consensus-based) need assessment tools provided more qualitative methods of synthesising the data, which would appear to be more consistent with the nature of the assessment process, and the use of Structured Professional Judgment.

- With regard to their **rigour** there is general recognition that 'actuarial' risk assessment tools are more accurate than consensus based tools (D'Andrade, Benton and Austin 2005). Our review found that although there is evidence favouring the validity, reliability and impact of one actuarial SDM risk assessment tool (California Family Risk Assessment tool), evaluation of its implementation in other contexts highlighted a range of significant problems.

  The comprehensive UK family need assessment tools highlighted above (Graded Care Profile and Safeguarding Assessment and Analysis Framework) do not currently have extensive evaluation data available, and this needs to be remedied.

  Some of the tools that were more limited with respect to the number of assessment domains provided and descriptors used to operationalise the domains (for example Resilience Matrix; Signs of Safety), appear to have potential value in terms of helping practitioners to create visual displays in order to facilitate the process of 'making sense' of the data, and sharing these data with families.

  The audit tools have potential value in terms of enabling services to audit case notes, and to identify discrepancies between the decisions recorded and the nature and severity of harm identified by these evidence-based tools.

Summary

Although there is general recognition of the need to move towards the use of 'structured' analysis and decision-making, there is currently limited evidence about the effectiveness of the available tools in the field of child protection, and further piloting of these instruments and research is now needed.

The evidence supports the use of one actuarial **risk assessment tool** (i.e. CRC-SDM California Family Risk Assessment tool) in some contexts, as part of the assessment process in order to classify the presenting nature and severity of any harm. This tool could potentially be used ***at referral*** or as part of the ***initial assessment*** to identify children who are in need of further assessment, and to ensure that no high risk families are being excluded at this point. However, this should not be implemented without evidence about its validity, rigour and impact, in addition to data about service user/provider acceptability in an English context.

We also identified a range of tools with which to conduct **strengths and needs assessments**. Although there is currently more evidence to support the use of the tools that have been developed as part of the Children's Research Centre - Structured Decision-Making Models (CRC-SDM), we identified two UK developed tools (Graded Care Profile; Safeguarding Assessment and Analysis Framework) that are more comprehensive, have greater consistency with the Assessment Framework (Department of Health, Department for Education and Employment and Home Office 2000), and that also provide clear guidance to help practitioners make sense of/analyse the data collected. These tools could potentially improve both the assessment and analysis of data about children in need, and children with complex needs in terms of the assessment of the likelihood of them suffering significant harm. However, they currently have limited evidence available concerning their rigour, and their use should be piloted and assessed for their validity, reliability and impact, in addition to the collection of data about service user/provider acceptability, and equity.

Other available tools that could be used to improve decision-making include **Response Priority Decision Trees**, which could be used ***at referral/intake*** to promote consistency of decision-making across practitioners, in response to the expression of initial concerns about a child; and the **permanency/placement/reunification** tools. These would also need piloting in an English context prior to use.

Recent studies of the implementation of the above CRC-SDM tools have pointed to harmful unintended consequences from their introduction, where the essential infrastructure and organisational change has not accompanied their use (Gillingham 2011; Gillingham and Humphries 2011). Appropriate infrastructure includes high quality and comprehensive training; supervisory

and management support; and the involvement of supervisors and direct line managers in the planning and implementation process (Johnson et al 2006).

Conclusion

This review of the evidence identified a range of tools that could potentially be used to improve decision-making about whether children are suffering, or are likely to suffer, significant harm, in England. Our review suggests that an *ideal* system of tools would meet the following criteria:

- provide a balance of structure in terms of the use of professional judgment and standardised tools, in order to enable structured professional judgment to be employed:
  - to avoid erosion of professional competence and confidence;
  - ensure that complexity is not minimised;
  - both increase the accuracy of identifying whether a child is suffering, or is likely to suffer, significant harm and whether there is a likelihood of that harm recurring;

- encourage assessment and analysis of information, which covers the full range of assessment domains that are known to be associated with children's optimal development, and thereby consistent with the Assessment Framework (Department of Health, Department for Education and Employment and Home Office 2000);

- be sensitive to the issue of different stages within an assessment:
  - either through the provision of a suite of tools to be used at different stages;
  - or the clear specification of which stage and when, the tools should be used during the process of an assessment (for example either at referral, assessment/section 47 enquiry or at the stage of return home or placement);

- incorporate clear guidance with regard to assessing parental 'capacity to change' using both standardised assessment/diagnostic tools; and goal-setting within agreed timeframes (Dawe and Harnett 2007);

- provide guidance or pointers about how the model of Structured Professional Judgment could be incorporated or integrated into a whole system in terms of:
  - organisational management
  - implementation within a geographic area
  - training and continuing professional development issues, including management of staff turnover
  - specific guidance as to how the model or tool is to be employed in the context of supervision;

- be underpinned by a model of 'partnership working' with children and families (see Davis and Day 2010);

- be clearly based on best available evidence about which factors are associated with significant harm of children, in order to provide the most reliable foundation for analysis and decision-making;

- acknowledge and promote the tools use within the context of an effective relationship between the children's services professionals and the children and adults being assessed.

None of the tools we have reviewed would fulfil all of these criteria. However, some provide partial fulfilment, and through piloting could be further developed (for example, Graded Care Profile and Safeguarding Assessment and Analysis Framework).

The findings of this review suggest that the application of such tools have the potential to improve assessment practice and, in particular, analysis and subsequent decision-making, which would have major benefits for children and families.

Implications

i) For Policy

- There is a need to begin to move toward the use of 'Structured Professional Judgment' in terms of the methods implemented to assess the likelihood of significant harm to children. This should involve the use of standardised methods of assessment alongside professional judgment;
- The evidence points to the *potential* benefits of using a number of such standardised assessment tools including the following:
    - Decision-Priority Tools – to prioritise cases at the point of referral;
    - Risk/safety assessment tools - part of the initial assessment stage;
    - Strengths and needs assessment tools - as part of a more structured in-depth assessment;
- A protocol for measuring 'parental capacity to change' has now been developed (Dawe and Harnett 2007), but only one of the above tools (Safeguarding Assessment and Analysis Framework) involves its assessment;
- In addition to the above tools, there are a range of standardised assessment and diagnostic instruments now available, such as those that were published alongside the Assessment Framework (Department

of Health, Cox and Bentovim 2000). There is a need for this list to be updated for all age groups, but particularly in terms of the assessment of infants and toddlers;
- A policy making group should be convened to examine the ways in which the above tools could be used when responding to referrals to children's social care and in assessing whether a child is 'in need' and if the child is suffering, or likely to suffer, significant harm.

ii) For Research

- Research should be commissioned to pilot any subsequent implementation of the assessment and analysis tools. This should focus on a) the reliability and validity of the *actuarial tools* in England; and b) the inter-rater reliability, impact on outcomes for children and acceptability of the proposed methods of contextual assessment.

iii) For Managers

- The assessment and analysis tools that have been identified require a range of infrastructure factors to be in place, perhaps most significantly being managerial and service commitment to their use alongside professional judgment;
- Practitioners need to be provided with adequate continuing professional development (CPD) time to enable them to undertake the necessary training to learn how to deliver new methods of assessing and analysing data about the likelihood of significant of harm being suffered by children;
- Regular professional supervision should be provided to all practitioners using these tools for assessment and analysis purposes;
- Regular service audits of the decision-making process should be undertaken using some of the standardised tools identified as part of this review.

iv) For Practitioners

- The need for, and potential benefits of, Structured Professional Judgment should now be recognised by practitioners alongside the need for a new 'mindset' about the use of standardised instruments;

- New methods are now available for assessing whether a child is suffering harm or is likely to, and practitioners should use opportunities for continuing professional development (CPD) to integrate these new assessment and analytical processes into their practice;

- The tools identified as part of this review should only be implemented as part of a broader 'partnership' approach to working with children and families. The Family Partnership Model offers an evidence-based model (Davis and Day 2010).

Chapter 1 – Background

1.1 Introduction

Section 47 of the Children Act 1989 places a duty on local authorities to make enquiries where it is suspected that a child is suffering, or is likely to suffer, significant harm to enable it to decide whether it should take any action to safeguard and promote the welfare of the child. The framework for assessing such children is set out in chapter 5 of Working Together to Safeguard Children (HM Government 2010). This states that the assessment should draw together and analyse available information on the child's developmental needs; parenting capacity; and family and environmental factors in order to provide sound evidence on which to base professional judgments about whether, and how best, to intervene to safeguard the child's welfare.

Assessment and analysis is a central part of any system for safeguarding children, and the basis for making decisions about those children who may be suffering or are likely to suffer significant harm. Assessment processes involve gathering information, making sense of that data, and acting upon it to safeguard and promote the welfare of children. Throughout the UK, the 'making sense' element has been termed 'analysis'. A variety of tools have been developed to assist practitioners to analyse information gathered during assessment, and the purpose of this study is to review the research evidence that examines the rigour of these tools, and to address the implications in terms of child protection practice in England.

The chapter begins with an examination of the policy and theoretical context for this review. It goes on to examine issues with regard to the way in which children are 'classified' as suffering, or likely to suffer, significant harm and concludes with an overview of the main approaches that have been developed to improve the analysis process.

1.2 Policy and Theoretical Context

Analysis is at the heart of assessment, with professional judgment and subsequent decisions/actions being dependent on the quality of the analysis undertaken. It is therefore important that the methods used to undertake or help practitioners with this process are rigorous.

There are many different terms used to describe the process of analysis that occurs between gathering data and making a plan for the child and family. Practitioners are required to make sense of what has been gathered and arrive at judgments based on that understanding. This process has been

described in various ways, underlining the complexity and difficulty of this area of work for practitioners.

Working Together (HM Government 2010), and the Assessment Framework (Department of Health, Department for Education and Employment and Home Office 2000) describe 'analysis' as being the stage prior to 'judgment' and 'decision-making', and suggests that it consists of organising the information derived from the data gathering phase of assessment. Chapter 4 of the Assessment Framework (Department of Health, Department for Education and Employment and Home Office 2000) suggests that practitioners summarise the information gathered using the three sides of the assessment triangle, namely the developmental needs of the child, parenting capacity, and family and environmental factors. The advice to practitioners is then to work with the child and family to reach a shared understanding of the child's needs within the family context, keeping the focus on the child. Both strengths and difficulties are to be identified in each of the three domains and the inter-relationships between the child, family and environment understood. This analysis of the child's needs, drawing on knowledge from practice and research, enables professionals to make judgments about the child's welfare.

Judgment is defined as the practitioner activity involved in making a decision about the child's developmental needs, including but not limited to whether the child is suffering or likely to suffer significant harm, and the parents' capacity to meet those needs. Decisions then follow in terms of what to do, based on the above.

The accompanying Practice Guidance (Department of Health 2000) states that the way in which information about children's developmental needs, parenting capacity, and family and community context, is recorded will help professionals to analyse the child's needs and the capacity of the parents or carers.

Research evidence suggests that the implementation of the Assessment Framework has shown some benefit in terms of improved practice, but a comprehensive review found that practitioners 'lacked confidence' in their ability to analyse the data that they had collected (Cleaver *et al* 2004). This is consistent with wider evidence of a lack of 'accuracy' of risk assessment in child protection (see below for further discussion).

The National Children's Bureau has developed hypothesis-testing approaches (Sheldon 1987) to teach practitioners analysis skills. This involves a step-wise approach to assessment (Dalzell and Sawyer 2007), which has been elaborated more recently through the development of study skills training in 'introducing conceptual clarity; developing and practising skills such as hypothesising and writing conclusions; and encouraging transfer of learning through supported opportunities for reflection' (Platt 2011 p. 157).

A number of recent publications have also explicitly focused on the assessment process (Helm 2010; Holland 2010; Horwath 2009; Turney *et al*. 2011). This literature highlights the 'longstanding difficulties' in relation to the analysis of information collected as part of the assessment of likelihood of harm being suffered by a child (Turney *et al*. 2011 p. 101), alongside the importance of 'critical and analytical thinking' and appropriate 'reflective supervision' to both promote and support such analytic skills. This literature also stresses the importance of the quality of the relationship between practitioner and family members, as a necessary basis for establishing partnership working and as an essential foundation for effective assessment (ibid). A practitioner's intuitively-based feelings and responses have been identified as an important source of data in assessments (for example, Helm 2010; Munro 1999), although the dangers of reliance upon intuition (i.e. because of its potential as a source of bias) is also recognised, as is the fact that intuition needs to be tempered with critical and analytic reasoning within assessment and clinical judgment (Turney *et al*. 2011).

In the above literature 'assessment tools, measures and checklists' are recommended to 'support information gathering and analysis', rather than being a 'substitute for sound professional knowledge and judgment' (Helm 2010), but their use as part of the assessment and analysis process is not fully addressed.

The analysis process, should of course, be seen within a broader contextual framework or from what is also described as being a systemic point of view. Within this perspective, analysis occurs within the context of a range of organisational influences, in addition to those internal to the practitioner, all of which are recognised to impinge upon the decision-making process. The systems-based approach as a theoretical schema within which to understand decision-making on individual cases in the field of social care, has been described by Baumann (Baumann *et al*. 2011; Baumann, Kern and Fluke 1997) and Munro (2011; 2005). Munro's (2011; 2005) systems analysis approach incorporates individual factors such as practitioner skills and knowledge, available resources, and constraints in the system and individually (i.e. such as an emphasis on 'analytic' versus 'intuitive' judgment), alongside the organisational context within which decisions are made. These are seen to be mutually interlocking and as influencing one another.

Similarly, Baumann (Baumann *et al*. 2011; Baumann, Kern and Fluke 1997) proposes the 'decision-making ecology' as a conceptual framework with which to understand decision-making. In their model, *case factors*, *organisational factors*, *external factors* and factors that are *internal* to the decision maker are all identified as having an impact on the decision-making process and have the potential to affect the outcome of that decision. The

outcomes of these decisions then feed back into the system, reshaping or influencing the contributory factors.

1.3 Classification of Harm in Child Protection

Decisions based on the analysis of information collected during the assessment process have to be made at a number of key stages in terms of children who may be suffering or are likely to suffer significant harm, and this is now recognised to be an iterative process of hypothesis development and testing (see for example, Dalzell and Sawyer 2007).

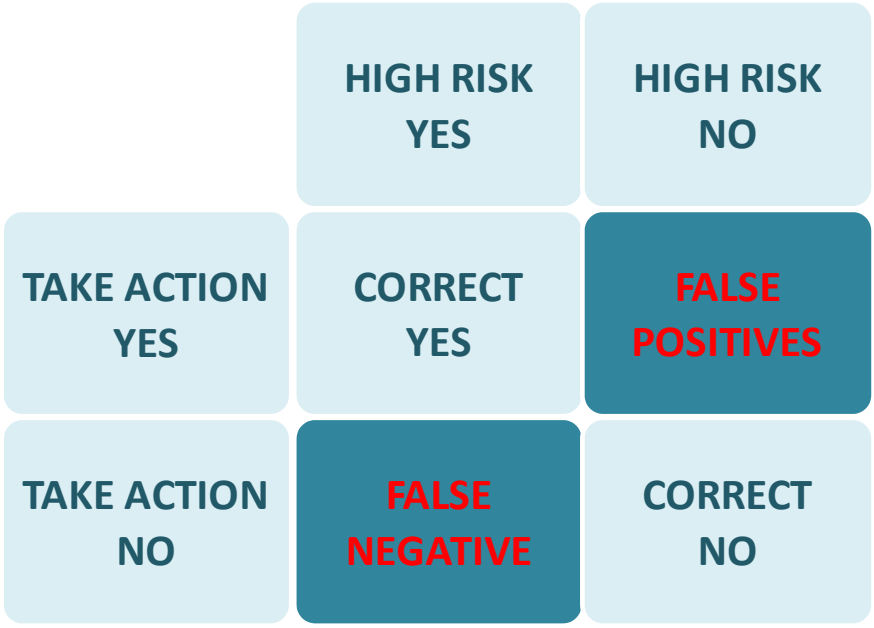
Decision-making is typically described as being 'poor' or 'inaccurate' where the action that has been taken, is inconsistent with the level of risk of harm likely to be suffered by the child. Such discrepancies are, of course, mostly revealed through retrospective analyses of case notes, in which the cases are classified in terms of the level of risk of harm suffered using indicators that research shows to be highly predictive of the recurrence of abuse. For example, Corby (2003) found that 16 per cent of 400 cases had an 'anomalous outcome' in the sense of their having been less or more child protection than would have been expected using an evidence-based set of weighted indicators. Similarly, Ward *et al*., (2012) found that a substantial proportion of the babies in their study were considered low risk for significant harm by their social worker, whereas the researchers rated the same children to be at higher risk for further harm, using empirically based risk evaluation criteria (Jones 1991; 1998; Jones, Hindley and Ramchandani 2006). Furthermore, and lending support to the accuracy of the researchers' assessments, around one third of those babies who were classified as being high risk of harm at birth were still in the same high-risk situations three years later, and 37% of the children had suffered maltreatment while the cases were open to children's social care.

Other recent studies have found that although assessments of risk of harm were associated with some of the factors that have been shown to predict the recurrence of maltreatment, overall these assessments were often 'only slightly better than guessing' (Dorsey et al. 2008). The researchers found 'a complex picture of risk assessment in which there were few patterns of risk factors (other than prior reporting) that were consistently associated with caseworker classification of risk and subsequent report' (ibid).

Two key types of error have been identified in terms of the decision-making process (for example, Baumann et al. 2011; Munro 2005). These are demonstrated in figure 1 which shows the possible outcomes of the decision-making process with regard to whether action is initiated (i.e. at any stage of the assessment process) in relation to the level of risk of harm likely to be suffered by the child. This figure demonstrates a) false positives in which action is taken unnecessarily; and b) false negatives in which no action is taken for children who are at high risk of being abused (ibid). So, to return to the Corby (2003) study reported above, in terms of the 16% of cases with

an ‘anomalous outcome’ this study found that cases in which less child protection services were provided than would have been expected (*false negatives*) mostly involved families experiencing multiple material and stress-related problems including domestic violence or drug-alcohol misuse with families with children under school age, *all of whom were eventually re-referred*. Cases in which more protection was provided than would have been expected (*false positives*) all resulted in child protection conferences and *most resulted in non-registration*. The small number of children who received services also did not involve registration (ibid).

Figure 1: Decision-Making Outcomes



As discussed above, a range of systematic or extraneous factors influence where the threshold is placed in terms of whether a child is classified as being ‘high risk’ of harm. Furthermore, the consequences of false positives and false negatives depend on the stage in the decision-making process. For example, false positives at referral mean that resources including staff time are wasted investigating families for whom this level of input is not warranted. False negatives at a later stage in the process can result in a child dying.

It is for these reasons that the accurate classification of families is important (Munro 2005), and that the significant number of misclassifications that are apparent within the system, need to be addressed. The next section examines a number of approaches to the assessment and analysis of harm that have been developed over the past two decades in order to address this issue.

1.4 Approaches to assessment and analysis of the likelihood of harm

Unaided clinical judgment in relation to the assessment of risk of harm, is now widely recognised to be flawed (Arad-Davidson and Benbenishty 2008; DePanfilis and Girvin 2005; Munro 1999; Pfister and Böhm 2008), and a number of standardised methods of assessment have been developed to address the inadequacies of such decision-making. These structured, predetermined assessment schemas are classified according to the method by which they were developed: a) 'consensus' based; or b) 'empirically'/ (Baumann et al. 2011) 'statistically' based (Shlonsky and Wagner 2005).

Consensus-based tools of risk assessment and management are derived from an analysis of the factors that practitioners typically use when making assessments where a child may be in need of safeguarding from harm. These factors are compiled into a schema that practitioners can then apply to a case to assess the nature and severity of any harm being suffered or that the child is likely to suffer.

Empirical/statistical tools including *'actuarial'* tools are based only on factors that have been shown to be statistically predictive of future maltreatment. These factors are also compiled into a schema, most of which can be scored numerically, and totalled to assess the level of risk of harm. These schemas provide practitioners with clear guidance about the level of risk of harm being suffered or that the child is likely to suffer that is associated with each category of scores.

Other approaches that fall within the 'empirical/statistical' category include the use of 'concept guided risk assessment', in which a limited number of 'key schema' of risk, which are soundly based in evidence and that potentially reduce complexity by grouping risk factors into broader categories and areas of concern, are tested and developed using highly sophisticated statistical techniques (Baumann et al. 2011), including the use of 'configural' and 'neural network' models (Shlonsky and Wagner 2005).

A third and more recently developed approach in the field of forensic psychology is known as the structured professional judgment (SPJ) risk assessment framework (also defined as 'guided clinical judgment' or 'structured clinical guidelines') (Boer 2008). This involves the use of structured guidelines some of which are empirically based, but which leave the final decision-making process to the professional.

The evidence shows that the use of 'standardized' assessments produces more accurate classification of risk of harm, compared with clinical judgment, which is only just better than guessing at 65% (for a summary White and Walsh 2006). This reflects the fact that the latter involves significant sources of bias (for example, the under-use of base rates when predicting events that are uncommon/overestimation of the occurrence of events; confirmatory

biases; illusory correlations; too much importance being attached to unique characteristics of the case etc) that increase the likelihood of error (ibid).

The evidence also suggests that the use of standardised 'actuarial' assessment tools, are on the whole more accurate in terms of the classification of risk of harm, than the consensus-based measures (D'Andrade, Austin and Benton 2008; D'Andrade, Benton and Austin 2005; Stewart and Thompson 2004). These findings are consistent with reviews of risk assessment tools in other fields. For example, a recent meta-analysis of 118 measures to predict recidivism among sexual offenders, found that the *actuarial* measures were the most accurate, with effect sizes ranging from 0.67 to 0.97 (which is a moderate to large result) (Hanson and Morton-Bourgon 2009). The *structured professional judgment* tools were intermediate between the accuracy found for the actuarial tools above, and that for unaided clinical judgment, which was the least accurate of the three approaches (ibid).

However, all of these methods have limitations. While consensus-based approaches are associated with poor conceptualisation, inconsistency in terms of the number and type of variables used, use of the same variables to predict all types of maltreatment, lack of focus on recurrence, and poor accuracy (White and Walsh 2006), the empirical (i.e. actuarial), and structured professional judgment tools also have limitations. For example, actuarial tools tend to ignore crucial case-specific idiosyncratic factors, focus on relatively static immutable factors, exclude factors for which there is insufficient evidence and are optimized for a specific outcome in a specific population at a specific time (ibid). Similarly, the structured professional judgment tools often involve the use of variables that are unrelated or only distally related to risk of harm alongside other problems (Boer 2008).

1.5 The Current Situation

There is increasing recognition within the field of child protection, of the need for a 'third generation approach' toward assessment, which involves the use of empirically validated, structured decision-making (Douglas et al. 1999) and *'structured clinical judgment'* (Hart 1998a; Hart 1998b) in which, evidence-based actuarial tools are used alongside professional judgment. This is depicted graphically in figure 2 (adapted from Shlonsky and Wagner 2005).

Figure 2: Structured Clinical Judgment

A range of standardised and actuarial risk assessment tools have been developed to improve the accuracy of assessments of the nature and severity of harm being suffered or likely to be suffered by a child. Although such standardised tools have limitations they have the potential to improve the classification of risk of harm by providing practitioners with clear guidance about how to focus the assessment process, and analyse the data collected. This integrated approach to assessment, is in principle consistent with recent research on complexity, which highlights the nature of families as complex systems, and raises questions regarding the appropriateness of applying 'predictive' methods of risk assessment, pointing instead to the need for 'indicative', non-linear methods of assessing harm to children (Barlow and Scott 2010).

Since the most recent review of these tools was conducted (D'Andrade, Austin and Benton 2008), a range of standardised (both consensus and actuarial) assessment and analysis tools have been developed internationally, for example, UK - Safeguarding Assessment and Analysis Framework (Tapp et al. 2010) and Graded Care Profile (GCP) (Srivastava and Polnay 1997); Australia - Signs of Safety (Turnell 2010; Turnell and Edwards 1997); and the Netherlands - Child Abuse Risk Evaluation (De Ruiter and Veen 2005), pointing to the need for an updated review of the available tools alongside the evidence about their rigour.

1.6 Aims

The aim of the review is to identify all published tools or systems of tools for analysing whether children are suffering, or are likely to suffer, significant harm and to critically appraise their rigour.

It should be noted that the standardised tools that are available typically have four functions – a) screening for potential maltreatment in the general population; b) screening for the presence of maltreatment in cases being assessed by children's social care; c) assessing the likelihood of *recurrence* of maltreatment in populations already being assessed by child protection services; and d) assessing the likelihood of maltreatment among children who have been returned to their parents after residing in foster care (Schlonsky et al., 2007). The focus of the current review is on tools that are aimed at screening for the presence of maltreatment in cases being assessed by children's social care; assessing the likelihood of *recurrence* of maltreatment in populations already assessed by children's social care; and assessing the likelihood of maltreatment among children who have been returned to their parents having been looked after by the local authority. We have not therefore included tools that are aimed at screening for risk of harm in the general population.

It should also be noted that we have used the terms 'Structured Professional Judgment' throughout in preference to 'Structured Clinical Judgment' (see section 1.5 above) in order to remove the medical emphasis implied by the term 'clinical'.

Chapter 2 – Methods

2.1 Design

We undertook a systematic review to identify and appraise all published and unpublished studies reporting the use and or development of tools for analysing data about whether a child is suffering, or likely to suffer, significant harm.

2.2 Search Strategy

2.2.1 Inclusion criteria

We included any tool that has been explicitly designed to facilitate the collection and analysis of information about whether a child is suffering, or likely to suffer, significant harm.

We only included tools that had been developed, or that have been brought into use, or their effectiveness researched, between 1970 and 2011, and that are available in the English language.

2.2.2 Databases searched

We searched a wide range of databases including the following:

- Conference Proceedings Citation Index- Social Science & Humanities (CPCI-SSH);
- Cumulative Index to Nursing and Allied Health Literature (CINAHL);
- Dissertations and Theses (formerly Dissertation Abstracts);
- Excerpta Medica Database (EMBASE);
- Internet Search (Google Scholar);
- Medical Literature Analysis and Retrieval System Online (MEDLINE);
- PsychINFO;
- Science Citation Index Expanded (SCI-EXPANDED);
- Social Sciences Citation Index (SSCI) ;
- Social Services Abstracts;
- Sociological Abstracts.

Other citations were identified using the following sources:

- The Internet;
- NSPCC library and database;
- Cochrane Library, Current Controlled Trial;
- Authors of papers included in the review were contacted to identify unpublished research;
- Reference lists of articles identified through database searches and bibliographies of systematic and non-systematic review articles were examined to identify further relevant studies.

- On-line consultation - letter 'requests for assistance' were e-mailed by the Department for Education to the following groups of practitioners/professionals:
    - Director of Children's Services or equivalent;
    - Chair of Local Safeguarding Children Board (LSCB);
    - Named/designated doctor for safeguarding;
    - Named/designated nurse for safeguarding;
    - Children and Family Court Advisory and Support Service (CAFCASS);
    - Non-governmental agency for example National Society for the Prevention of Cruelty to Children, Barnardo's, Action for Children;
    - Family Justice Council/ Family Justice System;
    - Independent Assessment Services;
    - Family Court Assessment Service.

2.2.3 Search Terms

The main search strategy was developed for MEDLINE (**Appendix 1**); searches of the remaining databases were based on this search taking into account differences in record indexing and search facilities. Details of the search strategies for: CPCI-SSH, CINAHL, Dissertations and Theses, EMBASE, MEDLINE, PsychINFO, SCI-EXPANDED, SSCI, Social Services Abstracts, Sociological Abstracts databases, Google, Google Scholar are available in **Appendix 2**.

2.2.4 Selection of studies

An initial screen for topic relevance was undertaken (JDF). The titles and abstracts of citations identified through searches were independently reviewed by two researchers (JB/JDF) to determine whether they met the inclusion criteria. Abstracts that did not meet the inclusion criteria were excluded.

Two independent reviewers assessed full copies of papers summarising tools that appeared to meet the inclusion criteria. Uncertainties concerning the appropriateness of tools for inclusion in the review were resolved through consultation with a third reviewer (DJ).

2.2.5 Quality Assessment

The tools identified in this review vary markedly in their aim(s), content, approach, theoretical underpinnings, evidence base and use. Currently there is no validated assessment tool to assess the quality of these tools; therefore an assessment tool based on good practice was designed for the purpose of this study (**Appendix 3**).

Critical appraisal of studies was undertaken independently by two reviewers.

2.2.6 Data management

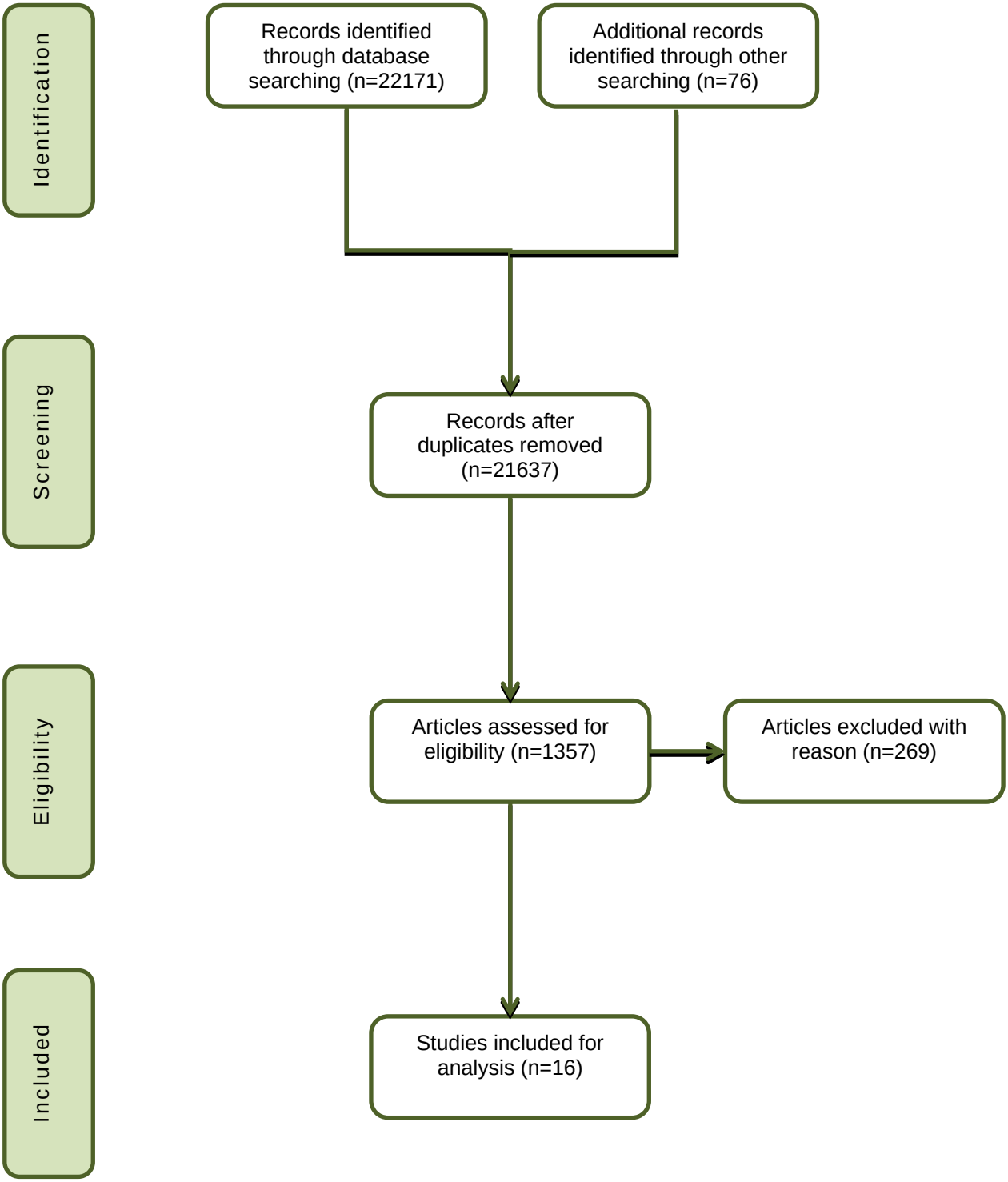
The data were extracted by the lead researcher and checked by the first author. In a small number of cases where data were not available in the published study reports, the author was contacted to supply missing information.

The following data were extracted from all studies: study identification, name of tool, aim of tool, professional tool designed for, brief description of process, whether the tool has been validated, the stage in the assessment process the tool is used, the evidence framework underpinning the guideline, the current use of the tool and the authors' overall conclusions.

2.2.7 Data synthesis

The included tools are presented using a narrative summary. Figure 3 shows the results of the search.

Figure 3: Search Results



Chapter 3 – Review of Tools of Assessing Sufferin Likely to Suffer Significant Harm

3.1 Introduction

This chapter presents the results of our review of the evidence to identify tools to aid the analysis of whether a child is suffering, or is likely to suffer, significant harm. It is organised into two parts.

Part One describes the following:

- a classification of the tools in terms of their key function;
- a summary of the assessment process: the key time points in the assessment process for which the tool was designed and the key domains that are assessed.

Part Two assesses the adequacy of the identified tools. All of the tools have been assessed in terms of the adequacy of the following criteria:

- the domains that indicate what is to be assessed;
- the provision of behavioural descriptors that define and operationalise the categories/domains of assessment;
- the procedures and calculations for determining the level of risk of harm associated with the above domains and with the overall score produced by the scale;
- the standardised forms provided to capture and record the information.

We have also assessed the adequacy of the tools in terms of the following:

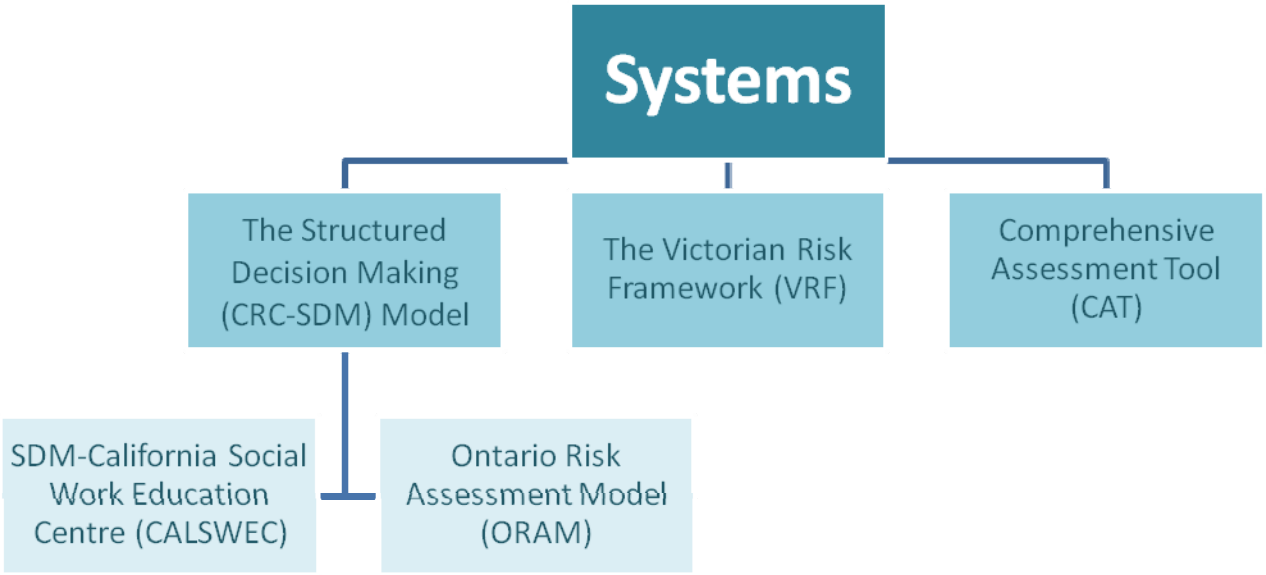
- **Validity:** face; construct; internal/external; criterion (concurrent/predictive).
- **Reliability:** internal consistency; inter-rater; test-retest.
- **Acceptability:** for service users and providers.
- **Equity:** for different ethnic groups.
- **Impact**: in terms of outcomes for children.

3.2 Part One: Characteristics of the Included Tools

3.2.1 Classification of the Included Systems and Tools

The search identified the following tools that are designed to assist practitioners in the assessment and analysis of information about whether a child is suffering, or likely to suffer, significant harm. The five systems of tools are depicted in Figure 4.

Figure 4: Systems of Tools



1.Children's Research Centre – Structured Decision-Making (CRC-SDM) (Children's Research Center). It should be noted that this model was originally developed in North America, but that a number of other versions of the basic model are now available - **Ontario Risk Assessment Matrix (ORAM); SDM-California Social Work Education Centre (SDM-CALSWEC) model.**

The Children's Research Centre – Structured Decision-Making System consists of the following tools:

- Connecticut Department of Children and Families (DCF) Response Priority
- California Family Risk Assessment

- Safety Assessment
- Virginia Department of Social Services (DSS) Family Strengths and Needs Assessment/Review*
- Placement/permanency Plan
- Reunification Model (4 assessment tools).

2. **Comprehensive Assessment Tool (CAT)** (SPHERE Institute 2005) **consisting of the following:**
   - Response Determination Assessment
   - Emergency Response Assessment
   - Comprehensive Assessment Tool Continuing Services Assessment
   - Comprehensive Assessment Tool Case Closure Assessment
   - Comprehensive Assessment Tool Placement Assessment.

3. **Victorian Risk Framework (VRF)** (Practice Leadership Unit, Child Protection and Juvenile Justice Branch 1999).
   - Intake Case and Risk Assessment Summary
   - Initial/investigation Case and Risk Assessment Summary
   - Case progress Case and Risk Assessment Summary.

Each of these systems comprises a number of assessment tools (see Table 2 below).

In addition, we identified a further 11 independent standardised assessment tools (risk/safety/family needs) (see Figure 5):

- Child Abuse Risk Evaluation – Netherlands (CARE-NL) (De Ruiter and Veen 2005)
- Child at Risk Field System (CARF) (ACTION for Child Protection 1984)

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*The California Family Assessment and Factor Analysis (CFAFA) has a number of versions – the basic model (CFAFA); basic + reunification questions (CFAFA-R); basic + G questions (CFAFA-G); all domains (CFAFA-GA); and the Strengths and Stressors Tracking Device (SSTD) which is aimed at guiding planning and evaluating the effectiveness of treatment and has 16 further items (N.B. The CFAFA also has other tools for assessing family needs in different situations that have not been included here because they were not explicitly developed to assess risk in children who may be likely to suffer harm: Family Assessment Form; Family Assessment Checklist; Ackerman-Schoendorf Scales for Parent Evaluation of Custody (ASPECT); and the Darlington Family Assessment System (DFAS).

We did not include the CFAFA in the systems of tools, because it largely consists of a range of tools that are variations of the primary tool, as opposed to being tools for use at different stages of the assessment process.

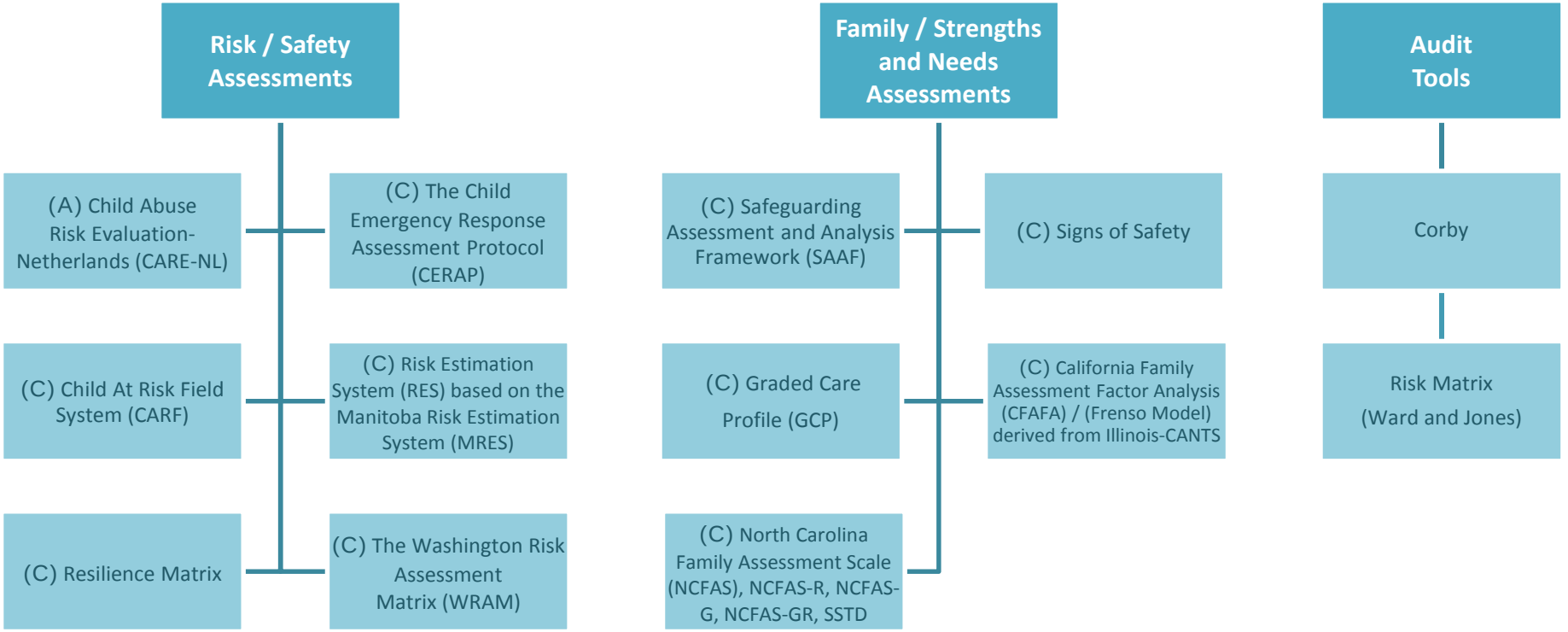
We did not include the Warwickshire Risk Assessment Model because it consists primarily of a 'pathway' specifying the stages of risk assessment and is not a tool with which to undertake a risk assessment.

- Child Endangerment Risk Assessment Protocol (CERAP)
- California Family Assessment and Factor Analysis (CFAFA)*
- Graded Care Profile (GCP) (Srivastava and Polnay 1997)
- Manitoba Risk Estimation System (MRES) / Risk Estimation System (RES)
- North Carolina Family Assessment Scale (NCFAS) (National Family Preservation Network 2011)
- Resilience Matrix (RM) (The Scottish Government 2010)
- Signs of Safety (SoS) (Turnell 2010; Turnell and Edwards)
- Safeguarding Assessment and Analysis Framework (SAAF) (Tapp et al. 2010)
- Washington Risk Matrix (WRAM).

We also identified two audit tools:

- Corby (2003)
- Ward et al (2012).

Figure 5: Individual Assessment / Analysis Tools (A – Actuarial; C – Consensus-based)



The above systems and tools comprise the following:

- **RISK ASSESSMENT TOOLS** – these typically measure ***a small number of historical and static factors***, which research has shown to be strongly associated with future risk of harm to children. They are described as either **Risk Checklists; or Safety checklists**. They are for use at the initial stages of the assessment/section 47 enquiry process, and comprise a) a set of empirically based questions (i.e. that the evidence has shown to be strongly associated with likelihood of harm); b) a set of instructions to the practitioner about how to synthesise the results across the questions; c) instructions about how to interpret the results obtained in terms of the level of risk of harm associated with different groupings of risk factors that are present.

  It should be noted that although most of the risk/safety assessment tools that have been developed as part of the structured decision-making models are empirically based (actuarial), most of the individual risk assessment tools that we identified have been developed using consensus methods (the status of the tools in terms of whether it is consensus or actuarial been clearly identified in Figures 4 and 5 above).

- **STRENGTHS AND NEEDS ASSESSMENT TOOLS –** these typically measure ***dynamic factors*** that are often defined as 'needs', and that if addressed can reduce the risk of harm posed. They range from fairly brief tools that have been developed alongside the above actuarial tools as part of Structured Decision-Making Systems (for example the Family Strengths and Needs Assessment – FSNA), to brief mapping tools (for example Resilience Matrix), to more comprehensive assessment and analysis tools (for example, Safeguarding Assessment and Analysis Framework - SAAF).

- **RESPONSE PRIORITY DECISION TREES** - these tools are used to improve the consistency across workers and to prioritise decisions about initial reports of abuse, in order to focus the workload on the most relevant cases, and aid decision-making about the rapidity of the response that is needed. They comprise decision-trees for each of the different types of harm (for example, emotional, physical and sexual abuse, and neglect), and are aimed at facilitating clarity about what should or should not be enquired into. All of the response priority tools that were identified have been developed as part of systems of tools (for example, Children's Research Centre – Structured Decision-Making; Comprehensive Assessment Tool; Victorian Risk Framework).

- **PERMANENCY/PLACEMENT AND REUNIFICATION CHECKLISTS** – these tools are based on the same principles as the other Structured Decision-Making tools and have been developed as part of these systems. They focus explicitly on likelihood of recurrence of harm in relation to decisions about permanency/placement, placement breakdown and reunification.

- **AUDIT TOOLS** – these are very similar to risk checklists in that they comprise lists of empirically based risk factors. However, they have been used to date, as a means of auditing retrospectively whether cases have been classified accurately. For example, Ward *et al*., (2012) recently used a set of empirically based risk factors developed by Jones (1991; 1998; (Jones, Hindley and Ramchandani 2006) to identify and classify cases into four levels of risk, and then to analyse whether the actions taken were consistent were these ratings.

Table 2 describes each of the identified systems and tools. Nine of the systems/tools were developed in North America (Comprehensive Assessment Tool; Child at Risk Field System; Children's Research Centre – Structured Decision-Making; California Social-Work Education Center-SDM (CALSWEC-SDM); California Family Assessment and Factor Analysis; North Carolina Family Assessment Scale; Child Endangerment Risk Assessment Protocol; Washington Risk Matrix), five in the UK (Graded Care Profile; Safeguarding Assessment and Analysis Framework; Resilience Matrix; Corby (2003); and Ward et al 2012), one in the Netherlands (Child Abuse Risk Evaluation – Netherlands), one in Canada (Ontario Risk Assessment Matrix); two in Australia (Signs of Safety; Victoria Risk Framework) and one in New Zealand (Manitoba Risk Estimation System).

Table 2: Systems and Tools

Included Tools			
	Tool	**Content**	**Analysis**
Systems of tools			
Systems	**Comprehensive Assessment Tool (CAT)**	5 tools: • Response Determination Assessment • Emergency Response Assessment • CAT Continuing Services Assessment • CAT Case Closure Assessment • CAT Placement Assessment.	Decision-tree; Quantitative
	Children's Research Centre-Structured Decision-Making (CRC-SDM) (also **Ontario Risk Assessment**	6 tools: • Connecticut DCF Response Priority • California Family Risk Assessment • Safety Assessment • Virginia DSS Family Strengths and Needs Assessment/Review* • Placement/permanency Plan	Decision tree; Quantitative

	Model (ORAM); SDM-CALSWEC)	• Reunification Model (4 assessment tools).	
	Victorian Risk Framework (VRF)*	3 tools: • Intake Case and Risk Assessment (CARAS) • Initial/investigation CARAS • Case progress CARAS.	Descriptive
Individual Tools (i.e. not included in the above systems)			
Risk/safety Checklists	**Child Abuse Risk Evaluation-Netherlands (CARE – NL)**	14 items	Numeric summary score
	Child at Risk Field (CARF)	14 items	Numeric summary score
	Child Endangerment Risk Assessment Protocol (CERAP)	15 items + mitigating factors	Data not synthesised numerically; Descriptive data used to classify child as 'safe' or 'unsafe'.
	Manitoba Risk Estimation System (MRES)	22 items	Numeric summary scores for vulnerability, reoccurrence and severity
	Signs of Safety (SoS)	2 domains: Safety; Contextual factors	Map
	Resilience Matrix (RM)	2 domains: Resilience/vulnerability; Protective environment/adversity	Map
	Washington Risk Assessment Matrix (WRAM)	37 items over 7 domains	Numeric score obtained by summing items from 7 domains
Family Assessment	**California Family Assessment and Factor Analysis (CFAFA)**	23 items over 5 domains	Data from 23 items summed numerically
	Graded Care Profile (GCP)	13 items over 4 domains	Numeric summary for 13 sub-areas of 4 key domains + map
	The North Carolina Family Assessment Scale (NCFAS); (NCFAS-R) Scale-Reunification; (NCFAS-G) General Services; (NCFAS-G+R) Strengths and Stressors Tracking Device (SSTD)	10 domains 4 domains – 26 items	6 point Likert scale for each item but no summary score; uses clinical judgment of practitioner.
	Safeguarding Assessment & Analysis Framework (SAAF)	120 items over 20 domains	5 point scale to depict level of concern; 3 point scale to depict overall rating for harm, risk of harm and prospects for

			successful intervention. Descriptive
Audit	**Corby (2003)**	Schema involves assessing age, seriousness of abuse or concerns, whether there had been prior concerns or contact with social care, record of who reported the concern and what the initial response had been. Numbers are assigned to each of these dimensions and the total determined whether the case was to be considered child protection one or one involving a child in need.	Descriptive summary of level of risk of harm
	Ward et al (2012)	30 items over 7 domains	Descriptive summary of level of risk of harm

* Numerous variations of this tool existing including the FRAAN with variations developed in South Australia (SA-FRAAN); California (C-FRAAN); Minnesota (Min-FRAAN); Michigan (Mic-FRAAN); New South Wales (FSNA) etc.

3.2.3 Timing and Domains of Assessment

a) Timing

The included tools are implemented at different time points in terms of the overall assessment process, and focus on different domains.

Table 3 depicts the point in the assessment process at which the tools can be used. It should be noted that the systems of tools (for example Comprehensive Assessment Tool; Children's Research Centre – Structured Decision-Making; Victorian Risk Matrix), comprise a number of assessment instruments that are for use at different time points:

- **Prior to Referral:** Graded Care Profile (GCP);
- **Referral response decisions (i.e. response priority tools):** Children's Research Centre-Structured Decision-Making (CRC-SDM); Comprehensive Assessment Tool (CAT); California Social-Work Education Center-SDM (CALSWEC-SDM);
- **Section 47 enquiry (i.e. Safety Checklists; Risk Checklist; Family Needs Assessment):** Child Abuse Risk Evaluation-Netherlands (CARE-NL); Children's Research Centre-Structured Decision-Making (CRC-SDM); Comprehensive Assessment Tool (CAT); California Social-Work Education Center-SDM (CALSWEC-SDM); Child At Risk File System (CARF); Child Endangerment Risk Assessment Protocol (CERAP); Manitoba Risk Assessment System (RES); North Carolina Family Assessment Scale (NCFAS); Resilience Matrix (RM); Safeguarding Assessment and Analysis Framework (SAAF); Signs of Safety (SoS); Washington Risk Assessment Matrix (WRAM);
- **Abuse/neglect has been substantiated – child protection plan/placement/permanency planning:** Children's Research Centre –

Structured Decision-Making (CRC-SDM); Comprehensive Assessment Tool (CAT); Ontario Risk Assessment Model (ORAM); and California Social-Work Education Center-SDM (CALSWEC-SDM);

- **Reunification –** Child at Risk Field System; Comprehensive Assessment Tool; Child Endangerment Risk Assessment Protocol; Children's Research Centre–Structured Decision-Making (CRC-SDM); Comprehensive Assessment Tool (CAT) and associated Ontario Risk Assessment Model (ORAM); California Social-Work Education Center-SDM (CALSWEC-SDM); North Carolina Family Assessment Scale;

- **Audit tools for use posthoc –** Corby (2003); Ward et al (2012).

Table 3: Assessment Time-points

	Children with additional needs	Children with Complex Needs						
Systems/tools	Identification and assessment of need	Intake	Section 47 Enquiry Risk	Safety	Family Need	Placement/ Permanency Planning/ closure	Re-unification	Audit
Child Abuse Risk Evaluation – Netherlands				✓				
Child at Risk Field System				✓				
Child Endangerment Risk Assessment Protocol				✓				
Comprehensive Assessment Tool		✓				✓		
California Family Assessment and Factor Analysis								
Corby (2003)								✓
Children's Research Centre – Structured Decision-Making / Ontario Risk Assessment Matrix / SDM-CALSWEC		✓		✓	✓	✓	✓	
Graded Care Profile	✓							
RES (Manitoba Risk Estimation System)				✓				
North Carolina Family Assessment Scale NCFAS-R NCFAS-G NCFAS-G+R Strengths and Stressors Tracking Device (SSTD)				✓ ✓ ✓ ✓	✓ ✓ ✓ ✓ ✓		✓ ✓	
Resilience Matrix				✓				
Safeguarding Assessment and Analysis Framework (SAAF)				✓	✓			
Signs of Safety				✓				
Victorian Risk Framework		✓		✓		✓		
Washington Risk Assessment Matrix				✓				
WJRM (2011)								✓

b) Domains being Assessed:

The included tools focus on a range of domains in terms of the assessment process (i.e. what is being assessed). These have been summarised in Table 4 below.

It should be noted that the systems of tools are organised in terms of the timing of the assessment, and do not specify clear assessment domains (i.e. each assessment tool is focused on factors that have been shown to be associated with risk of harm), and the following systems have not therefore been included in Table 4 - Comprehensive Assessment Tool; Children's Research Centre – Structured Decision-Making; Ontario Risk Assessment Matrix; California Social Work Education Center-SDM; Victorian Risk Framework.

Table 4: Assessment Domains for Individual Tools

	Child	Parent	Parenting capacity	Parent-child	Family interaction	Family health	Environ-ment	Risk	Safety/ strengths	Family needs / intervention	Social / Community links
Child Abuse Risk Evaluation – Netherlands (CARE-NL)		✓		✓	✓						
Child at Risk Field System (CARF)	✓	✓			✓					✓	
Child Endangerment Risk Assessment Protocol (CERAP)								✓	✓		
California Family Assessment and Factor Analysis (CFAFA)	✓		✓		✓						
Graded Care Profile (GCP)	✓		✓	✓							
Manitoba Risk Estimation System (MRES)	✓	✓		✓				✓			✓
North Carolina Family Assessment Scale (**NCFAS-R** **NCFAS-G** **NCFAS-G+R)** **Strengths and Stressors Tracking Device (SSTD)**	✓ ✓ ✓ ✓		✓ ✓ ✓ ✓		✓ ✓ ✓ ✓	 ✓ ✓	✓ ✓ ✓ ✓		✓ ✓ ✓ ✓		 ✓
Resilience Matrix (RM)								✓	✓		
Safeguarding Assessment and Analysis Framework (SAAF)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Signs of Safety (SoS)								✓	✓		
Washington Risk Assessment Matrix (WRAM)	✓	✓		✓			✓	✓			

N.B. the following tools are not included in the above table because they are organised by time point and not domains:

- The two audit tools (Corby 2003); Ward et al 2012);
- The Systems of tools – CRC-SDM (+ORAM; SDM-CALSWEC); CAT

3.3 Part Two – Adequacy of the Tools

This section is divided into two parts. The first summarises our critical appraisal of the included systems and tools in terms of their evaluative content using the following criteria:

A) the adequacy of the domains that indicate what is to be assessed;
B) the provision of behavioural descriptors that define and operationalise the categories/domains of assessment;
C) the procedures for determining the nature and severity of the risk of harm associated with the above domains and with the overall score produced by the scale;
D) the standardised forms provided to capture and record the information.

Table 5 summarises our critical appraisal of the above domains.

The second part summarises our findings about the rigour of the included systems/tools in terms of their validity, reliability, acceptability, equity and impact.

3.3.1 Adequacy of Assessment Domains

Table 4 above shows considerable variability in terms of the domains being assessed. On the whole, the actuarial and structured decision-making tools have a very restricted range of assessment domains mostly classified by the type of abuse. A number of the more recent tools that have been developed (for example the Resilience Matrix and Signs of Safety) also have very limited assessment domains.

In contrast, some of the family assessment tools that have been developed in the UK (Graded Care Profile; SAAF) have very comprehensive assessment domains that are consistent with the Assessment Framework (Department of Health, Department for Education and Employment and Home Office 2000).

3.3.2 Adequacy of Behavioural Descriptors to Operationalise the above Domains

The included tools provide varying levels of guidance in terms of behavioural descriptors that are provided to operationalise the above domains, which we have categorised as ‘minimal’, ‘good’ or ‘unclear’.

Minimal guidance: As would be expected the tools that have limited assessment domains also provide limited (for example, North Carolina Family Assessment Scale; Signs of Safety) or no guidance (for example, Resilience Matrix) in the manual in terms of operationalisation, which is left to the discretion of the practitioner.

Interestingly, two of the Structured Decision-Making systems (Children's Research Centre – Structured Decision-Making; CRC-CALSWEC) provide highly structured guidance about the numeric scores that are associated with each of the component items, and with the four overall levels of risk of harm (i.e. low, moderate, high and very high, and also specify the differentiated minimum standards for each level), but appear to provide very limited behavioural descriptors with which to operationalise the included domains.

Good guidance: A number of tools (for example, the Graded Care Profile, Manitoba Risk Estimation System, Safeguarding Assessment and Analysis Framework, Victorian Risk Framework and Washington Risk Assessment Matrix) provide what we have termed 'good' guidance. This reflects the fact that they provide very clear and often extensive behavioural descriptors to guide the assessment of the likelihood of harm. For example, the Victorian Risk Framework (VRF - based on the Children's Research Centre – Structured Decision-Making) clearly defines the level of harm ('extreme' – impact on child/young person is extreme, enduring or deteriorating and likely to result in permanent consequences; 'serious' – impact on child/young person is observable, on-going and/or intrusive to functioning or health; 'concerning' – if harm is immediate, isolated and not persisting). It also clearly defines the harm patterns associated with each of those categories. Practitioner judgment is required to assess the harm rating in conjunction with the guidance provided.

Some tools (for example, Washington Risk Assessment Matrix) provide clear guidance with regard to assessing the individual components of the scale (for example, the risk in relation to substance abuse: 'No risk' – no past or present substance abuse; 'low risk' – history of substance abuse but no current problem; 'moderate risk' – reduced effectiveness due to substance abuse or addiction; 'high risk' – substantial incapacity due to substance abuse or addiction'), but we were unable to identify whether the *overall* risk levels of harm to a child are specified.

The Safeguarding Assessment and Analysis Framework similarly describes different levels of functioning across the domains and provides guidance about whether the indicated level of functioning represents a low or high risk of harm.

The Ontario Risk Assessment Matrix system which was developed in Canada and is based on the Children's Research Centre – Structured Decision-Making tools (some of which are exactly the same), has also been modified to include a set of very detailed descriptors of the type of behaviours/incidents that indicate high risk, alongside the highly structured SDM scoring forms.

Unclear: Some tools are still in the early stages of development and have not yet produced guidelines (for example, Child Abuse Risk Evaluation –

Netherlands), or we were unable to identify whether guidelines are provided (Comprehensive Assessment Tool; California Family Assessment and Factor Analysis; Child at Risk Field System; Child Endangerment Risk Assessment Protocol).

The only model that specified clear service requirements in terms of the level of risk identified is the Children's Research Centre – Structured Decision-Making. Table 5 shows the service level specification for in-home cases for the Children's Research Centre – Structured Decision-Making:

Table 5: Service Requirements

Risk Level	Service Requirement
Low	▪ One face-to-face contact per month by CPS worker with the client. ▪ One collateral contact per month by the worker on behalf of the clients.
Moderate	▪ Two face-to-face contacts per month by CPS worker with the client. ▪ Two collateral contacts per month by the worker on behalf of the clients.
High	▪ Three face-to-face contacts per month by CPS worker with the client. ▪ Three collateral contacts per month by the worker on behalf of the clients.
Very high	▪ Four face-to-face contacts per month by CPS worker with the client. ▪ Four collateral contacts per month by the worker on behalf of the clients.

Summary

On the whole, the structured decision-making systems and the actuarial tools in particular are the most highly structured and also the least comprehensive in terms of the domains being assessed. We have also described them as 'high' in terms of the guidance about the scoring and associated likelihood of harm, but these tools do not provide extensive descriptors of the type of behaviours/incidents associated with harm, and they provide a very limited number of specific situations that are given a numeric score. Only the Ontario Risk Assessment Matrix appears to combine high structure with extensive descriptors. The best tools are defined as 'moderate' in terms of the amount of guidance, but on the whole, these tools provide a good set of descriptors for an extensive range of domains in the case of the Graded Care

Profile and Safeguarding Assessment and Analysis Framework in particular. Some models provide limited or no guidance (Resilience Matrix; Signs of Safety).

Table 6: Summary of Evaluative Aspects of the Tools

			SYSTEMS					INDIVIDUAL TOOLS										
			CRC-SDM*	VRM	CAT	ORAM	CalSWEC-SDM	CARF	CERAP	CFAFA	CARE-NL	GCP	MRES	NCFAS/ SSTD	RM	SAAF	SoS	WRAM
A)	Assessment Domains	Parenting capacity	✓	✓	✓	✓	✓	✓	✖	✖	DK	✓	✖	✓	✖	✓	✖	✓
		Child's developmental status/needs	✓	✓	✓	✓	✓	?	✖	✖	DK	✓	✖	✓	✖	✓	✖	✓
		Family/environmental factors	✓	✓	✓	✓	✓	✓	✖	✖	DK	✓	✖	✓	✖	✓	✓	✓
		Safety/Strengths	✓	✓	✓	✓	✓	✓	✓	✓	DK	✓	✖	✓	✓	✓	✓	✖
		Risks	✓	✓	✓	✓	✓	✓	✓	✓	DK	✓	✖	✓	✓	✓	✓	✓
		Harm	✖	✖	✖	✖	✖	✖	✓	✖	DK	✓	✖	✓	✖	✓	✓	✓
		Prospects for successful intervention	✖	✖	✖	✖	✖	✖	✖	✖	DK	✓	✖	✓	✖	✓	✖	✖
		Capacity for change	✖	✖	✖	✖	✖	✖	✖	✖	DK	✖	✖	✖	✖	✓	✖	✖
		Other	Response Priority Tool; Placement /Reunification tools	Placement/ Permanency Planning / closure	Response determination Emergency Response; Placement/ Assessment / Continuing Services; Case Closure	Same as CRC-SDM	Same as CRC-SDM	DK	Reuinif-ication	DK	DK			Reunif-ication; other assessment tools		Other assessment tools		

	CRC-SDM*	VRM	CAT	ORAM	CalSWEC-SDM	CARF	CERAP	CFAFA	CARE-NL	GCP	MRES	NCFAS/ SSTD	RM	SAAF	SoS	WRAM
B) Behavioural Descriptors to define/operationalise assessment domains	Minimal	good	DK	Good	Minimal	DK	DK	DK	DK	Good	Good	DK	No	Good	No	Good
c) Procedures for calculating and summarising level of risk: WRAM																
Qualitative **summary of level of risk?***	✓	✓	DK	✓	✓	✖	✓	✓	✖	✓	✓	✓	Map only	✓	✓	✓
Quantitative **Summary of level of risk**	✓	✓	DK	some	some	✓	✓	✓	✓	✖	✓	✖	✖	✖	✖	✓
D) Standardised **Recording Forms**	Range of forms	Range of forms	Range of forms	Range of forms	Range of forms	Brief	DK	DK	DK	Map + forms	Range of forms	Range of forms	Map	Range of forms	1-page	Good

* This category includes numeric scores that were not obtained by 'summing' items across questions, rather by assessing the level of risk posed using a numeric scale

Legend: Children's Research Centre-Structured Decision-Making (**CRC-SDM**); Victorian Risk Matrix (**VRM**); Comprehensive Assessment Tool (**CAT**); Ontario Risk Assessment Matrix (**ORAM**); California Social Work Education Center-SDM (**CALSWEC-SDM**); Child At Risk File System (**CARF**); Child Endangerment Risk Assessment Protocol (**CERAP**); (**CFAFA**); Child Abuse Risk Evaluation-Netherlands (**CARE-NL**); Graded Care Profile (**GCP**); Manitoba Risk Assessment System (**RES**); North Carolina Family Assessment Scale (**NCFAS**)/ Strengths and Stressors Tracking Device (**SSTD**); Resilience Matrix (**RM**); Safeguarding Assessment and Analysis Framework (SAAF); Signs of Safety (**SoS**); Washington Risk Assessment Matrix (**WRAM**).

3.3.3 Procedures for determining the likelihood of harm and use of standardised forms

In this section we have combined our analysis of the following two criteria because they are inter-related:

A) the procedures for determining the likelihood of harm associated with the above domains and with the overall score produced by the scale;
B) the standardised forms provided to capture and record the information.

The included tools all specify a method for understanding/interpreting/ synthesising the data collected as part of the assessment process. We have classified these methods according to whether the data are synthesised qualitatively (i.e. using a narrative summary/or a *descriptive* numeric score obtained by using a visual scale) or quantitatively (i.e. using a numeric score produced by combining scores for constituent items).

We were unable to obtain the forms used for a small number of included tools (Comprehensive Assessment Tool; Child Endangerment Risk Assessment Protocol; California Family Assessment and Factor Analysis; North Carolina Family Assessment Scale), but where possible we have used secondary sources to assess the tool.

A) Qualitative (i.e. narrative summary):

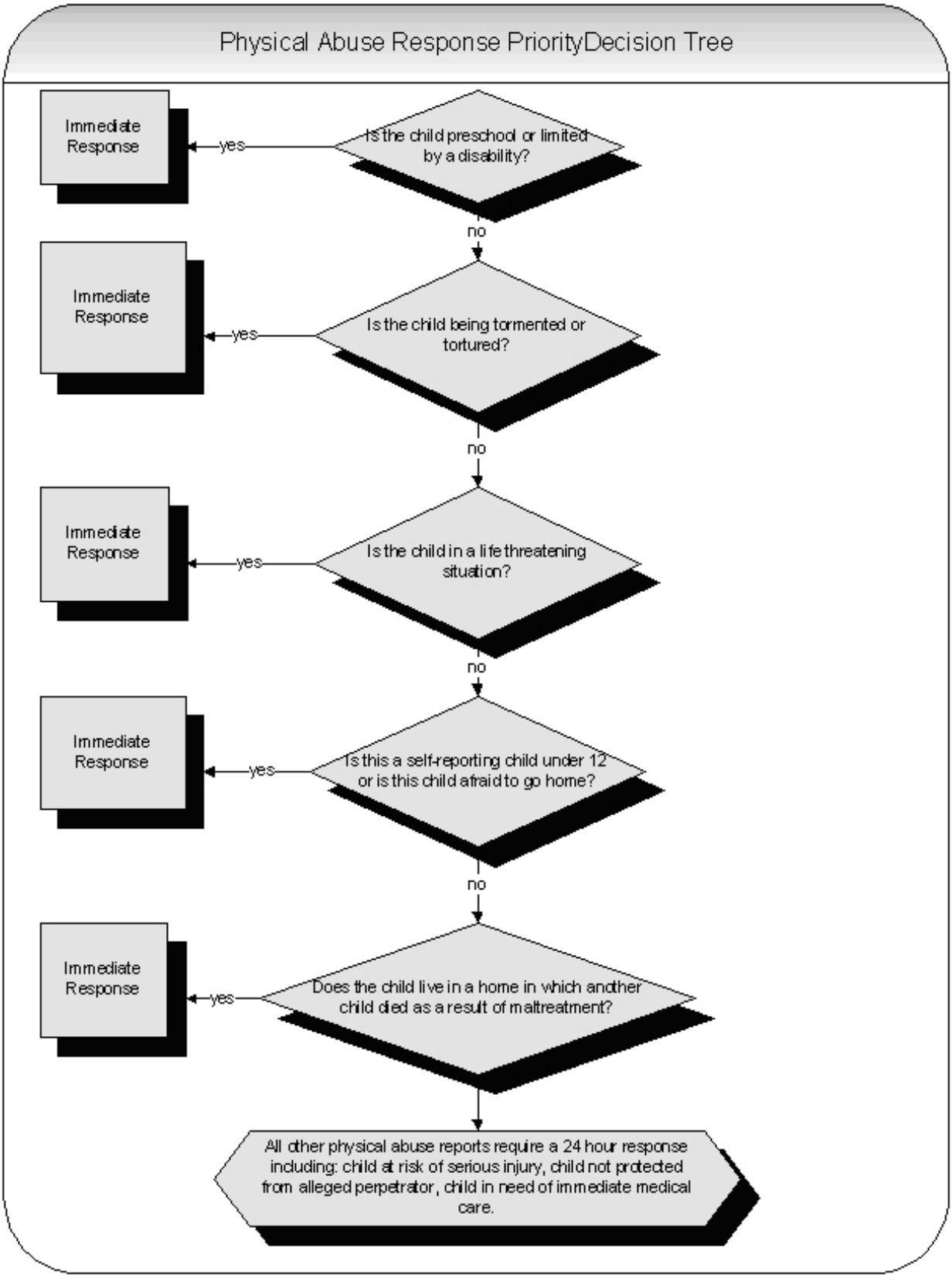
A number of qualitative methods of analysing/summarising the data are utilised in the included tools:

Ai) Decision-Trees

All of the **Response Priority Tools** aimed at guiding decision-making with regard to the categorisation of cases at intake involve the use of decision-trees.

The diagram below provides an example of the type of decision-tree used to assess the immediacy of the action required in terms of concerns that have been raised about a child suffering physical abuse (http://info.dhhs.state.nc.us/olm/manuals/dss/csm-60/man/CS1407-07.htm):

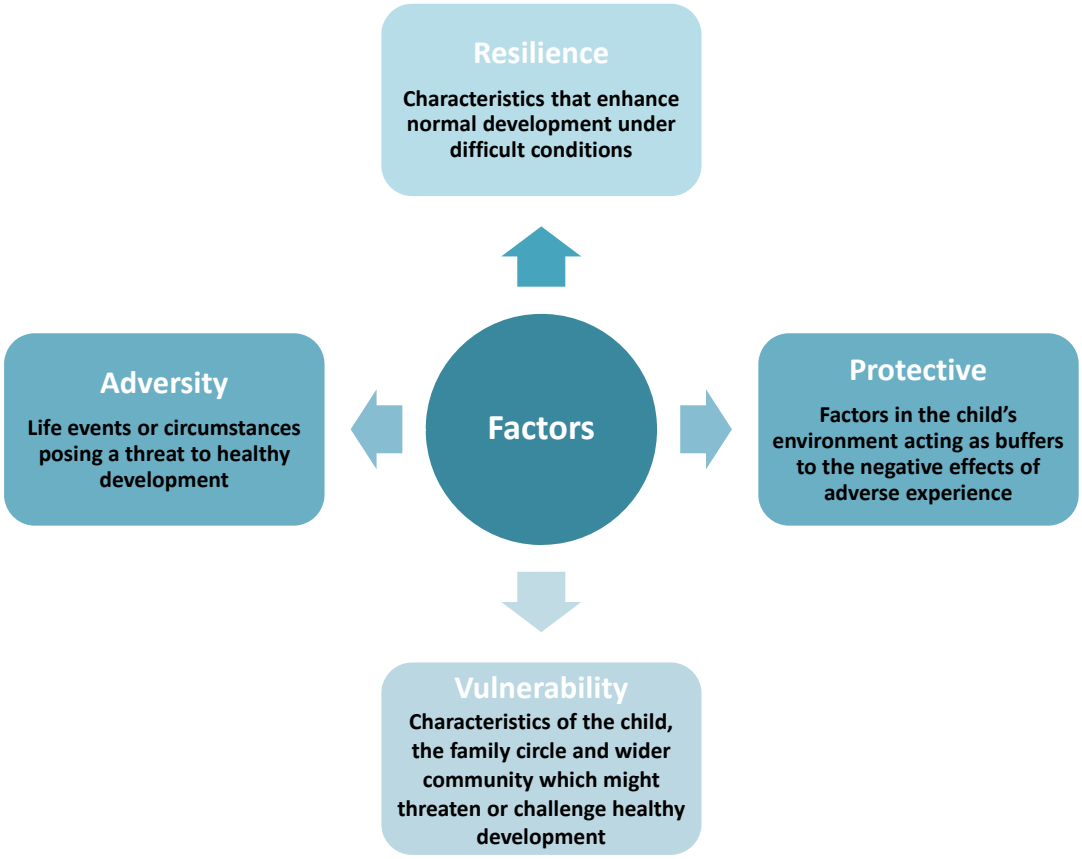
Figure 6: Physical Abuse Decision Tree



A2) Mapping

The Resilience Matrix (RM) provides a two dimensional diagram (see below) on which to 'plot' the strengths and pressures the child is experiencing, providing a visual matrix of risk. It was designed for use as part of Getting it Right for Every Child (GIRFEC) (Aldgate and Rose 2008; Rose and Aldgate 2000).

Figure 7: The Resilience Matrix

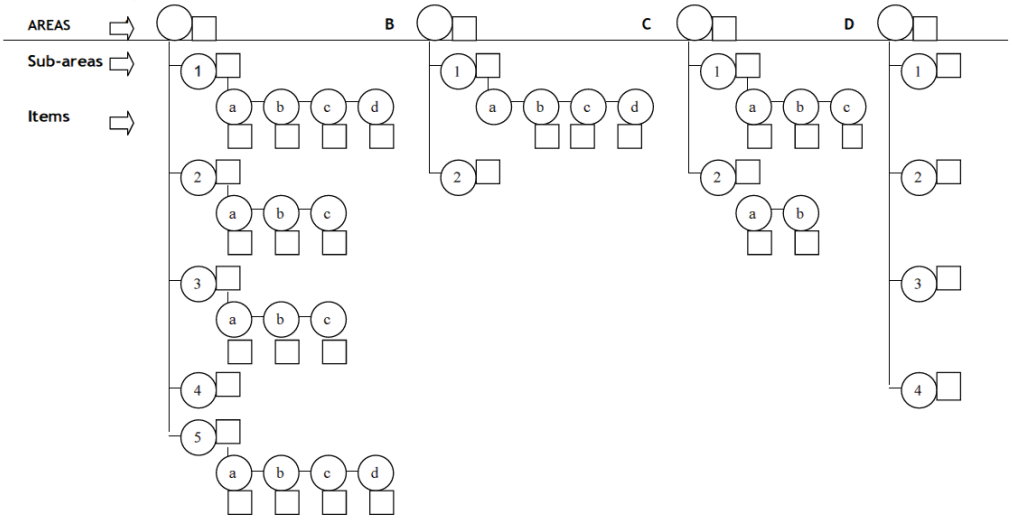


The Graded Care Profile also provides a map, but of the scores (see below) obtained from rating the included items, alongside an overall numeric summary sheet.

On the diagram below the key domains are referenced by the capitals on the top row, and the sub-areas are indicated by the numbers beneath and the individual items are indicated by the non-capitalised letters beneath that.

Figure 8: Graded Care Profile Map of Scores

Full Reference Scheme



A3. Descriptive Summaries

We have included in this section all instruments that utilised either a narrative summary of risk; or a numeric summary of risk (i.e. quantitative) that was not produced by summarising scores (i.e. although the risk level is indicated by a number, the number was not obtained by summarising responses to items, but by the practitioner assessing the nature and severity of harm being suffered by a child or likely to be using a visual or numeric scale).

A3.1 Narrative Summaries

Only one of the six **Risk Checklists** utilises a descriptive summary of the data collected (i.e. the remainder all produced quantitative assessments of risk of harm by combining scores across a range of items (see section B below).

The Child Endangerment Risk Assessment Protocol comprises a list of 14 items for use across all types of maltreatment, and the practitioner records the presence of absence of each item. An example is presented in Figure 9 below:

Figure 9: Descriptive Scoring Matrix for Child Endangerment Risk Assessment Protocol

'Any member of household's alleged or observed drug or alcohol abuse may seriously affect his/her ability to supervise, protect, or care for the child':

***Risk Factor present*=Child unsafe, safety plan needed;**
***Risk Factor Not Present*=Child not unsafe due to this risk**

A number of the **Family Assessment Models** also utilise descriptive summaries of the assessment results. For example, the Safeguarding Assessment and Analysis Framework collects data across 12 domains using the following format:

Figure 10: Safeguarding Assessment and Analysis Framework Assessment Step 5

Step 5 – Child-centredness of parents regarding parenting difficulties		
Level of functioning	Areas to be considered	Level of Functioning
BETTER PROSPECT FOR INTERVENTION	• Parents' acknowledgement of level of parenting difficulties • Motivation to achieve change	POORER PROSPECT FOR INTERVENTION
Reasonable acknowledgement and acceptance of level of parental difficulties and awareness of resulting harm		Failure to acknowledge level of parenting difficulties, or harm, blames family or environmental factors, agency failures, mutual blame
Motivation to achieve adequate levels of parenting		Limited or little motivation to contemplate the need for change

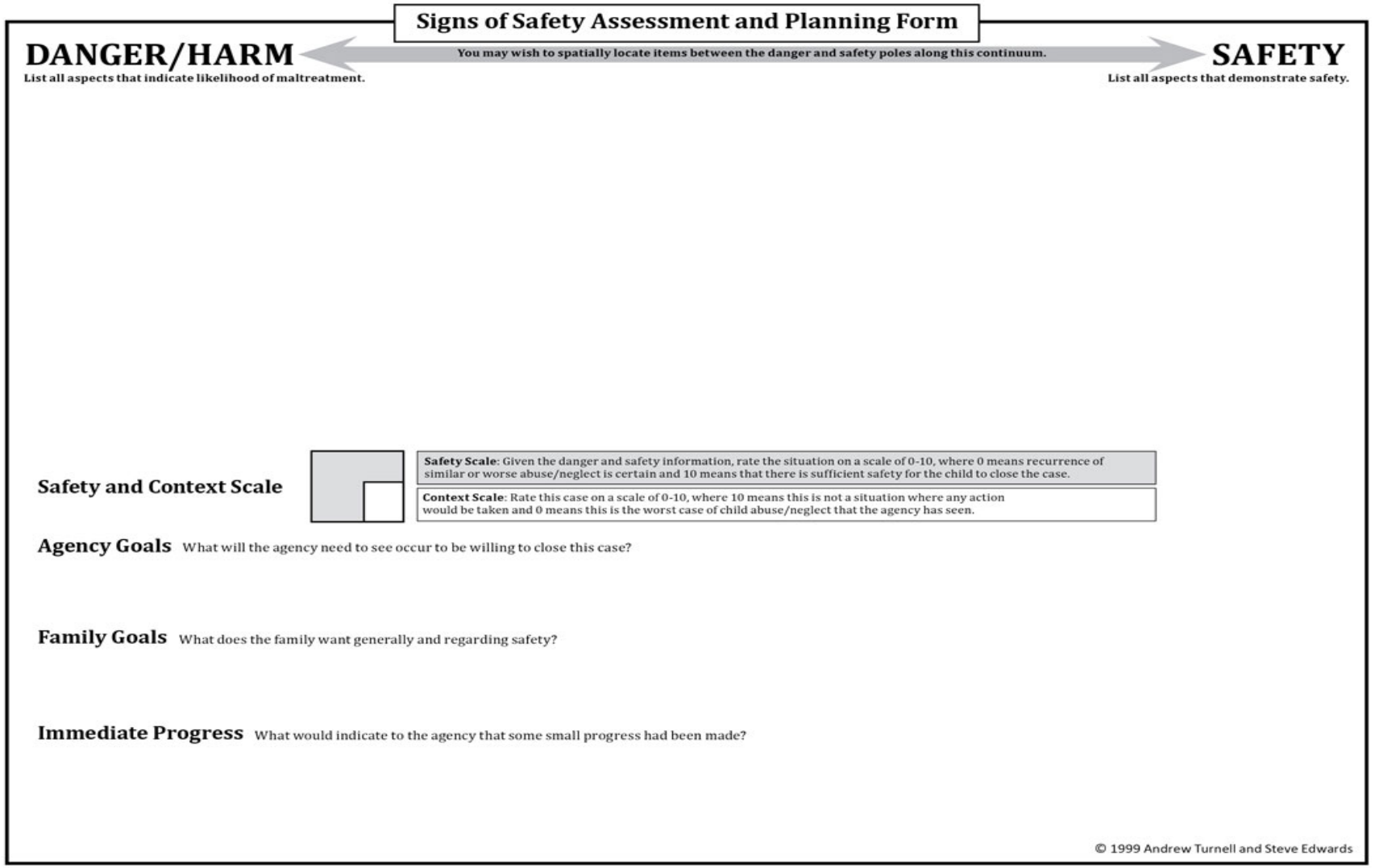
The data from the 12 domains are then summarised for three overall domains - *Overall level of harm*; *Overall level of risk of re-abuse or likelihood of future harm*; and *Overall prospects of successful intervention* - using three levels as depicted in Figure 11 for the 'Harm' domain.

Figure 11: Safeguarding Assessment and Analysis Framework Summary Assessment Domain One

OVERALL LEVEL OF HARM	LOW LEVEL OF HARM	MODERATE LEVEL OF HARM	HIGH LEVEL OF HARM
(Please tick a box)	☐	☐	☐

Signs of Safety provides an Assessment and Planning form that facilitates the practitioner organising the data collected using a range of subheadings – Danger/Harm, Safety, Agency goals, Family goals and Immediate progress. This model also involves the practitioner producing a quantitative assessment of risk using two scales - safety and context – each being rated on a 10 point scale.

Figure 12: Signs of Safety Assessment Form



Signs of Safety Assessment and Planning Form

DANGER/HARM
List all aspects that indicate likelihood of maltreatment.

You may wish to spatially locate items between the danger and safety poles along this continuum.

SAFETY
List all aspects that demonstrate safety.

Safety and Context Scale

Safety Scale: Given the danger and safety information, rate the situation on a scale of 0-10, where 0 means recurrence of similar or worse abuse/neglect is certain and 10 means that there is sufficient safety for the child to close the case.

Context Scale: Rate this case on a scale of 0-10, where 10 means this is not a situation where any action would be taken and 0 means this is the worst case of child abuse/neglect that the agency has seen.

Agency Goals What will the agency need to see occur to be willing to close this case?

Family Goals What does the family want generally and regarding safety?

Immediate Progress What would indicate to the agency that some small progress had been made?

The Victorian Risk Framework family assessment tools also utilise descriptive summaries of risk. For example, this tool requires the practitioner to provide descriptions of a range of factors (including pattern and history of harm; the child; opportunity for harm; relationship with and belief about child; factors which impact on parenting; supports and services) in terms of the ways in which they increase vulnerability to and likelihood of harm or increase safety. The model provides a Risk Factor Warning list that is utilised alongside the risk assessment summary sheet (Figure 13).

Figure 13: Victorian Risk Framework Summary Assessment Domain One

Alleged Confirmed Not Known No		Alleged Confirmed Not Known No	
	Prior child protection history: ▪ Prior substantiated abuse reports ▪ Escalating concern ▪ /pattern of contact with child protection service **Child:** ▪ Child under 2 years ▪ Any evidence of physical abuse/shaking ▪ Premature, disabled, chronically ill ▪ Difficulty feeding, sleeping, cries a lot ▪ Born underweight or drug dependent **Any child or young person in the home has:** ▪ A developmental /other disability ▪ History of self-harm/suicide (talk or attempt)		**Carer(s)*:** ▪ Under 20 at birth of first child ▪ Carer(s) abused as child(ren) ▪ Carer is not biological parent ▪ Carer(s) have intellectual disability ▪ Family is socially isolated or severely fragmented **Carer(s)* response to investigation/ incident:** ▪ Viewed less seriously than child protection worker ▪ Failed to co-operate satisfactorily **Carer(s)* have history of violent relationships:** ▪ Has physically abused child (past or present) ▪ As perpetrator of domestic violence ▪ As victim of

	▪ Offending ▪ Violent Behaviour ▪ Mental health issue ▪ Substance abuse problems ▪ Recent significant behaviour change ▪ History of multiple separations /no stable placement No stable day program (education /employment /other) **Carer(s)* parenting skills:** ▪ Use of excessive or inappropriate discipline ▪ Domineering (high criticism /low warmth family type) ▪ Unmotivated or unrealistic re: improving parenting skills		domestic violence ▪ Other violence **Carer(s)* have current:** • Alcohol only • Other drugs (with or without alcohol) **Carer(s)* have mental health problems:** ▪ Psychiatric illness ▪ Self-esteem issues ▪ Apathetic or depressed **Carer(s)* beliefs about the child:** ▪ Describes or acts toward child predominantly negative ▪ Unrealistic expectations **Carer(s)*have history of perpetrating sexual assault:** ▪ Of child(ren) ▪ Of adult(s)
* Carers can include any parent, carer or adult in the household			

The two **Audit Tools** both utilise lists of evidence-based risk factors that have been shown to be strongly associated with future harm (Corby 2003); Jones, 1991; 1998; (Jones, Hindley and Ramchandani 2006), alongside risk classification schemas with which to classify the factors (see below). Figure 14 depicts the Risk Matrix developed by Ward *et al*., (2012), to classify the Jones (1991; 1998) and Jones, Hindley and Ramchandani (2006) risk factors following information gathering, assessment and analysis.

Figure 14: Risk Matrix (Ward *et al* 2012)

Low risks	Medium risks	High risks	Severe risks
CIN/Child protection plan	Child protection plan	Child protection plan	Legal proceedings
No risk factors apparent (or previous risk factors fully addressed)	Risk factors apparent (or not all risk factors fully addressed)	Risk factors apparent (and risk factors not being addressed)	Risk factors apparent (and risk factors not being addressed)
Protective factors apparent	Protective factors apparent	Protective factors apparent	No protective factors apparent
Parents ABLE to demonstrate sustained capacity for actual change	Parents ABLE to demonstrate sustained capacity for actual change	Parents UNABLE to demonstrate sustained capacity for actual change	Parents UNABLE to demonstrate sustained capacity for actual change
Very unlikely that abuse will occur/recur	Some possibility that abuse will occur/recur	Strong possibility that abuse will occur/recur	Very strong possibility that abuse will occur/recur
If parents can maintain 'low risks' for a period of at least six months the case can close.	If parents address all risk factors and maintain the change for at least six months the case can move to 'low risk', where it should remain for a further six months before closing.	If parents develop a capacity for actual change and begin to address risk factors and protective factors remain apparent this should be sustained for at least six months before the case can move to 'medium risk' where it should remain for a further six months before moving to 'low risk'.	If protective factors become apparent and/or parents begin to address risk factors it should be sustained for at least six months before moving to 'high risk'.
If new risk factors emerge/previous risk factor remerge and parents are able to show demonstrable capacity for change and protective factors are apparent the case will move to 'medium risk' for further monitoring.	If parents are unable to address all risk factors but are making use of interventions to address them and protective factors are apparent the case should remain 'medium risk'. As long as no new risk factors emerge or previous risk factors remerge that had previously been addressed.	If parents remain 'high risk' for six months without addressing risk factors the case should move to severe risk where legal proceedings will be instigated.	
If new risk factors emerge/previous risk factors remerge and	If new risk factors emerge/previous risk factors remerge and	If protective factors are no longer apparent	

parents are unable to show demonstrable capacity for change yet protective factors are apparent the case will move to 'high risk' for further monitoring.	parents are unable to show demonstrable capacity for change yet protective factors are apparent the case will move to 'high risk' for further monitoring.	the case should move to severe risk where legal proceedings will be instigated.	
If new risk factors emerge/previous risk factor remerge and parents are unable to show demonstrable capacity for change and no protective factors are apparent the case will move to 'severe risk' where legal proceedings will be instigated.	If new risk factors emerge/previous risk factor remerge and parents are unable to show demonstrable capacity for change and no protective factors are apparent the case will move to 'severe risk' where legal proceedings will be instigated.		

B) Quantitative (i.e. numeric) summary (on own or in addition to qualitative summary):

All of the **risk and safety checklists** (apart from the Child Endangerment Risk Assessment Protocol described in section A above), utilise quantitative methods of summarising the data that has been collected, mostly by summarising the score for the component items. There are two types of instrument within this category – actuarial and consensus based tools.

B1. Actuarial Tools

Child Abuse Risk Evaluation–Netherlands – Total score is produced by summing scores from 14 items measuring 4 Domains (no further information available);

Children's Research Centre – Structured Decision-Making – Family Strengths and Needs Assessment checklist consists of two domains (Neglect and Abuse) comprising 12 and 11 items respectively. The response to each item is scored, and then a total score for each domain is produced. The scored risk levels are assigned to four categories as follows: low; 2-4 moderate; 5-8 high; 9+ very high. The model then allows for 'policy over-rides' which provides the opportunity to take account of additional scenarios that may increase the risk; and discretionary overrides that may also increase the risk of harm and that require the approval of the practitioners supervisor.

B2. Consensus-Based Tools

Child at Risk Field System – Total score produced by summing scores for 14 items measuring 5 domains; child, parent, family, maltreatment and intervention (no further information available).

California Family Assessment and Factor Analysis – Total score produced by summing scores for 23 items over 5 domains (no further information available).

Manitoba Risk Estimation System - Numeric summary scores for vulnerability, reoccurrence, severity (no further information available).

Washington Risk Assessment Matrix – Total risk score produced by summing items from seven domains: child characteristics, severity of abuse/neglect, chronicity of abuse/neglect, caretaker characteristics, caretaker/child relationship, socio-economic factors and perpetrator access (no further information available).

3.3.5 Evaluation of the Included Tools

3.3.5.1 Introduction

We assessed the included tools in terms of the extent to which the following evaluation data was available:

Validity –This provides data about the extent to which the tool measures what it claims to be measuring. The following aspects of validity are typically appraised: face; construct; internal/external; criterion (concurrent/predictive);

Reliability – This describes the extent to which tool is consistent in terms of the results that it produces across different raters, and at different points in time. The following three types of reliability data may be assessed: internal consistency; inter-rater; test-retest;

Acceptability – This data provides information about the extent to which either users or recipients find the tool acceptable in terms of its content and administration;

Equity – This describes the extent to which the tool is equitable in terms of it producing similar results across different ethnic, social or gender divisions and groups;

Impact – Impact data refers to data describing the extent to which the use of the tool makes a difference in terms of outcomes for children.

Table 7 provides a summary of the evaluation data available for each tool.

Table 7: Summary of Evaluation for Each Model

			SYSTEMS					INDIVIDUAL TOOLS										
			CRC-SDM	VRM	CAT	ORAM	CalSWEC-SDM	CARF	CERAP	CFAFA	CARE-NL	GCP	MRES	NCFAS	RM	SAAF	SoS	WRAM
Evaluation	Validity/ reliability	Validity	✓	✓	✖	✓	✖	✓	✓	✓	✖	✓	?	✖	✖	✖	✖	✓
		Reliability	✓	✓	✖	✓	✖	✓	✓	✓	✖	✓	?	✖	✖	✖	✖	✓
	Accept-ability	Service users	✓	✖	✖	?	✓	?	?	?	✖	?		✖	✖	✖	✓	✖
		Service providers	✓	some	✖	✓	✓	✓	✖	?	✖	✓	?	✖	✖	✓	✓	✖
	Equity	Equity and fairness in use	✓	some	✖	✓	✓	✓	✓	✓	✖	✖	?	✖	✖	✖	✓	✓
	Impact	Improves outcomes	✓	✖	✖	✓	✖	Some	✓	?	✖	✖	?	✖	✖	✖	?	✖

3.3.5.2 Validity and Reliability data

The results show considerable variability in terms of the assessment of validity and reliability of the included tools. Some of the included tools have not yet been assessed in terms of any aspects of validity or reliability (Child Abuse Risk Evaluation – Netherlands; Comprehensive Assessment Tool; North Carolina Family Assessment Scale; RES; Resilience Matrix; Signs of Safety; Safeguarding Assessment and Analysis Framework; Victorian Risk Framework).

The results of many of the studies assessing predictive validity, convergent validity and inter-rater reliability of some of the actuarial tools were average or poor. For example, data evaluating the Child at Risk Field System found that its predictive validity was variable (Doueck, Levine and Bronson 1993), and its convergent validity was poor (Kolko 1998). Similarly, evaluation of the Washington Risk Assessment Matrix found poor predictive validity (Baird and Wagner 2000; Camasso and Jagannathan 2000) limited convergent validity (English and Graham 2000), and poor inter-rater reliability (Baird et al. 1999). The California Family Assessment and Factor Analysis also performed poorly in tests of predictive validity (Baird and Wagner 2000; Camasso and Jagannathan 1995) and inter-rater reliability (Baird et al. 1999). Evaluation of the Child Endangerment Risk Assessment Protocol found mixed results for predictive validity (Fuller, Wells and Cotton 2001), and no studies of convergent validity or inter-rater reliability. Evaluation of the North Carolina Family Assessment Scale is limited to data from non-child protection populations (Lee and Lindsey 2010).

The only tools that have been found to consistently have good validity (predictive), reliability (inter-rater) and impact has been the risk assessment tool of the Children's Research Centre – Structured Decision-Making model developed in the United States. Studies of its predictive validity found it to perform well in predicting subsequent maltreatment at 6 months (Johnson 2004); 18 months (Baird and Wagner 2000) and 24 months (Johnson 2004). Data about inter-rater reliability of the risk assessment instrument found moderately good results (for example Kappa 0.56) (Baird et al. 1999), although slightly less good results for the overall risk score in a second study (Loman and Siegel 2004).

However, evaluation of the Canadian Ontario Risk Assessment Matrix (which is derived from the Children's Research Centre – Structured Decision-Making) found significant problems in terms of both the capacity of this instrument to correctly classify families (i.e. validity), and also in terms of the ability of different practitioners to reach similar conclusions following its use (inter-rater reliability) (Barber et al. 2007). This may have implications in terms of the adaptation of the Children's Research Centre – Structured Decision-Making in a UK setting. We identified no validity or reliability data over and above that obtained for the original Children's Research Centre – Structured

Decision-Making, for the SDM-CALSWEC (see below for results for acceptability and equity).

The only UK tool to have been evaluated to date in terms of inter-rater reliability (Graded Care Profile) found high inter-rater agreement for all domains (Srivastava and Polnay 1997).

3.3.5.3 Impact

Only three of the included systems/tools had data concerning their impact (Child at Risk Field System; Child Endangerment Risk Assessment Protocol; Children's Research Centre – Structured Decision-Making).

The Child at Risk Field System, in addition to its poor predictive and convergent validity (see above) was found to have no discernable impact in terms of substantiation rates (Doueck, Levine and Bronson 1993). The Child Endangerment Risk Assessment Protocol, which had mixed findings for predictive validity and no data on convergent validity or inter-rater reliability showed improved recurrence rates for maltreatment at 60 days (Fluke et al. 2001), which were maintained for six years following implementation (Garnier and Nieto 2002; Nieto and Garnier 2001).

However, evaluation of the impact of the implementation of the Children's Research Centre – Structured Decision-Making model across 13 sites, in comparison with 13 sites not using this system found significant improvements for a range of outcomes. The 13 intervention sites closed more low and medium risk cases while control sites closed more high risk of harm cases, and programme participation was higher in SDM sites. So, for example, SDM families were more likely to participate in parenting skills training, substance abuse treatment, family counselling and mental health services. There was also better outcomes in terms of new referrals, new substantiations, removal to foster-care, and child injury report (Wagner, Hull and Luttrell 1995).

3.3.5.4 Equity

Only three of the included systems/tools evaluated their use with different racial/ethnic groups (Children's Research Centre – Structured Decision-Making; California Family Assessment and Factor Analysis; Washington Risk Assessment Matrix).

One study found that the California Family Assessment and Factor Analysis had an equitable distribution of African-American families and while families across the different risk categories (Baird and Wagner 2000). There were

mixed findings for the Washington Risk Assessment Matrix, with one study showing that African- and Native American's were more likely to be classified as high risk while Asian American's were under-assigned to this category (English *et al*. 1995), while another study showed an equitable distribution for African-American and while families (Baird and Wagner 2000).

Although the research evaluating the Children's Research Centre – Structured Decision-Making instruments with different racial/ethnic groups suggest good equity on the whole (for example, instruments classify equal proportions of all ethnic groups into the different risk categories) (Baird, Ereth and Wagner 1999; Baird and Wagner 2000; Johnson 2005) a number of anomalies were noted (for example, some risk ratings of ethnic groups varied) (Johnson 2004; Loman and Siegel 2004).

3.3.5.5 Acceptability

We identified research about the acceptability of the implementation for service users and providers for a number of systems (SDM CALSWEC; Ontario Risk Assessment Matrix; Victorian Risk Framework), and also for some of the individual tools (Graded Care Profile; Signs of Safety).

a) Systems

Process data are available regarding the implementation of the Children's Research Centre – Structured Decision-Making in Los Angela county (Kim et al. 2008) and Australia (Gillingham and Humphreys 2010), both of which identified a range of problems.

Kim et al., (2008) identified difficulties in terms of worker attitudes and behaviours such as resistance to 'relinquishing their decision making power' and SDM perceived as a 'threat to their professional judgment', and as an additional paper work burden that was perceived to be used to satisfy organisational accountability requirements. Organisational level barriers included the problem of building a 'SDM friendly culture' and its integration with other initiatives and systems (ibid., pp.67-68).

Gillingham and Humphreys (2010) and Gillingham (2011) evaluated the implementation of eight of the ten Children's Research Centre – Structured Decision-Making risk assessment tools in two Australian states: South Australia and Queensland in terms of the extent to which they assisted decision-making, promoted consistency in decision making and helped to target the children most in need of a service. Although their use was

mandatory and embedded in an electronic case recording system, it was also emphasised that they should not replace professional judgment (Gillingham and Humphreys 2010). In terms of decision-making (which referrals to accept, urgency of a section 47 enquiry/assessment, whether a child is safe in the short-term, etc), this research found that decisions were being made before the SDM tools were completed in the electronic case recording system, and that this 'after the event' engagement with the tools did not affect the decision-making (ibid., p. 2605). Consistency was not considered to be important by practitioners: the tools were being used differently in different offices and a range of contextual factors (for example, level of busyness) emerged to explain inconsistencies.

Similar themes emerged in terms of the use of the tool to target the children most in need. Further exploration revealed that practitioners felt that the tools (for example, the Family Risk Evaluation Tool – FRET) overestimated risk of harm (i.e. 'almost every case comes out as high'), and that more experienced practitioners felt that it oversimplified situations, could not deal with complexity and limited their practice (ibid). Other concerns included the feeling that the tools were an administrative burden that deflected attention from the core task, that they were being used as 'yet another accountability tool' and that they undermined the development of knowledge and skills necessary for those working to protect children from harm.

These findings suggest that the perception of workers was that the tools were being used as accountability rather than decision-making tools, and that they were organization and not user-focused.

More recently (Gillingham 2011) suggests that perceptions by practitioners, that the use of decision-making tools of this nature may impair the development of professional expertise, again points to the importance of the 'process of implementation' and 'in particular how tools are regarded within an organisation in relation to practitioner expertise' (ibid., p. 412).

b) Individual Tools

One study suggests that the Graded Care Profile (GCP) is user-friendly, the mean time taken to complete the record sheet being 20 minutes (range 10 to 30 minutes) (Srivastava and Polnay 1997). However, local evaluations of its implementation found variable results. For example, Stockport LSCB reported the results of a ten-month evaluation, following the introduction of the GCP with a support package including training and briefings, operational support, supervision and reminders about use (Stockport LSCB 2007). Although the tool received positive comments during the training sessions, the evaluation found resistance to using the tool and that it was not embedded within practice - out of 28 initial child protection conferences for neglect, the Graded Care Profile was only completed in six (6/28; 21%)

cases, despite its use being mandatory. The reasons practitioners failed to complete the Graded Care Profile included: the difficultly of the language especially where the parents had a learning disability, it was time consuming to complete, required more than one visit to complete the tool, there was concern from some practitioners regarding its suitability for use with older children and some practitioners had re-worded the tool. The research concluded that the Graded Care Profile was not embedded in practice and that although practitioners had a positive view about the tool, its implementation needed underpinning by an agreed data set and systems for gathering data across agencies (ibid).

The Signs of Safety Model does not appear to have been evaluated in terms of rigour (i.e. validity, reliability or impact) but has evidence of good user (Westbrock 2006) and provider acceptability (Alcock et al., 2009; Inoue et al., 2006; Sundman 1997; Turnell and Edwards 1999), in addition to a number of case studies (Christianson and Maloney 2006; Turnell, Elliott and Hogg 2007) and opinion/discussion papers (Myers 2005; Turnell 2004), the results of which are not discussed here.

3.3.6 Summary

- We identified 5 systems of tools, 11 individual tools and 2 audit tools that can be used to assess and analyse whether a child is suffering, or likely to suffer, significant harm.

- We further classified the component tools into five categories according to its primary purpose - Response Priority; Risk/Safety Assessment; Family Needs Assessment; Placement/Permanency and Reunification tools; Audit.

- We assessed the tools in terms of the comprehensiveness of the assessment domains, the operationalisation of the domains, the procedures for analysing the data and their rigour.

- In terms of **operationalisation of the key domains** we found that some of the structured decision making (SDM) tools provided a highly structured (i.e. tick box) approach with little accompanying descriptors. Only one SDM system of tools (Ontario Risk Assessment Model) provided extensive descriptors. The two UK developed tools (Graded Care Profile; Safeguarding Assessment and Analysis Framework) provided the most comprehensive descriptors alongside a comprehensive set of assessment domains.

- In terms of the **procedures and calculations for analysing** the collected data, the SDM actuarial tools were the most highly structured and quantitative, while many of the family assessment tools provided

more qualitative methods of synthesising the data, which would appear to be more consistent with the nature of the assessment process and the use of Structured Professional Judgment.

- With regard to their **rigour**, although there is general recognition that 'actuarial' risk assessment tools are more accurate than consensus-based tools (D'Andrade, Benton and Austin 2005) our review found that although there is evidence favouring the validity, reliability and impact of one actuarial SDM risk assessment tool (California Risk Assessment Tool), evaluation of the implementation of this tool in other contexts has highlighted a range of significant problems.

  The two UK comprehensive family assessment tools highlighted above (Graded Care Profile and Safeguarding Assessment and Analysis Framework) do not currently have extensive evaluation data available, and this needs to be remedied.

  Some of the more limited tools in terms of the number of assessment domains provided and descriptors used to operationalise the domains (for example, Resilience Matrix and Signs of Safety), would appear to have potential value in terms of helping practitioners to create visual displays in order to facilitate the process of 'making sense' of the data, and in terms of sharing the data with families.

  The audit tools would appear to have potential value in terms of enabling services to audit case notes, and to identify discrepancies between the decisions recorded and the level of risk of harm identified by these evidence-based tools.

Chapter 4 – Discussion

4.1 Introduction

The aim of this section is to examine the findings of this review in terms of their implications for the assessment and analysis of children suffering, or likely to suffer, significant harm in England. The limitations of using clinical judgment on its own to undertake assessment and analysis, are now widely recognised (Arad-Davidson and Benbenishty 2008; DePanfilis and Girvin 2005; Pfister and Böhm 2008) (Munro 1999), alongside the need for reliable methods of classifying whether children are suffering, or likely to suffer, significant harm (Munro 1999; 2005). Our review identified a range of tools (some of which were a component part of a system of tools) that incorporated standardised methods for analysing assessment data. For the majority of these, the processes for analysing data formed an integral part of the assessment tool. Only two of the included tools (Resilience Matrix and Signs of Safety) provided minimal guidance within the tool itself, about the data to be collected and how to analyse it.

We have distinguished between a number of key stages at which assessment and analysis are typically undertaken – responding to referrals; assessment/section 47 enquiry; case planning; and continuing services/placement/re-unification planning, alongside their different aims (see table 8 below). So for example, responding to referral focuses on screening; assessment/ section 47 enquiry focuses on identifying and understanding the problem; case planning involves the planning of services; and the final stage involves the monitoring of progress and evaluation. Table 8 also identifies the type of measurement criteria that are important in terms of assessing the adequacy of any standardised and validated tools that might be used at each of these stages as part of the assessment process. For example, tools that are being used to monitor progress should have data available to indicate that they are sensitive to change (Johnson et al., 2006).

We have also distinguished between standardised tools that have been developed on the basis of consensus (i.e. primarily based on expert opinion about risk/likelihood of harm), and those that are empirically/statistically based, of which the 'actuarial' tools are currently the most common. The latter are evidence-based and statistically predictive of future maltreatment (Rycus and Hughes 2003), and the research shows that such tools are more accurate than consensus based tools in the assessment of risk/likelihood of harm to children (D'Andrade, Benton and Austin 2005), and in other fields (for example, sexual recidivism (Hanson and Morton-Bourgon 2009).

We have also distinguished between brief tools assessing static risk factors, and the more comprehensive tools that have been developed to assess strengths and needs, or dynamic factors that are amenable to change. Only some of the risk assessment tools are empirically based (actuarial), and none of the needs assessments tools, all of which are consensus based.

Table 8: Stages of Assessment and Measurement Criteria (adapted from Johnson et al., 2006)

Decision-Making stage	Assessment stage	Clinical criteria	Measurement criteria
Responding to referrals	Screening	Detects the nature of a problem; provides guidance as to further assessment; cost effective	Adequacy determined by predictive validity
Assessment/ section 47 enquiry	Identification and understanding	Confirms hypotheses regarding family functioning; quantifies or measures the severity of dysfunction; determines the primary locus of the problem; provides standardised measures and validated clinical cut-off scores	Adequacy determined by discriminative and differential predictive validity
Case planning	Service Planning	Specifies objectives for change; analyses factors that produce and maintain problematic behaviour; identifies family strengths and resources; determines both intervention sequence and level of change adequate for treatment termination; may require multi-method assessment approach if multiple goals cannot be systematically measured using a single methods.	Adequacy determined by content validity and inter-rater reliability regarding specific behavioural patterns relevant to the problem
Continuing services/Placement and Reunification decisions	Monitoring Progress/Evaluation	Focuses on the behaviour to be changed; amenable to repeated-measures; generalizable beyond the treatment setting; sensitive to change; easily administered.	Adequacy determined by sensitivity to clinical change. Tool should be unresponsive to spurious influences such as retesting effects and instrument decay

Given the range of decision-points with regard to the likelihood of harm that were identified above, and indeed, their different purposes (for example service planning; assessing change), a range of standardised tools should be used, alongside professional judgment, to assess the likelihood of harm to a child.

The remainder of this chapter focuses on addressing the findings of this review in terms of what would improve assessment and analysis of likelihood of harm, as part of English child welfare services. We have taken as our starting point,

the concept of 'structured professional judgment', which refers to the combined use of structured/empirically based assessment/analysis tools, alongside professional judgment. Such structured assessment of the likelihood of significant harm attempts to bridge the gap between the scientific, actuarial approach and the clinical practice of risk and needs assessment. It is underpinned by the following premises:

- that the use of standardised empirical (i.e. actuarial) instruments can promote transparency, accountability and accuracy whilst encouraging use of professional discretion (White and Walsh 2006);
- that such tools are based on sound scientific knowledge whilst being practically relevant (ibid);
- the use of such instruments is aimed at augmenting the role of intuition, not replacing it (Munro 1999);
- their use is consistent with recent theorising from the field of complexity, pointing to the need for 'indicative', non-linear methods of assessing risk/likelihood of harm, rather than 'predictive' risk assessment (see Barlow and Scott 2010 for an overview);
- their use is consistent with developments across a range of other fields including assessment of risk of sexual recidivism (Hanson and Morton-Bourgon 2009);
- the term 'risk' is being used widely to include assessment of dynamic factors related to 'need' alongside static and historic data about family and child functioning.

This review aims to build on the conceptual model established by the Assessment Framework (Department of Health, Department for Education and Employment and Home Office 2000). The main rationale for this approach is that the Assessment Framework (ibid) comprehensively captures accepted knowledge and best understanding about the range of influences on child development, and provides a concise conceptual model that is accessible and comprehensive for practitioners to use.

4.2 What assessment/analysis tools are available?

This review has identified a range of tools that have been developed to aid in the analysis of data from assessments about whether a child is suffering, or likely to suffer, significant harm. Most of these tools are designed for use as part of an assessment process, and consist of detailed guidance about how to synthesise the data collected to produce an overall summary about the nature and severity of harm a child may be suffering or is likely to suffer and in some cases provide further guidance about the seriousness of any risk of harm identified. The CRC-SDM system also provided specifications about the level of service input associated with each of the risk levels.

The tools ranged from simple mapping instruments (for example the Resilience Matrix) and brief screening checklists comprising 14 items that can be used at any point in the assessment process and consisting of minimal guidance (for example Child Abuse Risk Evaluation – Netherlands), through to highly structured systems of tools for use at each of the different decision-making

time points (i.e. referral through reunification) with highly structured guidance and recommendations about service input (for example Children's Research Centre – Structured Decision-Making).

In chapter three we undertook an extensive evaluation of the above tools in terms of what they comprise, and evidence about their adequacy and acceptability. The next section summarises the findings of this review in terms of which tools could potentially assist assessment and analysis about whether a child is suffering, or likely to suffer, significant harm. Our analysis of the 'adequacy' of these tools is based on the extent to which they are consistent with the use of 'structured professional judgment' (see Chapter 1 for further discussion), and the domains developed in the Assessment Framework (Department of Health, Department for Education and Employment and Home Office 2000), together with data about their reliability and acceptability.

4.3 How much Structure – Issues and Implications?

4.3.1 Structure and Types of Social Work Practice

Three models of social work assessment have been identified – questioning, procedural and exchange models (Miller and O'Byrne 2002), with the latter being seen as the most consistent with broader social work values and with the Assessment Framework. We have identified tools that could be used as part of an 'exchange' model of working, and that would improve the analysis of information collected as part of the assessment process.

The tools that have been identified by this review range along a continuum in terms of the ratio of structure relative to the use of professional judgment. For example, some of the more minimalist tools provide only a simple data collection form with limited guidance about the domains or how the information should be synthesised and made sense of (for example Signs of Safety), while the most structured systems of tools provide more limited scope for professional judgment (Children's Research Centre – Structured Decision-Making).

Decisions about which tool(s) to use, must take account of the need for methods of assessment that are not so highly structured that they preclude practitioner judgment but that are also not insufficiently evidence-based or structured to facilitate accuracy and rigour in decision-making. These issues are addressed further below.

4.3.2 Erosion of Professional Judgment and Complexity

One of the concerns of practitioners that is highlighted by the studies evaluating the implementation of the highly structured systems (for example Children's Research Centre – Structured Decision-Making), is the extent to which the use of such tools erodes the ability of practitioners to exercise their

professional judgment (Gillingham and Humphreys 2010). Recently published research suggests that unless careful attention is paid to the way in which such structured models of assessment are implemented, they could impair professional development (Gillingham 2011). This refers specifically to the fact that although such SDM tools are intended for use alongside professional judgment, the day-to-day reality in terms of their actual implementation may be quite different. The research suggests that *'it may not be the tools themselves that impair the development of expertise, but rather how they are regarded at an organisational level and subsequently implemented'* (ibid p., p.420).

In addition, concerns were raised about the perception on the part of practitioners that such tools minimise complexity and rate too many families as being at significant risk of harming their children. In terms of the issue of 'minimising complexity', these tools were intended to classify cases using evidence about the factors that are strongly associated with the recurrence of abuse. They are as such intended to help practitioners to *classify cases* into high, medium and low levels of future risk of harm. Used in isolation as the primary source of data collection, these tools are likely to prove highly unsatisfactory to practitioners. Used alongside other data collection instruments, however, such tools could provide useful information to practitioners about their overall classification in terms of the nature and severity of harm a child is or may be suffering.

4.3.3 Overestimation of the Likelihood of Significant Harm

The issue of 'over-estimation' of likelihood/risk of significant harm is important, and although it is acknowledged that risk assessment systems are organizational risk management strategies (Gambrill and Shlonsky 2001), there is little acknowledgement of the tension that their use creates for practitioners when the recommended tools assess risk/recurrence of harm lower than the organizational threshold. Studies that have examined the issue of thresholds with regard to the assessment process in eight Area Child Protection Committees in England (Joint Chief Inspectors 2002; 2005) found that 'pressures on resources in children's social care were continuing to raise the threshold for services for children where there were concerns about their welfare' (cited in Brandon et al., 2008). Recent research also highlights the way in which 'risk filtration systems' arise in child protection practice where external pressures such as policy changes result in more cases than can be managed within existing resources. Hayes and Spratt (2009) make very clear the 'perverse' consequences of this in terms of the way in which such filtration systems actually subvert the broader policy aims of the service.

The research highlighting user perceptions about the over-identification of high risk families as a result of the use of actuarial risk assessment tools, points to the need for them to be piloted prior to their implementation in new settings. This would enable discrepancies between the risk ratings produced by these tools, and provider perceptions about risk that are based on an awareness

about service thresholds, to be identified and addressed. One question might be: why it is that child protection services have thresholds that are set above those indicated by the evidence based tools?

The next section addresses the scope of the tools that have been identified and their potential use at different stages of an assessment.

4.4 Assessment and Analysis

One key aspect of decision-making is what should be the nature of the assessment undertaken? Arguably this has been a major issue in several recent serious case reviews. For example an assessment of parents, without equal emphasis on an assessment of parent-child interaction or on the child individually was a major omission in the Peter Connolly case (Haringey Local Safeguarding Children Board 2010a; 2010b). Judgment must be based on having gathered sufficient information about enough aspects of child and family functioning to allow confidence in the decision being made. One way of improving this aspect of the 'decision-making ecology' (Baumann et al. 2011) is to increase the use of standardised, easily applicable methods of evaluating children, their relationship with parents, and family interaction styles. This would go some way to ensuring that all the important aspects of the ecology of the case were adequately covered in the assessment.

The Assessment Framework (Department of Health, Department for Education and Employment and Home Office 2000) provides a conceptual map guiding the assessment domains (see diagram below). A number of standardised instruments are suggested for use as part of this assessment, including for example, the Adult Wellbeing Scale (which assesses whether parents are feeling irritable, depressed or anxious) and the Strengths and Difficulties Questionnaire (which explores the extent of children's emotional and behavioural problems) (ibid).

Figure 15: The Assessment Triangle – taken from the Assessment Framework

However, it is not possible for such a framework to specify the methods by which data are analysed, and that task is a central component of the structured assessment tools that we have identified. The use of one or more of these tools would therefore help practitioners to 'make sense of' or analyse the data that are collected to assess to what extent children are suffering, or likely to suffer, harm now and in the future.

We identified a range of risk/safety/family assessment tools that were designed to assess different aspects of risk/likelihood of significant harm at different stages of the assessment process. In the next section we present our conclusions about the potential use of such tools.

4.4.1 Referral / Initial Assessment – screening

Our review identified a number of tools that could be utilised to increase accuracy of collection and analysis of information about whether a child is suffering, or likely to suffer, significant harm at referral and initial assessment.

4.4.1.1 Response Priority Tools

We identified a number of Response Priority Tools (e.g. see the CRC-SDM suite of tools) (also known as decision trees) that are used to improve consistency of decision-making across workers, and to prioritise decisions about initial reports of abuse and neglect in order to focus the workload on the most high-risk cases of harm and to aid decision-making about the rapidity of the response that is needed. The decision-trees are focused on each of the four key types of abuse (for example, emotional, physical and sexual abuse, and neglect), and all have been developed as part of Structured Decision-Making systems. Research shows that the use of these tools was associated with increased accuracy in the identification of high risk cases of harm.

These tools would need to be adapted and piloted before being used in the UK, to assess whether they could improve consistency of decision-making and classification of whether there are concerns that a child is suffering, or likely to suffer harm, at referral.

4.4.1.2 Risk Assessment Tools

Our review identified only one 'actuarial' risk assessment and analysis tool (i.e. for 'screening' families): The CRC-SDM California Family Risk Assessment Tool. The available data about its rigour (i.e. reliability, validity and impact), suggested improved outcomes for children. However, it has subsequently been evaluated in other settings outside the US, where the findings about its validity and reliability were inconsistent (i.e. Ontario Risk Assessment Matrix in Canada), and as part of the implementation of a whole system of Structured Decision Making tools (of which it is just one part), where data about user and provider acceptability, identified a range of problems when it was piloted/implemented in two Australian states (i.e. see paragraph, 3.3.5.5).

The implications of these findings is that research would be needed to assess what role, if any, the use of an actuarial risk assessment and analysis

instrument of this nature could play in terms of the screening of cases at referral within a UK context. It would also need to be piloted prior to use, to assess validity, inter-rater reliability and impact in terms of the outcomes for the cases being processed. Piloting would also need to involve the collection of 'process' data about user and provider acceptability.

4.4.2 Core Assessment – -identification and analysis

4.4.2.1 Assessing Family Need

This review identified a range of consensus-based contextual Family/Child Needs and Strengths Assessment tools. Although the evidence currently favours tools that have been developed as part of the Structured Decision-Making Models (for example, Family Strengths and Needs Assessment tool), we identified two UK developed tools – (Graded Care Profile: Graded Care Profile and Safety Assessment and Analysis System) – that have been designed to assess dynamic and contextual factors in relation to children in need (Graded Care Profile), and children with complex needs (Safeguarding Assessment and Analysis Framework), respectively. The advantages of the latter two tools are that: a) they are consistent with the Assessment Framework (Department of Health, Department for Education and Employment and Home Office 2000); b) they assess a much wider range of domains compared with other available tools (for example, Structured Decision Making) and are as such more comprehensive; c) compared with current practice they provide practitioners with clear guidance about what to assess, and how to analyse and 'make sense of' the data collected. The Safeguarding Assessment and Analysis Framework could considerably improve the existing Core Assessment. However, these two tools would also need to be formally piloted within a UK context and data collected concerning their reliability, validity, impact and acceptability.

The Signs of Safety model, which is another consensus-based tool, has a limited number of assessment domains none of which focus on children's development, limited consistency with the Assessment Framework (Department of Health, Department for Education and Employment and Home Office 2000), and provides limited guidance in terms of analysing or 'making sense' of the data, vis-a-vis other tools such as the Safety Assessment and Analysis Framework (SAAF). The strengths of the Signs of Safety and other tools of this nature (for example, the Resilience Matrix) are that they can be used to a) map the evidence as part of the process of 'making sense' of it; and b) as a visual tool for use as part of working in partnership with children and families, to help them to understand their strengths alongside problem areas.

4.4.2.2 Assessing other Aspects of Child and Family Functioning

This review has focused explicitly on the assessment and analysis of significant harm in a child welfare context. In addition to the tools that we have identified as part of this review, there are a range of screening and assessment instruments available to enable practitioners to make valid and reliable assessments with regard to a range of aspects of the functioning of children and families. A number of these tools were published alongside the Assessment Framework (Department of Health, Cox and Bentovim 2000).

There is a need for the list of these to be updated, in terms of the assessment of children across all age-groups. For example, there is now extensive evidence available concerning the link between highly 'atypical' or 'anomalous' parenting practices during the first two years of life and 'disorganised' attachment (Madigan et al 2006), including evidence concerning the wide-ranging impact of such 'disorganisation' on children's later functioning (for example Green and Goldwyn 2002). This points to the importance of assessing both parent-infant/toddler interaction, and infant attachment status, using one of the many validated assessment methods that are now available with which to do this (e.g. Broughton 2010; Zeanah et al 2001; Kelly and Barnard 2000; Crittenden 2001).

There should be at least one practitioner within each assessment team, who has the necessary skills to undertake such advanced methods of assessing infants and toddlers, and this will undoubtedly require experienced practitioners undertaking further training to enable them to acquire the necessary skills. Information about these validated methods of conducting assessments should be part of the core training and continuing professional development of social workers, and others working with children and families, in order to raise awareness and competencies within the children's services workforce.

4.4.3 Case planning – service planning/ Continuing Services – monitoring progress

We discussed above the need to re-assess the likelihood of recurrence of harm across the life of a case, and the potential problems of relying on static risk assessment tools for this purpose (D'Andrade, Benton and Austin 2005). Only one of the family assessment tools that we identified included an assessment of the possibilities of future change and how success or otherwise might be gauged - Safeguarding Assessment and Analysis Framework (Tapp et al. 2010).

There is increasing evidence to suggest that a central component of case planning and the provision of continuing services should be an appraisal of parents *'capacity for change'*, and that this should involve the use of protocols such as those developed by Dawe & Harnett (2007).

The need for such an approach was emphasized most recently by the findings in the study by Ward *et al*'s *Infants suffering, or likely to suffer, significant harm: A prospective longitudinal study* (2012) in which 47 children were followed, who were identified during the ante-natal period as being at risk of suffering significant harm. This study found that by three years of age, only one-third of the children were no longer at risk of suffering significant harm. One of the problems identified by this study was the inaccuracy of many of the repeated 'specialist' parenting assessments made by psychologists, psychiatrists or independent social workers, alongside the absence of effective input to help parents change, or any assessment of parenting capacity to change.

Dawe and Harnett, (2007), who have developed a procedure for assessing 'capacity to change – C2C) write as follows:

'A cross-sectional assessment of families provides important information about family functioning at one point in time, but is of limited usefulness when the results are equivocal. The assessment of a family's capacity-to-change provides additional information not possible in a cross-sectional assessment, including an evaluation of the parent's motivation and capacity to acquire parenting skills.

An assessment of capacity-to-change includes: 1) carrying out a cross-sectional assessment of the parents' current functioning, 2) specifying operationally defined targets for change, 3) implementing an intervention with proven efficacy for the client group with a focus on achieving identified targets for change, and 4) the objective measurement of progress over time including evaluation of the parents' willingness to engage and cooperate with the intervention and the extent to which targets were achieved. The aim of the capacity-to-change through intervention is to determine whether a family has the potential to eventually achieve a minimal level of parenting' (Dawe and Harnett 2007).

The process of assessing a family's capacity to change should as such involve the use of both standardised screening/diagnostic tools before and after the delivery of an intervention/treatment programme, alongside the setting of 'agreed' goals to be met within a specified timeframe.

Only one of the included tools (Safeguarding Assessment and Analysis Framework) incorporates an assessment of the family's 'capacity to change', and further work is needed to identify how such an assessment could be integrated within the Assessment Framework and related guidance.

4.4.4 Placement/Reunification

Some of the Structured Decision Making models also include guidance to facilitate the assessment and analysis of data about the level of risk of reoccurrence of abuse or neglect attached to the reunification of a child or the benefits of placement (e.g. CRC-SDM Reunification Model) (Wagner and Bogie 2010). The accuracy and acceptability of these tools has not been assessed independently of the implementation of the overall Structured Decision Making models, and their potential for use in a UK context should be assessed alongside the other tools examined in this review.

4.4.5 Audit

Two of the tools that we identified could be used as part of the process of auditing cases to ensure that the recorded decisions are in fact classifying cases appropriately. Ward *et al*., (2012) used a table of factors associated with

recurrence of significant harm, derived from reviews of available evidence (Jones, Hindley and Ramchandani 2006; Jones, 1991; 1998) that were organised according to child, parent, parent-child, and neighbourhood areas that are known to be associated with children's future safety, either positively or negatively. This table was used as a basis for making an assessment of the seriousness of cases in their study of infants. On the basis of the table they recorded the level of risk of future significant harm as being either low, medium or high, and are currently taking this approach further in a new study (Ward, personal communication).

Similarly, Corby (2003) designed a research tool for his study of refocusing child welfare services. The research tool was designed to see whether, following refocusing, cases of children in need, and those requiring safeguarding from significant harm were appropriately separated and responded to on a rational basis. Following its use in the research project, Corby (2003) proposed it as a system to help, but not substitute for, decision-making in everyday practice. His schema involved assessing age, seriousness of abuse or concerns, whether there had been prior concerns or contact with social care, record of who reported the concern and what the initial response had been. Numbers were assigned to each of these dimensions and the total determined whether the case was to be considered ‘child protection’.

These two audit tools, which have been developed through a systematic review of the evidence, could be integrated with some of the above tools for analysing the likelihood of suffering a reoccurrence or future significant harm.

4.4.6 Summary

The above tools go a long way to satisfying the very clear expressed need that social work practitioners have for additional help in relation to decision-making and forming a judgment about significant harm in the cases they are assessing. They could also be easily utilised without added administrative burden, as part of a modified assessment process.

Such tools should, of course, be used alongside other developing methods of teaching and learning the skills of analysis (Dalzell and Sawyer 2007; Platt 2011), and within the context of organisational recognition, support and encouragement for the processes used.

4.5 Infrastructure Requirements

Much of the focus of the research evaluating the *implementation* of the tools that have been identified by this review highlights the significance of a range of contextual factors in terms of the successful implementation of all standardised tools. These findings clearly demonstrate that a number of contextual factors must to be in place, including the following: high quality, comprehensive training; supervisory and management support; and the involvement of supervisors and direct line staff in the planning and implementation process (D’Andrade, Benton, Austin 2005). To this we would add that assessment and

analysis be undertaken as part of a process of partnership working with children and families (Davis and Day 2010).

4.5.1 High Quality/Comprehensive Training

All of the included tools provide integral on-going high quality and comprehensive training and support. The findings of this research point to the need for this to be part of the core training of social workers, and also for fully qualified (and very experienced) social workers to be provided with appropriate continuing professional development (CPD) opportunities with which to acquire new skills for assessment and analysis, and to maintain and update these regularly.

Methods of assessing and analysing data from assessments of children who are suffering, or likely to suffer, significant harm will continue to develop over the next decade, with the gradual introduction and use of computational and artificial intelligence models (for example, Baumann et al. 2011; Flaherty and Patterson 2003; Marhall and English 2000; Schwartz, Kaufman and Schwartz 2004; Zandi 2000) increasing the accuracy of such assessments. Standardised tools/methods of this nature are now widely used in other fields (for example recidivism of sex offenders), and child welfare professionals such as social workers are in danger of becoming marginalised and outdated if they do not begin to integrate these tools into everyday practice. This will undoubtedly require a change of 'mindset' on the part of child welfare practitioners, who currently appear to regard such tools as part of a 'tick-box' culture that is de-skilling the profession (Gillingham 2011), rather than as part of a toolbox that can aid decision-making, and a method of augmenting the more intuitive based process of professional judgment (Munro, 1999).

4.5.2 Supervisory and Management Support

There is a need for increasing awareness and understanding on the part of organisations, commissioners and the practitioners about what has been termed the 'decision-making ecology' in children's services field (i.e. the overall context within which judgments and decisions are made about significant harm to children). The Munro review (2011) of child protection has made major progress in this respect in England. We suggest that a better appreciation of the context for judgments and decisions is likely to be of considerable value within the field, and is necessary to bring the spotlight to bear on judgment and decision-making processes concerning children suffering, or likely to suffer, significant harm.

There appears to be a disparate range of tools currently being used across England, which is a testament to practitioners' and organisations' search for ways to improve judgment and decision-making in relation to significant harm. The findings of this review suggest the need for a prospective, proactive approach to the complexities of judgment and decision-making. The first step, therefore, is to bring decision-making into centre stage, which has already begun with the Munro review (2011). The findings of the current review suggest the need for further planned initiatives in education of social workers and other children's services professionals, training, and continuing professional development so that a wider understanding of the issues involved

in the 'decision-making ecology', is central to social work practice and its immediate supervision.

4.5.3 The Involvement of Supervisors and First Line Managers in the Planning and Implementation process

Recent evidence (Gillingham 2011) points very clearly to the need for supervisors and first line mangers to be involved in the planning and implementation process with regard to the introduction of structured assessment tools. This evidence points to the need for:

- clear lines of communication to address issues that are raised through the use of such tools;
- 'buy-in' to the process of change that the use of such tools involves from staff across all levels of the organisation;
- full training and on-going supervision;
- clarity about the role of such tools vis-a-vis professional judgment.

4.6 Conclusion

This review of the evidence identified a range of tools that could potentially be used to improve decision-making about whether children are suffering, or are likely to suffer, significant harm in England. Our review suggests that an *ideal* system of tools would meet the following criteria:

- provide a balance of structure in terms of the use of professional judgment and standardised tools, in order to enable structured professional judgment to be employed:
  - to avoid erosion of professional competence and confidence;
  - ensure that complexity is not minimised;
  - both increase the accuracy of identifying whether a child is suffering, or is likely to suffer, significant harm and whether there is a likelihood of that harm recurring;

- encourage assessment and analysis of information, which covers the full range of assessment domains that are known to be associated with children's optimal development, and thereby consistent with the Assessment Framework (Department of Health, Department for Education and Employment and Home Office 2000);

- be sensitive to the issue of different stages within an assessment:
  - either through the provision of a suite of tools to be used at different stages;
  - or the clear specification of which stage and when, the tools should be used during the process of an assessment (for example either at referral, assessment/section 47 enquiry or at the stage of return home or placement);

- incorporate clear guidance with regard to assessing parental 'capacity to change' using both standardised assessment/diagnostic tools; and goal-setting within agreed timeframes (Dawe and Harnett 2007);

- provide guidance or pointers about how the model of Structured Professional Judgment could be incorporated or integrated into a whole system in terms of:
  - organisational management
  - implementation within a geographic area
  - training and continuing professional development issues, including management of staff turnover
  - specific guidance as to how the model or tool is to be employed in the context of supervision;

- be underpinned by a model of 'partnership working' with children and families (see Davis and Day 2010);

- be clearly based on best available evidence about which factors are associated with significant harm of children, in order to provide the most reliable foundation for analysis and decision-making;

- acknowledge and promote the tools use within the context of an effective relationship between the children's services professionals and the children and adults being assessed.

None of the tools we have reviewed would fulfil all of these criteria. However, some provide partial fulfilment, and through piloting could be further developed (for example, the Graded Care Profile and the Safeguarding Assessment and Analysis Framework).

The findings of this review suggest that the application of such tools have the potential to improve assessment practice and, in particular, analysis and subsequent decision-making, which would have major benefits for children and families.

5. References

ACTION for Child Protection. (1984) Child at Risk Field System. North Carolina: ACTION for Child Protection. website: http://www.actionchildprotection.org/.

Aldgate, J. & Rose, W. (2008) Assessing and Managing Risk in Getting it right for every child. GIRFEC website: http://www.scotland.gov.uk/Resource/Doc/1141/0123849.pdf: Scottish Government.

Arad-Davidson, B. & Benbenishty, R. (2008) The role of workers' attitudes and parent and child wishes in child protection workers' assessments and recommendation regarding removal and reunification. *Children and Youth Services Review* 30(1):107-21.

Baird, C., Ereth, J. & Wagner, D. (1999) *Research-based risk assessment: Adding equity to CPS decision-making*. Madison: Children's Research Center.

Baird, C. & Wagner, D. (2000) The relative validity of actuarial and consensus-based risk assessment systems. *Children and Youth Services Review* 22 (11-12): 839-71.

Baird, C., Wagner, D., Healy, T. & Johnson, K. (1999) Risk assessment in child protective services: consensus and acturial model reliability. *Child Welfare* 78 (6): 723-48.

Barber, J., Trocmé, N., Goodman, D., Shlonsky, A., Black, T. & Leslie, B. (2007) *The Reliability and Predictive Validity of Consensus-Based Risk Assessment*. Toronto: Centre of Excellence for Child Welfare.

Barlow, J. & Scott, J. (2010) *Safeguarding in the 21st Century: Where to Now*. Dartington: Research in Practice.

Baumann, D., Dalgleish, L. I., Kern, H. D. & Fluke, J. D. (2011) *The Decision-making Ecology*. Washington, DC: American Humane Association.

Baumann, D., Kern, H. D. & Fluke, J. D. (1997) *Foundations of the Decision-making Ecology and Overview. Worker Improvements to the Structured Decision and Outcome Model.* Austin, Texas: Department of Protective and Regulatory Services.

Boer, D. P. (2008) *Ethical and Practical Concerns Regarding the Current Status of Sex Offender Risk Assessment*. Sexual Offender Treatment 3, 1.

Brandon, M., Belderson, P., Warren, C., Howe, D., Gardner, R., Dodsworth, J. & Black, J. (2008) *Analysing Child Deaths and Serious Injury through Abuse and Neglect: What can we learn? A biennial analysis of serious case reviews 2003-2005.* London: Department for Children, Schools and Families.

Broughton, C. (2010) Measuring Trauma in the Primary Relationship: The Parent-Infant Relational Assessment Tool. Pp. 194-208, in Barradon, T.

(ed) *Relational Trauma in Infancy: Psychoanalytic, Attachment, and Neuropsychological Contributions to Parent-Infant Psychotherapy.* East Sussex: Routledge.

Camasso, M. J., and Jagannathan, R. (1995) Prediction accuracy of the Washington and Illinois risk assessment instruments: an application of receiver operating characteristics curve analysis. *Social Work Research* 19 (3): 174-83.

Camasso, M. J., & Jagannathan, R. (2000) Modeling the reliability and predictive validity of risk assessment in child protective services. *Children and Youth Services Review* 22(11-12):873-96.

Children's Research Center. *Structured Decision Making® (SDM) systems*. Wisconsin: Children's Research Center: http://www.nccd-crc.org/crc/crc/c_sdm_about.html.

Christianson, B., & Maloney, S. (2006) One family's journey: a case study utilising complementary conferencing processes. *Protecting Children* 21:31-37.

Corby, B. (2003) Towards a new means of inquiry into child abuse cases. *Journal of Social Welfare and Family Law* 25(3):229-41.3

Cleaver, H., & Walker, S. with Meadows (2004) *Assessing Children's Needs and circumstances: the impact of the Assessment Framework*. London: Jessica Kingsley Publishers.

Crittenden, P. (2001) *CARE-Index Infant and Toddlers. Coding Manual.* USA:Family Relations Institute.

D'Andrade, A., Austin, M. J. and Benton, A. (2008) Risk and safety assessment in child welfare: instrument comparisons. *Journal of Evidence-Based Social Work* 5 (1-2): 31-56.

D'Andrade, A., Benton, A. & Austin, M. J. (2005) *Risk and Safety Assessment in Child Welfare: Instrument Comparison*. Berkeley: Bay Area Social Services Consortium.

Dalzell, R. & Sawyer, E. (2007) *Putting the analysis into assessment: undertaking assessments of need*. London: National Children's Bureau.

Davis, H. & Day, C. (2010) *Working in Partnership with Parents.* London: Pearson.

Dawe, S. & Harnett, P. H. (2007) Improving family functioning in methadone maintained families: Results from a randomised controlled trial. *Journal of Substance Abuse Treatment* 32: 381-90.

De Ruiter, C. & Veen, V. (2005) Child Abuse Risk Evaluation-Nl (Care-Nl). in *International Association of Forensic Mental Health Services*. Melbourne, Australia.

DePanfilis, D. & Girvin, H. (2005) Investigating child maltreatment in out-of-home care: Barriers to good decision-making. *Children & Youth Services Review* 27: 353-74.

Department of Health, Department for Education and Employment, and Home Office (2000). *Framework for the Assessment of Children in Need and Their Families.* London: The Stationery Office.

Department of Health, Cox A and Bentovim A. 2000. *Framework for the Assessment of Children in Need and their Families: The Family Pack of Questionnaires and Scales*. London: The Stationery Office.

Dorsey, S., Mustillo, S. A., Farmer, E. M. Z. & Elbogen, E. (2008) Caseworker assessments of risk for recurrent maltreatment: association with case-specific risk factors and re-reports. *Child Abuse & Neglect* 32 (3): 377-91.

Doueck, H. J., Levine, M. & Bronson, D. E. (1993) Risk assessment in child protective services: An evaluation of the Child at Risk Field System. *Journal of Interpersonal Violence* 8 (4): 446-67.

Douglas, K. S., Ogloff, J. R., Nicholls, T. L. & Grant, I. (1999) Assessing risk for violence among psychiatric patients: the HCR-20 violence risk assessment scheme and the Psychopathy Checklist: Screening Version. *Journal of Consulting and Clinical Psychology* 67 (6): 917-30.

English, D. J., Marshall, D., Brummel, S. & Orme, M. (1995) A preliminary examination of similarities and differences in the assessment of risk for different ethnic groups. Pp. 195-218 in *Ninth National Roundtable on CPS Risk Assessment*, edited by American Human Association. San Fransisco.

English, D. J., & Graham, J. C. (2000) An examination of relationships between children's protective services social worker assessment of risk and independent LONGSCAN measures of risk constructs. *Children and Youth Services Review* 22 (11-12): 897-933.

Flaherty, C. W., & Patterson, D. A. (2003) Predicting child physical abuse recurrence: comparison of a neural network to logistic regression. *Journal of Technology in Human Services* 21 (4): 93-111.

Fluke, J., Edwards, M., Bussey, M., Wells S. & Johnson, W. (2001) Reducing recurrence in child protective services: impact of a targeted safety protocol. *Child Maltreatment* 6 (3): 207-18.

Fuller, T. L., Wells, S. J. & Cotton, E. E. (2001) Predictors of maltreatment recurrence at two milestones in the life of a case. *Children and Youth Services Review. Special Issue: Assessing and managing risk in child protective services* 23 (1): 49-78.

Gambrill, E. & Shlonsky, A. (2001) The Need for Comprehensive Risk Management Programs in Child Protective Services. *Children and Youth Services Review* 23 (1): 79-107.

Garnier, P. & Nieto, M. (2002) *Illinois Child Endangerment Risk Assessment Protocol evaluation: Impact on short-term recurrence rates–year six +*. University of Illinois: Children and Family Research Center.

Gillingham, P. & Humphreys, C. (2010) Child protection practitioners and decision-making tools: observations and reflections from the front line. *British Journal of Social Work* 40 (8): 2598-616.

Gillingham, P. (2011) Decision-making tools and the development of expertise in child protection practitioners: are we 'just breeding workers who are good at ticking boxes'? *Child and Family Social Work* 16 (4): 412-21.

Green, J. & Goldwyn, R. (2002) Annotation: Attachment disorganisation and psychopathology: new findings in attachment research and their potential implications for developmental psychopathology in childhood. *Journal of Child Psychology and Psychiatry* 43 (7): 835-46.

Hanson, R. K. & Morton-Bourgon, K. E. (2009) The accuracy of recidivism risk assessments for sexual offenders: a meta-analysis of 118 prediction studies. *Psychological Assessment* 21 (1): 1-21.

Haringey Local Safeguarding Children Board (2010a). *Haringey Local Safeguarding Children board (2008) Serious Care Review: Child A.* http://media.education.gov.uk/assets/files/pdf/s/first%20serious%20case%20review%20overview%20report%20relating%20to%20peter%20connelly%20dated%20november%202008.pdf

Haringey Local Safeguarding Children Board (2010b). *Haringey Local Safeguarding Children board (2009) Serious Care Review: Child A.* http://media.education.gov.uk/assets/files/pdf/s/second%20serious%20case%20overview%20report%20relating%20to%20peter%20connelly%20dated%20march%202009.pdf

Hart, S. D. (1998a). *The role of psychopathy in assessing risk for violence: Conceptual and methodological issues.* Legal and Criminological Psychology (3): 121-37.

—. (1998b). Psychopathy and risk for violence. Pp. 355-75 in Cooke, D., Forth, A.E. & Hare, R. D. Dordrecht *(Eds) Psychopathy: Theory, Research and Implications for Society,*The Netherlands: Kluwer.

Hayes, D. & Spratt, T. (2009) Child welfare interventions: Patterns of social work practice. *British Journal of Social Work* 39 (8): 1575-97.

Helm, D. (2010) *Making Sense of Child and Family Assessment: How to Interpret Children's Needs*. London: Jessica Kingsley.

HM Government. (2010) *Working Together to Safeguard Children: A guide to inter-agency working to safeguard and promote the welfare of children.* London: Department for Children, Schools and Families.

Holland, S. (2010) *Child and Family Assessment in Social Work Practice*. London: Sage Publications.

Horwath, J. (ed) (2009) *The Child's World The Comprehensive Guide to Assessing Children in Need.* London: Jessica Kingsley.

Inoue, N., Inoue, K. & Shionoya, M. (2006) Training effects of case management skills working with child abuse and neglect: utilizing Signs of Safety approach. *Japanese Journal of Child Abuse and Neglect*, 8 (2): 268-279.

Joint Chief Inspectors (2002) *Safeguarding Children*: *A Joint Chief Inspectors' Report on Arrangements to Safeguard Children.* London: Department of Health.

Joint Chief Inspectors (2005) *The Second Joint Chief Inspectors' Report on Arrangements to Safeguard Children.* London: CSCI.

Jones, D., Hindley, N. & Ramchandani, P. (2006) Making plans: assessment, intervention and evaluating outcomes. In Aldgate, J., Jones, D. &

Jeffery, C. (Eds) *The Developing World of the Child.* London: Jessica Kingsley Publishers.

Jones, D. P. H. (1991) The effectiveness of intervention and the significant harm criteria. In Adcock M., White R. & Hollows A. (Eds.) *Significant harm.* Significant Publications Ltd: Croydon.

Jones, D. P. H. (1998) The effectiveness of intervention. In Adcock M., White R. (Eds.). *Significant harm: its management and outcome.* 2nd edn., pp. 91-119. Significant Publications Ltd.: Croydon.

Johnson MA, Stone S, Lou C, Vu C, Link J, Mizrahi P, Austin MJ (2006) *Family Assessment in Child Welfare Services: Instrument Comparisons.* Bay Area Social Services consortium and the Zellerbach Family Foundation.

Johnson, W. (2004) *Effectiveness of California's child welfare Structured Decision-Making (SDM) model: A prospective study of the validity of the California Family Risk Assessment.* California: Alameda County Social Services Agency.

— (2005) Effects of a research-based risk assessment on racial/ethnic disproportionality in service prevision decisions. In Derezotes, D., Poertner, J. & Testa F. (Eds) *Race Matters in Child Welfare: The Overrepresentation of African American Children in the System*. Washington: Child Welfare League of America.

Jones, D., Hindley, N. & Ramchandan, I. P. (2006) Making plans: assessment, intervention and evaluating outcomes. Pp. 267-86. In Aldgate, J., Jones, D., Rose, W. & Jeffery, C. (Eds) *The Developing World of the Child*. London: Jessica Kingsley.

Kelly, J. F., & Barnard, K. E. (2000). Assessment of parent–child interaction: Implications for early intervention. In S. J. Meisels (Ed.), *Handbook of early childhood intervention* (pp. 258–289).

Kim, A. K., Brooks, D., Kim, H. & Nissly, J. (2008) *Structured Decision Making® and child welfare service delivery project .* Berkeley: University of California at Berkeley, California Social Work Education Center.

Kolko, D. J. (1998) CPS operations and risk assessment in child abuse cases receiving services: Initial findings from the Pittsburgh service delivery study. *Child Maltreatment* 3(3): 262-275.

Lee, B. R. & Lindsey, M. A. (2010) North Carolina Family Assessment Scale: measurement properties for youth mental health services. *Research on Social Work Practice* 20 (2): 202-11.

Loman, L. A. & Siegel, G. L. (2004) An evaluation of the Minnesota SDM Family Risk Assessment. Missouri: Institute for Applied Research: available from: http://www.iarstl.org.

Madigan, Bakermans-Kranenburg, van Ijzendoorn, Moran, Pederson, & Benoit (2006) Unresolved states of mind, anomalous parenting behaviour, and disorganized attachment: a review and meta-analysis of a transmission gap, *Attachment and Human Development*, 8, pp. 89-111.

Marhall, D. & English, D. (2000) Neural network modeling of risk assessment in child protective services. *Psychological Methods* 5(1):192-24.
Miller, J. & O'Byrne, P. (2002) *Assessment in Social Work*. Basingstoke: Palgrave.
Munro, E. (1999) Common errors of reasoning in child protection work. *Child Abuse & Neglect* 23 (8): 745-58.
Munro, E. (2005) What tools do we need to improve identification of child abuse? *Child Abuse Review* 14 : 374-88.
— (2011) *The Munro Review of Child Protection: Final Report A child-centred system*.London: The Stationery Office..
Myers, S. (2005) A Signs of Safety approach to assessing children with sexually concerning or harmful behaviour. *Child Abuse Review* 14:97-112.
National Family Preservation Network. (2011) North Carolina Family Assessment Scale Form. Idaho National Family Preservation Network: http://nfpn.org/assessment-tools.html.
Nieto, M. & Garnier, P. (2001) Illinois Child Endangerment Risk Assessment Protocol evaluation: Impact on short-term recurrence rates–year five. University of Illinois: Children and Family Research Center.
Pfister, H. & Böhm, G. (2008) The multiplicity of emotions: A framework of emotional functions in decision making. *Judgment and Decision Making* 3 (1): 5-17.
Platt, D. (2011) Assessments of children and families: learning and teaching the skills of analysis. *Social Work Education* 30 (2): 157-69.
Practice Leadership Unit, Child Protection, and Juvenile Justice Branch. (1999) Victorian Risk Framework: The Risk Profile Guide (Version 2). Victoria, Australia: Department of Human Services: http://www.dhs.vic.gov.au/office-for-children/cpmanual/Output%20files/Practice%20research/Output%20files/Execute/Risk%20profile%20guide.pdf.
Rose, W. & Aldgate, J. (2000) *Knowledge Underpinning the Assessment Framework* in Department of Health, *Assessing Children in Need and their Families: Practice Guidance*. London: The Stationery Office.
Rycus, J. S. & Hughes, R. C. (2003) *Issues in risk assessment in child protective services: policy white paper*. Ohio: Center for Child Welfare Policy.
Schwartz, D., Kaufman, A. & Schwartz, I. (2004) Computational intelligence techniques for risk assessment and decision support. *Children and Youth Services Review* 26: 1081-95.
Sheldon, B. (1987) Implementing findings from social work effectiveness research, *British Journal of Social Work*, vol. 17, pp. 573–586.
Sheppard, M. (1995) Social work, social science and practice wisdom. *British Journal of Social Work* 25:265-93.
Shlonsky, A. & Wagner, D. (2005) The Next Step: Integrating Actuarial Risk Assessment and Clinical Judgment into an Evidence-Based Practice

Framework in CPS Case Management. *Children and Youth Services Review* 27 (3): 409-27.
SPHERE Institute. (2005) *Comprehensive Assessment Tool (CAT) Safety and Risk Assessment System*. California: SPHERE Institute: available from: http://www.sphereinstitute.org/index.asp.
Srivastava, O. P., & Polnay, L. (1997) Field trial of graded care profile (GCP) scale: A new measure of care. *Archives of Disease in Childhood* 76 (4): 337-40.
Stewart, A. & Thompson, C. (2004) *Comparative Evaluation of Child Protection Assessment Tools*. Queensland: Griffith University.
Stockport LSCB (2007). *Evaluation of the use of the Graded Care Profile.* Stockport Local Safeguarding Children Board: Stockport.
Sundman, P. (1997) Solution focused ideas in social work. *Journal of Family Therapy* 19: 159-72.
Tapp, S., Bentovim, A., Cox, A., Bingley-Miller, L. & Pizzey, S. (2010) *Safeguarding Assessment and Analysis Framework: Evidence Based Approaches to Assessing Harm, The Risk of Future Harm and Prospects for Intervention*. York: Child and Family Training
The Scottish Government. (2010) *A Guide to Implementing Getting it right for every child: Messages from pathfinders and learning partners. Edinburgh*. http://www.scotland.gov.uk/Resource/Doc/318937/0101828.pdf.
Turnell, A. (2004) Relationship-grounded, safety-organised child protection practice: dreamtime or real-time option for child welfare? *Protecting Children* 19 (2): 14-25.
— (2010) Signs of Safety: A Comprehensive Briefing Paper. Resolutions Consultancy: Available from: http://www.signsofsafety.net/signsofsafety.
Turnell, A., Elliott, S & Hogg, V. (2007) Compassionate, safe and rigorous child protection practice with biological parents of adopted children. *Child Abuse Review* 16 (2): 108-19.
Turnell, A. & Edwards, S. Signs of Safety.net. Resolutions Consultancy: http://www.signsofsafety.net/.
— (1997) Aspiring to Partnership. The Signs of Safety approach to child protection. *Child Abuse Review* 6 (3): 179-90.
— (1999) *Signs of safety: A solution and safety oriented approach to child protection casework*. New York, NY: W W Norton & Co. (1999) xi, 216 pp.
Turney, D., Platt, D., Selwyn, J. & Farmer, E. (2011) *Social work assessment of children in need: what do we know?: messages from research*. London: Jessica Kingsley Publishers.
Wagner, D., Hull, S. & Luttrell, J. (1995) *Structured decision making in Michigan*. Pp. 167-91. San Francisco: Ninth National Roundtable on CPS Risk Assessment; American Humane Association.

Wagner, D. & Bogie, A. (2010) *Validation of the SDM® Reunification Reassessmen*t. Madison: A nonprofit social research agency and division of the National Council on Crime and Delinquency.

Ward, A., Brown, R., Westlake, D. and Munro, E.R. (2010) *Infants suffering, or likely to suffer, significant harm: A prospective longitudinal study*. Department for Education Research Brief. University of Loughborough: Centre for Child and Family Research.

- (2012) - Safeguarding babies and very young children from abuse and neglect (The significant Harm of Infants Study). London: Jessica Kingsley Publishers.

Westbrock, S. (2006) *Utilizing the Signs of Safety framework to create effective relationships with child protection service recipients.* Minnesota: University of St Thomas.

White, A. & Walsh, P. (2006) *Risk assessment in child welfare. An issues paper.* Sydney: NSW Department of Community Services. Available from: http://www.community.nsw.gov.au/docswr/_assets/main/documents/research_riskassessment.pdf.

Zandi, I. (2000) Use of artificial neural network as a risk assessment tool in preventing child abuse. Available at:http://olympic2.seas.upenn.edu/nnet.pdf.

Zeanah, C.H., Aoki, Y., Heller, S.S., Bakshi, S. (2002) Parenting-infant relationship global assessment scale: A study of its predictive validity. Psychiatry and Clinical Neurosciences 5695): 1323-1316.

Appendix 1 – Search Strategies

MEDLINE (searched via Ovid MEDLINE(R) March 2011)

#	Searches	Results
1	child abuse.mp. or exp Child Abuse/	22590
2	exp Child Abuse, Sexual/	7378
3	(Physical abuse adj10 (newborn$ or infant$ or child$ or adolescent$ or parent-child)).mp. [mp=protocol supplementary concept, rare disease supplementary concept, title, original title, abstract, name of substance word, subject heading word, unique identifier]	1135
4	(Emotional abuse adj10 (newborn$ or infant$ or child$ or adolescent$ or parent-child)).mp. [mp=protocol supplementary concept, rare disease supplementary concept, title, original title, abstract, name of substance word, subject heading word, unique identifier]	274
5	(Neglect$ adj10 (newborn$ or infant$ or child$ or adolescent$ or parent-child)).mp. [mp=protocol supplementary concept, rare disease supplementary concept, title, original title, abstract, name of substance word, subject heading word, unique identifier]	3335
6	(Maltreat$ adj10 (newborn$ or infant$ or child$ or adolescent$ or parent-child)).mp. [mp=protocol supplementary concept, rare disease supplementary concept, title, original title, abstract, name of substance word, subject heading word, unique identifier]	2110
7	(Harm$ adj10 (newborn$ or infant$ or child$ or adolescent$ or parent-child)).mp. [mp=protocol supplementary concept, rare disease supplementary concept, title, original title, abstract, name of substance word, subject heading word, unique identifier]	2313
8	(Intentional injur$ adj10 (newborn$ or infant$ or child$ or adolescent$ or parent-child)).mp. [mp=protocol supplementary concept, rare disease supplementary concept, title, original title, abstract, name of substance word, subject heading word, unique identifier]	56
9	(Safeguarding adj10 (newborn$ or infant$ or child$ or adolescent$ or parent-child)).mp. [mp=protocol supplementary concept, rare disease supplementary concept, title, original title, abstract, name of substance word, subject heading word, unique identifier]	88
10	(child protection adj10 (newborn$ or infant$ or child$ or adolescent$ or parent-child)).mp. [mp=protocol supplementary concept, rare disease supplementary concept, title, original title, abstract, name of substance word, subject heading word, unique identifier]	870
11	(Violence adj10 (newborn$ or infant$ or child$ or adolescent$ or parent-child)).mp. [mp=protocol supplementary concept, rare disease supplementary concept, title, original title, abstract, name of substance word, subject heading word, unique identifier]	3435
12	exp Child, Abandoned/	378
13	*Child Welfare/	10964
14	exp Shaken Baby Syndrome/ or exp Battered Child Syndrome/	952
15	1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14	36587

16	(Review$ adj10 (sexual abuse or physical abuse or emotional abuse or neglect$ or maltreat$ or harm$ or Intentional injur$ or safeguarding or child protection)).mp. [mp=protocol supplementary concept, rare disease supplementary concept, title, original title, abstract, name of substance word, subject heading word, unique identifier]	1837
17	(Examination$ adj10 (sexual abuse or physical abuse or emotional abuse or neglect$ or maltreat$ or harm$ or Intentional injur$ or safeguarding or child protection)).mp. [mp=protocol supplementary concept, rare disease supplementary concept, title, original title, abstract, name of substance word, subject heading word, unique identifier]	684
18	(Case conference$ adj10 (sexual abuse or physical abuse or emotional abuse or neglect$ or maltreat$ or harm$ or Intentional injur$ or safeguarding or child protection)).mp. [mp=protocol supplementary concept, rare disease supplementary concept, title, original title, abstract, name of substance word, subject heading word, unique identifier]	11
19	(Assessment$ adj10 (sexual abuse or physical abuse or emotional abuse or neglect$ or maltreat$ or harm$ or Intentional injur$ or safeguarding or child protection)).mp. [mp=protocol supplementary concept, rare disease supplementary concept, title, original title, abstract, name of substance word, subject heading word, unique identifier]	1341
20	(Instrument$ adj10 (sexual abuse or physical abuse or emotional abuse or neglect$ or maltreat$ or harm$ or Intentional injur$ or safeguarding or child protection)).mp. [mp=protocol supplementary concept, rare disease supplementary concept, title, original title, abstract, name of substance word, subject heading word, unique identifier]	366
21	(Model$ adj10 (sexual abuse or physical abuse or emotional abuse or neglect$ or maltreat$ or harm$ or Intentional injur$ or safeguarding or child protection)).mp. [mp=protocol supplementary concept, rare disease supplementary concept, title, original title, abstract, name of substance word, subject heading word, unique identifier]	2258
22	(Tool$ adj10 (sexual abuse or physical abuse or emotional abuse or neglect$ or maltreat$ or harm$ or Intentional injur$ or safeguarding or child protection)).mp. [mp=protocol supplementary concept, rare disease supplementary concept, title, original title, abstract, name of substance word, subject heading word, unique identifier]	430
23	screening tool$.mp.	6769
24	exp Risk Management/ or exp Risk Assessment/	152496
25	exp Decision Making/	95528
26	16 or 17 or 18 or 19 or 20 or 21 or 22 or 23 or 24 or 25	255865
27	infant.mp. or exp Infant, Newborn/ or exp Infant/	864112
28	exp Child, Preschool/ or child.mp. or exp Child/	1465163
29	exp Parent-Child Relations/ or Parent-Child.mp.	40985
30	exp Adolescent/ or adolescent.mp.	1397642
31	27 or 28 or 29 or 30	2581415
32	15 and 26 and 31	2770
33	limit 36 to (english language and humans and yr="1970 -Current")	2731

EMBASE (searched via OVID April 2011)

#	Search	Results
1	child abuse.mp. or exp child abuse/	15920
2	(Physical abuse adj10 (newborn$ or infant$ or child$ or adolescent$ or parent-child)).mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer]	1131
3	(Emotional abuse adj10 (newborn$ or infant$ or child$ or adolescent$ or parent-child)).mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer]	357
4	Neglect.mp. or exp CHILD NEGLECT/	9080
5	child sexual abuse.mp. or exp child sexual abuse/	4537
6	(Maltreat$ adj10 (newborn$ or infant$ or child$ or adolescent$ or parent-child)).mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer]	2027
7	exp HARM REDUCTION/	1539
8	(Harm$ adj10 (newborn$ or infant$ or child$ or adolescent$ or parent-child)).mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer]	2388
9	(Intentional injur$ adj10 (newborn$ or infant$ or child$ or adolescent$ or parent-child)).mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer]	48
10	(Safeguarding adj10 (newborn$ or infant$ or child$ or adolescent$ or parent-child)).mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer]	94
11	*protection/	1067
12	(child protection adj10 (newborn$ or infant$ or child$ or adolescent$ or parent-child)).mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer]	825
13	exp FAMILY VIOLENCE/	2227
14	(family violence adj10 (newborn$ or infant$ or child$ or adolescent$ or parent-child)).mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer]	1147
15	(Abandoned adj10 (newborn$ or infant$ or child$ or adolescent$ or parent-child)).mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer]	194
16	child welfare.mp. or exp child welfare/	7614
17	shaken baby syndrome.mp. or exp shaken baby syndrome/	658
18	exp BATTERED CHILD SYNDROME/ or battered.mp.	2604
19	1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16 or 17 or 18	37329
20	(Review$ adj10 (sexual abuse or physical abuse or emotional abuse or neglect$ or maltreat$ or harm$ or	3852

	Intentional injur$ or safeguarding or child protection)).mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer]	
21	(Case conference$ adj10 (sexual abuse or physical abuse or emotional abuse or neglect$ or maltreat$ or harm$ or Intentional injur$ or safeguarding or child protection)).mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer]	5
22	(Assessment$ adj10 (sexual abuse or physical abuse or emotional abuse or neglect$ or maltreat$ or harm$ or Intentional injur$ or safeguarding or child protection)).mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer]	1767
23	(Instrument$ adj10 (sexual abuse or physical abuse or emotional abuse or neglect$ or maltreat$ or harm$ or Intentional injur$ or safeguarding or child protection)).mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer]	413
24	tool.mp. or exp CLINICAL ASSESSMENT TOOL/	190409
25	exp RISK ASSESSMENT/ or exp RISK MANAGEMENT/	243771
26	exp FAMILY ASSESSMENT/ or exp CLINICAL ASSESSMENT TOOL/ or exp CLINICAL ASSESSMENT/	40191
27	exp decision making/	77490
28	20 or 21 or 22 or 23 or 24 or 25 or 26 or 27	535520
29	(newborn or infant or child or adolescent).mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer]	1187924
30	19 and 28 and 29	3573
31	limit 30 to (human and english language and yr="2000 - Current")	2647

CINAHL (searched via EBSCO April 2011)

#	Search	Results
1	(MH "Child Abuse+")	8786
2	TX child abuse	10218
3	(MH "Sexual Abuse+")	6645
4	(MH "Sexual Abuse+") Narrow by SubjectAge3: - Infant: 1-23 months Narrow by SubjectAge2: - Child, Preschool: 2-5 years Narrow by SubjectAge1: - Child: 6-12 years Narrow by SubjectAge0: - Adolescent: 13-18 years	3159
5	TX (sexual abuse N10 newborn*) or (sexual abuse N10 infant*) or (sexual abuse N10 child*) or (sexual abuse N10 adolescent*) or (sexual abuse N10 parent-child)	2117
6	TX (physical abuse N10 newborn*) or (physical abuse N10 infant*) or (physical abuse N10 child*) or (physical abuse N10 adolescent*) or (physical abuse N10 parent-child)	684
7	TX (emotional abuse N10 newborn*) or (emotional abuse N10 infant*) or (emotional abuse N10 child*) or (emotional abuse N10 adolescent*) or (emotional abuse N10 parent-child)	148
8	TX (neglect* N10 newborn*) or (neglect* N10 infant*) or (neglect* N10 child*) or (neglect* N10 adolescent*) or (neglect* N10 parent-child)	1356
9	TX (maltreat* N10 newborn*) or (maltreat* N10 infant*) or (maltreat* N10 child*) or (maltreat* N10 adolescent*) or (maltreat* N10 parent-child)	1278
10	TX (harm* N10 newborn*) or (harm* N10 infant*) or (harm* N10 child*) or (harm* N10 adolescent*) or (harm* N10 parent-child)	1005
11	TX (intentional injur* N10 newborn*) or (intentional injur* N10 infant*) or (intentional injur* N10 child*) or (intentional injur* N10 adolescent*) or (intentional injur* N10 parent-child)	32
12	TX (safeguarding N10 newborn*) or (safeguarding N10 infant*) or (safeguarding N10 child*) or (safeguarding N10 adolescent*) or (safeguarding N10 parent-child)	178
13	TX (child protection N10 newborn*) or (child protection N10 infant*) or (child protection N10 child*) or (child protection N10 adolescent*) or (child protection N10 parent-child)	1128
14	TX (violence N10 newborn*) or (violence N10 infant*) or (violence N10 child*) or (violence N10 adolescent*) or (violence N10 parent-child)	2335
15	TX (abandon* N10 newborn*) or (abandon* N10 infant*) or (abandon* N10 child*) or (abandon* N10 adolescent*) or (abandon* N10 parent-child)	302
16	(MH "Child Welfare")	7002
17	(MH "Child, Abandoned")	158
18	(MH "Shaken Baby Syndrome")	252
19	TX Battered Child Syndrome	10
20	S1 or S2 or S4 or S5 or S6 or S7 or S8 or S9 or S10 or	20336

	S11 or S12 or S13 or S14 or S15 or S16 or S17 or S18 or S19	
21	(MH "Decision Making+")	38987
22	(MH "Risk Assessment")	23494
23	(MH "Risk Management+")	8042
24	TX review*	1951102
25	TX examination*	61995
26	TX case conference*	289
27	TX assessment*	205468
28	TX instrument*	71820
29	TX model*	142503
30	TX tool*	86433
31	TX screening tool*	2451
32	S21 or S22 or S23 or S24 or S25 or S26 or S27 or S28 or S29 or S30 or S31	1988320
33	S20 and S32	1067

SCI-EXPANDED, SSCI, CPCI-S, CPCI-SSH (searched via WOS April 2011)

#	Searches	Results
1	TS="child abuse"	7,899
2	TS=("physical abuse" SAME (newborn* OR infant* or child* or adolescent* or parent-child))	1,368
3	TS=("emotional abuse" SAME (newborn* OR infant* or child* or adolescent* or parent-child))	321
4	TS=(neglect* SAME (newborn* OR infant* or child* or adolescent* or parent-child))	4,166
5	TS=(maltreat* SAME (newborn* OR infant* or child* or adolescent* or parent-child))	3,597
6	TS=(harm* SAME (newborn* OR infant* or child* or adolescent* or parent-child))	2,699
7	TS=(("intentional injury" or "intentional injuries") SAME (newborn* or infant* or child* or adolescent* or parent-child))	41
8	TS=(safeguarding SAME (newborn* OR infant* or child* or adolescent* or parent-child))	128
9	TS="child protection"	1,583
10	TS=(violence SAME (newborn* OR infant* or child* or adolescent* or parent-child))	5,090
11	TS=(abandoned SAME (newborn* OR infant* or child* or adolescent* or parent-child))	324
12	TS="child welfare"	3,474
13	TS=("shaken baby syndrome" or "battered child syndrome")	853
14	13 OR 12 OR 11 OR 10 OR 9 OR 8 OR 7 OR 6 OR 5 OR 4 OR 3 OR 2 OR 1	24,630
15	TS=(review* SAME ("sexual abuse" or "physical abuse" or "emotional abuse" or neglect* or maltreat* or harm* or "intentional injury" or "intentional injuries" or safeguarding or "child protection"))	2,941
16	TS=(examination* SAME ("sexual abuse" or "physical abuse" or "emotional abuse" or neglect* or maltreat* or harm* or "intentional injury" or "intentional injuries" or safeguarding or "child protection"))	857
17	TS=("case conference" SAME ("sexual abuse" or "physical abuse" or "emotional abuse" or neglect* or maltreat* or harm* or "intentional injury" or "intentional injuries" or safeguarding or "child protection"))	6
18	TS=(assessment* SAME ("sexual abuse" or "physical abuse" or "emotional abuse" or neglect* or maltreat* or harm* or "intentional injury" or "intentional injuries" or safeguarding or "child protection"))	2,723
19	TS=(instrument* SAME ("sexual abuse" or "physical abuse" or "emotional abuse" or neglect* or maltreat* or harm* or "intentional injury" or "intentional injuries" or safeguarding or "child protection"))	1,124
20	TS=(model* SAME ("sexual abuse" or "physical abuse" or	20,916

	"emotional abuse" or neglect* or maltreat* or harm* or "intentional injury" or "intentional injuries" or safeguarding or "child protection"))	
21	TS=(tool* SAME ("sexual abuse" or "physical abuse" or "emotional abuse" or neglect* or maltreat* or harm* or "intentional injury" or "intentional injuries" or safeguarding or "child protection"))	1,736
22	TS=(screening SAME ("sexual abuse" or "physical abuse" or "emotional abuse" or neglect* or maltreat* or harm* or "intentional injury" or "intentional injuries" or safeguarding or "child protection"))	1,067
23	TS=("risk management" SAME ("sexual abuse" or "physical abuse" or "emotional abuse" or neglect* or maltreat* or harm* or "intentional injury" or "intentional injuries" or safeguarding or "child protection"))	83
24	TS=("decision making" SAME ("sexual abuse" or "physical abuse" or "emotional abuse" or neglect* or maltreat* or harm* or "intentional injury" or "intentional injuries" or safeguarding or "child protection"))	1,054
25	24 OR 23 OR 22 OR 21 OR 20 OR 19 OR 18 OR 17 OR 16 OR 15	30,884
26	25 AND 14	1,794
27	Databases=SCI-EXPANDED, SSCI, CPCI-S, CPCI-SSH Timespan=1970-2011	1,793

Dissertation abstracts (searched via ProQuest May 2011)

#	Search	Results
1	ABS(child abuse OR physical abuse OR emotional abuse OR neglect* OR maltreat* OR harm* OR intentional injur* OR safeguarding OR child protection OR violence OR abandoned OR child welfare OR shaken baby syndrome OR battered child syndrome) AND ABS(review* OR examination* OR case conference* OR assessment* OR instrument* OR model* OR tool* OR risk management OR risk assessment OR decision making) AND ABS(newborn* OR infant* OR child* OR adolescent* OR parent-child) AND PDN(>1/1/1970) AND PDN(<12/31/2011)	5223
2	TITLE(child abuse OR physical abuse OR emotional abuse OR neglect* OR maltreat* OR harm* OR intentional injur* OR safeguarding OR child protection OR violence OR abandoned OR child welfare OR shaken baby syndrome OR battered child syndrome) AND TITLE(review* OR examination* OR case conference* OR assessment* OR instrument* OR model* OR tool* OR risk management OR risk assessment OR decision making) AND TITLE(newborn* OR infant* OR child* OR adolescent* OR parent-child) AND PDN(>1/1/1970) AND PDN(<12/31/2011)	257
3	INDEX TERMS IF(child abuse OR physical abuse OR emotional abuse OR neglect* OR maltreat* OR harm* OR intentional injur* OR safeguarding OR child protection OR violence OR abandoned OR child welfare OR shaken baby syndrome OR battered child syndrome) AND IF(review* OR examination* OR case conference* OR assessment* OR instrument* OR model* OR tool* OR risk management OR risk assessment OR decision making) AND IF(newborn* OR infant* OR child* OR adolescent* OR parent-child) AND PDN(>1/1/1970) AND PDN(<12/31/2011)	88
4	1 OR 2 OR 3	5568

Cochrane Database of Systematic Reviews

#	Search	Results
1	"child abuse OR physical abuse OR emotional abuse OR neglect* OR maltreat* OR harm* OR intentional injur* OR safeguarding OR child protection OR violence OR abandoned OR child welfare OR shaken baby syndrome OR battered child syndrome and review* OR examination* OR case conference* OR assessment* OR instrument* OR model* OR tool* OR risk management OR risk assessment OR decision making and newborn* OR infant* OR child* OR adolescent* OR parent-child, from 1970 to 2011 "	2077

PsychINFO (searched via the CSA Illumina March 2011)

#	Search	Results
1	((DE=("child abuse" or "battered child syndrome")) or (KW=(child abuse)) or (DE="physical abuse") or (DE=("sexual abuse" or "incest" or "rape" or "acquaintance rape")) or (DE="emotional abuse") or (KW=neglect*) or (KW=maltreat*) or (KW=harm*) or (KW=(intentional injur*)) or (KW=safeguarding) or (DE=("violence" or "domestic violence" or "intimate partner violence" or "school violence" or "violent crime" or "physical abuse" or "rape" or "acquaintance rape")) or (DE="abandonment") or (KW=(shaken baby syndrome)) or (DE="child welfare"))	
2	and	
3	((KW=review*) or(KW=examination*) or(KW=(case conference*)) or(DE=("measurement" or "group testing" or "individual testing" or "psychiatric evaluation" or "psychological assessment" or "questionnaires" or "rating scales" or "screening" or "screening tests" or "symptom checklists" or "functional analysis" or "general health questionnaire" or "health screening" or "physical examination" or "psychological screening inventory")) or(KW=assessment*) or(KW=instrument*) or(KW=(model or models)) or(KW=(tool or tools)) or(DE="risk management") or(DE="early intervention") or(DE="harm reduction") or(DE=("crisis intervention" or "debriefing psychological" or "suicide prevention")) or(DE=("family intervention" or "group intervention" or "school based intervention")) or(DE="risk assessment") or(DE="decision making"))	
4	Date range: 2000 to 2011 Limit to: English only; Language is English; Population is human; Age is Childhood (birth-12 yrs) or Neonatal (birth-1 mo) or Infancy (1-23 Mo) or Preschool (2-5 ys) or School Age (6-12 yrs) or adolescence (13-17 yrs)	6288

Google Scholar Search

#	Search	Results
1	[Newborn] AND [Assessment] AND [abuse OR neglect OR maltreatment OR harm OR "intentional injuries" OR safeguarding OR "child protection"] 1970-2011	0 in title 25,500 in anywhere
2	[infant] AND [Assessment] AND [abuse OR neglect OR maltreatment OR harm OR "intentional injuries" OR safeguarding OR "child protection"] 1970-2011	1 in title 62,900 in anywhere
3	[child] AND [Assessment] AND [abuse OR neglect OR maltreatment OR harm OR "intentional injuries" OR safeguarding OR "child protection"] 1970-2011	518 in title
4	[adolescent] AND [Assessment] AND [abuse OR neglect OR maltreatment OR harm OR "intentional injuries" OR safeguarding OR "child protection"] 1970-2011	72 in title
5	[parent-child] AND [Assessment] AND [abuse OR neglect OR maltreatment OR harm OR "intentional injuries" OR safeguarding OR "child protection"] 1970-2011	13 in title

Google Search

#	Search	Results
1	[Newborn] AND [Assessment] AND [abuse OR neglect OR maltreatment OR harm OR "intentional injuries" OR safeguarding OR "child protection"]	959,000 in anywhere
2	[infant] AND [Assessment] AND [abuse OR neglect OR maltreatment OR harm OR "intentional injuries" OR safeguarding OR "child protection"]	1,860,000 anywhere
3	[child] AND [Assessment] AND [abuse OR neglect OR maltreatment OR harm OR "intentional injuries" OR safeguarding OR "child protection"]	27,700,000 anywhere
4	[adolescent] AND [Assessment] AND [abuse OR neglect OR maltreatment OR harm OR "intentional injuries" OR safeguarding OR "child protection"]	27,900,000 anywhere
5	[parent-child] AND [Assessment] AND [abuse OR neglect OR maltreatment OR harm OR "intentional injuries" OR safeguarding OR "child protection"]	1,730,000 anywhere

Appendix 2 – Quality Assessment Tool

Model:	**[Model type] / (purpose):**

Section 1 – Description of the model (✓)

Description	Is the purpose of the model clearly described?	YES ☐	NO ☐	DON'T KNOW ☐	SOME ☐
	Is the target group clearly described?	YES ☐	NO ☐	DON'T KNOW ☐	SOME ☐
	Are the theoretical underpinnings described?	YES ☐	NO ☐	DON'T KNOW ☐	SOME ☐
	Are the theoretical underpinnings appropriate?	YES ☐	NO ☐	DON'T KNOW ☐	SOME ☐
	Is the content clearly set out in a logical order?	YES ☐	NO ☐	DON'T KNOW ☐	SOME ☐
	Underpinned by the assessment framework?	YES ☐	NO ☐	DON'T KNOW ☐	SOME ☐
	Is the model developmentally based?	YES ☐	NO ☐	DON'T KNOW ☐	SOME ☐
	Is the model based on? (✓all that apply)	Research ☐		Consensus ☐	Policy ☐
	Does the model incorporate existing standardised questions/scales?	YES ☐	NO	DON'T KNOW ☐	SOME ☐
	Are the materials clearly presented?	YES ☐	NO ☐	DON'T KNOW ☐	SOME ☐
	Training	Programme ☐	Supervision ☐	Other ☐	None described ☐

Section 2a – Components of the model – what is being assessed(✓)

What	Referral	Priority response tool ☐		Screening tools ☐	Other ☐
	Assessments	Safety assessment ☐		Risk assessment ☐	Other ☐
	Assessment of need	Child needs ☐	Parent/child ☐	Parenting capacity ☐	Family needs ☐
		Home/environment ☐		Reassessment ☐	Other ☐
	Total Number of domains assessed (✓):		**Comprehensiveness of domains assessed using Assessment Framework:**		
	1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6+ ☐	Limited ☐		Average ☐	Comprehensive ☐

Section 2b – Components of the model – how is data synthesised (✓)

How	Guidelines for information synthesis?	NONE ☐	SOME ☐	Comprehensive ☐	
	Documentation forms provided	YES ☐	NO ☐	DON'T KNOW ☐	SOME ☐

Section 3 – Adequacy of the model (✓)

Adequacy	Assesses	Prospects for successful intervention ☐	Parenting capacity ☐	Capacity for change ☐	Safety/Strengths ☐
		Child's developmental status/needs ☐	Family /environmental factors ☐	Overall Harm ☐	Overall Risks ☐
	Includes the following:				**Describe**
	Instructions to **guide synthesis** across the above domains?	YES ☐	NO ☐	DON'T KNOW ☐	
	Qualitative **summary of level of risk?**	YES ☐	NO ☐	DON'T KNOW ☐	
	Quantitative **Summary of level of risk**	YES ☐	NO ☐	DON'T KNOW ☐	
	Guidance about **risks** associated with the above summary?	YES ☐	NO ☐	DON'T KNOW ☐	
	Guidance about **action** based on above summary?	YES ☐	NO ☐	DON'T KNOW ☐	

Section 4 – Evaluation (✓)

Evaluation	**Validity**	Internal	YES ☐	NO ☐	DON'T KNOW ☐	SOME ☐
		External	YES ☐	NO ☐	DON'T KNOW ☐	SOME ☐
		Ecological	YES ☐	NO ☐	DON'T KNOW ☐	SOME ☐
		Strengths/limitations/risks acknowledged	YES ☐	NO ☐	DON'T KNOW ☐	SOME ☐
		Interrater reliability testing	YES ☐	NO ☐	DON'T KNOW ☐	SOME ☐
		Test-retest reliability	YES ☐	NO ☐	DON'T KNOW ☐	SOME ☐
	Acceptability	Service users	YES ☐	NO ☐	DON'T KNOW ☐	SOME ☐

		Service providers	YES ☐	NO ☐	DON'T KNOW ☐	SOME ☐
	Equity	Does the tool consider issues of fairness and equity	YES ☐	NO ☐	DON'T KNOW ☐	SOME ☐
	Effectiveness	Refer to validity testing, evaluations etc.	YES☐	NO ☐	DON'T KNOW ☐	SOME ☐

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