West Midlands
Best Practice Multi-Agency Protocol for the Management of

SUDDEN UNEXPECTED DEATHS IN INFANTS (SUDI)
# CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preface</td>
<td>3</td>
</tr>
<tr>
<td>Principles</td>
<td>4</td>
</tr>
<tr>
<td>1. Introduction</td>
<td>5</td>
</tr>
<tr>
<td>2. General Advice for all Professionals</td>
<td>7</td>
</tr>
<tr>
<td>3. Foundation for Study of Infant Deaths</td>
<td>10</td>
</tr>
<tr>
<td>4. SUDI Pathway Flow Chart</td>
<td>11</td>
</tr>
<tr>
<td>5. Inter-Agency Working – Overview of the Process</td>
<td>12</td>
</tr>
<tr>
<td>6. Roles and Responsibilities of Health Professionals, incorporating:</td>
<td>16</td>
</tr>
<tr>
<td>6.2 Care of Parents</td>
<td>19</td>
</tr>
<tr>
<td>6.3 Ambulance Staff</td>
<td>20</td>
</tr>
<tr>
<td>6.4 Approved Undertaker</td>
<td>22</td>
</tr>
<tr>
<td>6.5 General Practitioners</td>
<td>23</td>
</tr>
<tr>
<td>6.5 Hospital Procedures</td>
<td>24</td>
</tr>
<tr>
<td>7. Social Services</td>
<td>29</td>
</tr>
<tr>
<td>8. Role of the Coroner and the Post-mortem</td>
<td>30</td>
</tr>
<tr>
<td>9. Role of the Police</td>
<td>34</td>
</tr>
<tr>
<td>10. Factors which may case concern</td>
<td>38</td>
</tr>
<tr>
<td>11. Crown Prosecution Service</td>
<td>40</td>
</tr>
<tr>
<td>12. Audit</td>
<td>41</td>
</tr>
<tr>
<td>13. Freedom of Information Act and Data Protection</td>
<td>42</td>
</tr>
</tbody>
</table>

Appendix 1 – History Pro-forma
Appendix 2 – Avon Clinicopathological Classification of SUDI
Appendix 3 – Audit Document
Appendix 4 – Hospital forensic samples details
PREFACE

The death of any child is a tragedy. Every parent has a right to have such an event properly investigated.

This Best Practice Multi-agency Protocol deals with the investigation of sudden unexpected and unexplained deaths in infants under the age of 2 years, often referred to as ‘cot death’. It has been jointly developed by the following agencies within the West Midlands:

West Midlands Police
Birmingham & Black Country Strategic Health Authority
West Midlands South Strategic Health Authority
7 West Midlands Local Authorities
4 West Midlands Coroners
Foundation for Study into Infant Deaths
Crown Prosecution Service
West Midlands Ambulance Service

There has been considerable reference to both the Avon and Somerset and All Wales protocols in preparing a protocol that meets the needs of the West Midlands. A number of Police Forces in England and Wales have also made invaluable contributions throughout this process, in particular Avon and Somerset.

This document provides the framework for a comprehensive and sensitive enquiry aimed at establishing the cause of sudden unexplained deaths in infants.
PRINCIPLES

When dealing with an unexplained child death, all agencies need to follow five common principles:

♦ A sensitive, open-minded and balanced approach

♦ An inter-agency response

♦ Sharing of information

♦ An appropriate response to the circumstances

♦ Preservation of evidence

(It is considered that all of the above are of equal importance)
1. INTRODUCTION

1.1 WHY THE NEED FOR BEST PRACTICE PROTOCOLS?

1.1.2 A number of child death reviews have highlighted the lack of guidance for professionals in dealing with unexplained deaths in children. The CESDI 2000 research (Confidential Enquiry into Stillbirths and Deaths in Infancy/the CESDI Sudden Unexpected Death in Infancy studies) also highlights the need for establishing a pathway for investigating sudden unexplained deaths in infancy (SUDI).

1.1.3 In 2003, three high profile criminal cases involving the prosecution of mothers for causing the death of their babies created considerable public consternation.

1.1.4 In all three cases mothers had suffered the loss of more than one infant. The repetition of sudden deaths without explanation raised suspicion amongst professionals, and in the absence of any eye-witness evidence of harmful conduct, Police investigations relied upon medical expertise, particularly that of paediatricians and pathologists. Such evidence, when placed under careful scrutiny, raised serious concerns about the role of the expert witness in the Courts, the standard of proof, the quality of evidence, and the procedures adopted for the investigation of sudden unexpected and unexplained deaths in children.

1.1.5 It became apparent that there was a need for greater emphasis upon a coherent multi-disciplinary and multi-agency approach, to ensure that each SUDI incident is investigated and managed to the highest possible standard.

1.1.6 The Presidents of The Royal College of Pathologists and The Royal College of Paediatrics and Child Health recognised the seriousness of the events that were unfolding and established a Working Group to consider the implications of these cases for the medical profession. The overriding concern was that steps should be taken to prevent miscarriages of justice while protecting the interests and safety of children. This working group was chaired by Baroness Helena Kennedy QC.

1.1.7 This Best Practice Protocol is intended to provide guidance and set common minimum standards of investigation for practitioners who are confronted with these tragic circumstances. It is acknowledged that each such death has unique circumstances and each professional involved has their own experience and expertise, which, quite rightly, is drawn upon in their handling of individual cases. Nevertheless, there are common aspects to the management of unexplained child deaths, which it is important to share in the interest of good practice and of achieving a consistent approach.

1.1.8 In any sudden and unexplained death of an infant, the lead lies with the Coroner and the Police. However, this protocol sets out how ALL of the partner agencies must work together.

1.1.9 The Protocol gives an insight into the priorities of those professionals involved, in an attempt to promote a mutual understanding of each agency’s
roles and responsibilities. Professionals need to strike a balance between the sensitivities of bereaved families, and ensuring a proper investigation is undertaken, to aid families in arriving at an understanding of why their child died.

*This multi-agency, multi-disciplinary approach is supported by the Foundation for the Study of Infant Deaths (FSID).*

1.2 **WHAT IS IN THE BEST PRACTICE PROTOCOL**

1.2.1 The Protocol contains general advice and guidance in dealing with such deaths along with information concerning inter-agency working. It describes some of the factors that may arouse concern about the circumstances surrounding the death.

1.2.2 The Protocol is intended for the death of a child under the age of 2 years where the death is sudden, unexpected and/or unexplained, but consideration should be given to using it in all sudden, unexpected and unexplained child deaths.

1.2.3 There will, however, be some deaths, for example in profoundly disabled children, who have a reduced life expectancy, but where the death at that time is unexpected. In these cases it will be important for the Health professionals involved to come to a professional and competent decision on whether or not the use of this Protocol would then be appropriate.
2. **GENERAL ADVICE FOR ALL PROFESSIONALS**

2.1 The death of a child is a very difficult time for everyone. Time spent with the family now may be brief, but actions may greatly influence how the family deal with the bereavement for a long time afterwards. A sympathetic and supportive attitude, whilst maintaining professionalism towards the investigation, is essential.

2.2 The behaviour of the first professionals to come into contact with the family can have a lasting effect on the family’s later feelings about the death.

2.3 Remember that people are in the first stages of grief. They may be shocked, numb, withdrawn or hysterical.

2.4 All professionals must record the history and background information given by parents/carers in as much detail as possible. The initial accounts about the circumstances, including timings, must be recorded accurately and contemporaneously.

2.5 It is normal and appropriate for parents/carers to want physical contact with their dead child. In all but exceptional circumstances (such as where the parents are obvious suspects and crucial forensic evidence may be lost or interfered with) this should be allowed, however it must be under observation by an appropriate professional.

2.6 The child should always be handled as if he/she were still alive; remembering to use his/her name at all times as a sign of respect and dignity.

2.7 All professionals need to take into account any religious and cultural beliefs, which may impact on procedures. Such issues must be dealt with sensitively but the importance of the preservation of evidence should remain paramount.

2.8 Following the death of their baby, parents need to be consoled and supported. They need to understand the role of the Coroner (this will be explained by the Coroner’s officer). The family will also need to be told that the death of their child will require a detailed multi-disciplinary investigation, which will include a comprehensive medical and post-mortem examination and meetings between the professionals involved. They need to be aware that the investigation will involve the Police and Social Services and the Police will want to visit the scene of the child’s death as soon as possible. Utmost sensitivity should be displayed in imparting this information. All professionals involved in this process will need to be aware of the requirements of the law, but also be very sensitive to the distress of the family.

2.9 Where possible, written contact names and telephone numbers should be given and the leaflet from the Foundation for the Study of Infant Death should be made available.

2.10 The Coroner must be informed of all such deaths and the parents and family must be made aware of this procedure and that a Coroner’s post-mortem will be necessary. Additionally an inquest may well be necessary.
2.11 If any language difficulties become apparent it will be crucial to arrange for an interpreter immediately as communication with the family is central to this process.

2.12 Professionals from all agencies need to be aware that on occasions, in suspicious circumstances, the early arrest of the parent/carer may be essential in order to secure and preserve evidence and thus effectively conduct the investigation.

2.13 Professionals also need to be aware of the constraints placed on the Police by the Police and Criminal Evidence Act (PACE) that determines how suspects may be questioned and the length of time they may be detained without charge.

2.14 Agency professionals will be requested to provide statements of evidence promptly in the above circumstances.
2.15 **Pointers for all professionals in talking with bereaved parents**

(taken from advice given by the FSID)

- When you arrive always say who you are and why you are there, and how sorry you are about what has happened to the child.

- The parents will be in the first stages of grief and may react in a variety of ways, such as shock, numbness, anger or hysteria. Allow the parents space and time to cry, to talk together and to comfort any other children. These early moments of grieving are very important. Parents may want to hold their child and this can be facilitated, if appropriate, but may need to be supervised.

- In talking about the child preferably use the first name, or, if you don’t yet know the name, say ‘your child’, or ‘he’ or ‘she’. Don’t refer to the baby as ‘it’.

- Have respect of the family’s religious beliefs and culture. If English is not their first language, an interpreter should be arranged.

- Take things slowly, allowing the parents to gather their thoughts and tell the story in their own way.

- Be prepared to answer practical questions, for example about where the child will be taken and when they can next see him/her.

- Most parents feel guilty when their child has died. When talking to them try to ask questions in a neutral way, e.g. ‘Would you like to tell me what happened?’ Avoid questions that sound critical, such as ‘Why didn’t you?’

- Don’t use such phrases as ‘suspicious death’ or ‘scene of crime’, and try to avoid comments that might be misunderstood by, or distressing to, the parents.
3. THE FOUNDATION FOR THE STUDY OF INFANT DEATHS

3.1 The Foundation for the Study of Infant Deaths has a help-line offering support and information to anyone who has suffered the sudden death of an infant.

Help-line: 0870 787 0554 (9.00 am – 11.00 pm weekdays; 6.00 pm – 11.00 pm weekends)

Enquiries: 0870 787 0885 (9.00 am – 5.00 pm weekdays).

3.2 The help-line is also available for family and friends and those professionals involved with the death.

3.3 The Foundation has a wide range of leaflets and information for bereaved families and professionals. It also has a network of befriending, who are bereaved parents. Arrangements can be made for a befriender to contact the bereaved family to offer additional support. A free phone card is available from the FSID for parents, to enable contact with The Foundation.

3.4 Publications available:

♦ Protocols for A&E Departments
♦ Protocols for Ambulance Staff
♦ Protocols for General Practitioners
♦ Protocols for Midwives
♦ Protocols for Health Visitors
♦ Protocols for Police and Coroner’s Officers
♦ Good Practice for Paediatricians

Leaflet for bereaved parents: ‘When a Baby Dies Suddenly and Unexpectedly’
(Copies of the leaflet can be obtained from local CAIU departments).
5. INTER-AGENCY WORKING: OVERVIEW OF THE PROCESS

5.1.1 All sudden unexplained deaths in children are notified to the Coroner and a full Police/Coroner investigation will take place. A Detective Inspector from the local Child Abuse Investigation Unit will lead the investigation, which will comprise of a multi-agency team, with a remit to enquire into the circumstances surrounding the child’s death.

5.1.2 Multi-agency working will always involve at least the Police, the Coroner’s Officer, Health professionals and Social Services.

5.1.3 The process and procedures are described in full in each agency section, and an outline is set out below and in the flow chart.

5.1.4 Each professional must be fully conversant with both their own agency’s responsibility and the responsibilities of the other agencies.

5.1.5 All agencies need to be mindful that following the death of a child, families may not choose to return home, therefore it is vital that family contact details are shared between all professionals who will need to have continued contact with the family.

5.1.6 There should be collaborative working at all levels from the earliest call to the emergency services.

5.1.7 The initial call to the emergency services should trigger the pathway so that the Police and Paediatrician are informed.

5.1.8 Police and Health will jointly ensure that the immediate needs of the family and of the Investigation are met. This includes medical examination/investigations, full history taking, and the gathering of relevant information. The Police will contact Social Services to ensure that they are involved in the initial stages of the enquiry and then as necessary.

5.1.9 Police, Health and Social Services will collate information, and arrange an initial strategy and information-sharing meeting. The meeting will be convened within 2 working days of a child’s death, and in any event prior to the post-mortem examination. This should be arranged by the investigating Police Officer in conjunction with the Responsible Paediatrician.

5.2 MEETINGS

5.2.1 One of the main elements of the multi-agency protocol is collaborative working at all levels and the sharing of information. As a part of this process, there is a need for a number of formal meetings and discussions to be held.

5.2.2 It is crucial that accurate records of meetings and discussions are maintained and can be readily retrieved. The reason for this is to enable the management of disclosure in any subsequent Court proceedings, whether criminal or otherwise. Failings in this area can have serious consequences both in terms of potential miscarriages of justice and for individuals and organisations.
5.2.3 An initial strategy and information sharing meeting will be convened by the investigating Police Officer, in association with the Responsible Paediatrician, relevant Health professionals and Social Care professionals prior to the post-mortem examination. The purpose of this meeting is:

♦ To collate all relevant information to share with the Pathologist.

♦ For each agency to share information from previous knowledge of the family and records, with particular reference to the circumstances of the child’s death. This would include details of previous or ongoing child protection concerns, previous unexplained or unusual deaths in the family, neglect, failure to thrive, parental substance misuse, parental mental ill-health, domestic abuse, previous hospitalisation and GP visits, etc. Is there a “Significant Concern”?

♦ To enable consideration of any child protection risks to siblings/any other children living in the household, and to consider the need for child protection procedures.

♦ To ensure a co-ordinated bereavement care plan for the family.

♦ To discuss any need for action in respect of other children in the family (e.g. health overview).

Those involved should include:

i) **Health** - The doctor who certified death, the named Health Visitor for the child, the community midwife if appropriate, the General Practitioner, the hospital Consultant Paediatrician (and/or the Responsible Paediatrician), and the named professionals for Child Protection.

ii) **Social Services** - The Children’s Services Team Manager.

iii) **Police** - Child Abuse Investigation Unit Detective Inspector.

iv) **Other contributors** - Ambulance Service (if applicable) and Education (where the child was attending school or nursery) and any other agency/person who may have a contribution to make, eg Women’s Aid.

5.2.4 If there are child protection concerns this meeting will become a strategy meeting under child protection procedures.

5.2.5 There must be a further professionals’ meeting or phone conversation after the post-mortem, so those relevant professionals are able to discuss the findings and interpret their relevance.

5.2.6 As soon as possible, usually 8-12 weeks after the infant’s death (once the results of all relevant investigations have been obtained), a multi-agency case review meeting is to be held. This meeting will be convened by the Police. The main purpose of this meeting is to establish the cause of the child’s death.
and for future care planning for the family, achieved through sharing of information.

5.2.7 If, however, the death is subject of an ongoing criminal investigation, no such meeting should be held without the Police first seeking the views of The Crown Prosecution Service.

A view will be sought on the following issues:

- Should the meeting be held?
- What should be the format and scope?
- Who should attend the meeting?
- How should the meeting be recorded?
- Any other pertinent issues

The meeting will usually be chaired by the paediatrician. This meeting should involve the GP, Health Visitor, Paediatrician(s), Pathologist, Coroner’s Officer, senior investigating Police Officer and, where appropriate a senior representative from Social Services. Families will not be invited to these meetings, as the large number of professionals present and the very technical and detailed nature of some of the discussion will make the meeting inappropriate for bereaved parents. Many parents would be likely to find such a meeting intimidating and distressing. The parents must, however, be fully informed of the outcome of the meeting at a separate meeting with the SUDI Paediatrician and GP or Health Visitor.

5.2.8 At this case discussion meeting, all relevant information concerning the circumstances of the death, the infant’s history, family history and subsequent investigations should be reviewed. The cause of the infant’s death should be established if possible. The Avon clinicopathological classification of sudden unexpected infant deaths will be used in considering all of the potentially contributory factors that may be relevant (see Appendix 2). In some cases, the Coroner’s Officer will wish to attend these meetings; in others, the Police will attend both as the investigating agency and as the Coroner’s representative.

5.2.9 During the meeting there must be an explicit discussion of the possibility of neglect or abuse as a contributory factor to the infant’s death. If potential criminal acts are identified, the Police representative must adjourn the meeting in order to assess whether a criminal investigation should be commenced and advice of The Crown Prosecution Service sought.

5.2.10 If no evidence is identified to suggest neglect or abuse as contributory factors, this should be documented as part of the report of this meeting. The quality of medical and social care that was given to the child and family should also be discussed at this meeting, identifying any shortcomings and appropriate measures to improve future care. For these reasons, holding such a meeting even in those instances in which a complete and sufficient medical (natural) explanation has been found for the death may be of value.
5.2.11 Notes of the meeting will be kept by the Paediatrician chairing the meeting. This should be through completion of The Avon clinicopathological classification of sudden unexpected infant deaths form (Appendix 2) and any ancillary summary, as deemed necessary. This record will subsequently be distributed for ratification by those attending the meeting. **No other notes will be recorded at the meeting.**

5.2.12 After the multi-agency case review meeting, the SUDI Paediatrician, in close consultation with the Pathologist, should write a detailed report on the available information concerning the cause of the infant’s death as a letter to the parents. Arrangements should be made for the SUDI paediatrician and the GP or Health Visitor to jointly see the parents to explain the content of this report. They will answer any further questions that the parents may have, and make plans for any future additional care and support that may be appropriate, including the question of further investigation of family members or subsequent children for metabolic or other familial disorders. A copy of the report of the meeting should be sent to each of the agencies involved. This may be of great importance in assessing the possibility of risk (particularly from metabolic or other familial conditions) to surviving and future children in the family.

5.2.13 The record of the multi-agency case review meeting should be communicated by report to the Coroner. The information available from this meeting will potentially be of great value to the Coroner in the organisation and conduct of the inquest, and will ensure that correct information is included in the final registration of the cause of death notified to the Registrar of Births and Deaths.

5.2.14 Finally, the record of the multi-agency case review, a copy of the SUDI Paediatricians report and a copy of the SUDI Protocol audit document should be forwarded to the relevant local Safeguarding Children’s Board which, will inform the Board of the child’s death, assist in any serious case review and also the details may better inform the local Safeguarding Children’s Board of any cross cutting issues effecting the safety or future safety of Children in that Borough..

It is important for each agency to ensure that cases are audited/reviewed against the standards set out in this protocol. The purpose of the audit document is to identify problems encountered in the protocol and make amendments where necessary, thus ensuring the highest quality process possible (See paragraph 12 for full explanation of audit process and appendix 3 for audit document).
6. **The Roles and Responsibilities of Health Professionals**

6.1.1 This section sets out the issues to be considered by health professionals, their roles, responsibilities and process to be followed. Contained within this section are details regarding:

- Care of the parents
- Ambulance Service
- Approved undertaker where child is obviously deceased.
- General Practitioners
- Hospital procedures.

6.1.2 There should be a multi-disciplinary and multi-agency approach to the sudden unexplained death of a child. This will also place greater emphasis on support for the family at the time of the event and afterwards in the form of information giving and counselling.

6.1.3 Each Health Trust should ensure that health professionals are aware of their own and other’s role in the investigation and management of a child’s death.

6.1.4 Detailed, accurate and contemporaneous records should be kept by all professionals of history taking, medical examinations and discussions with parents and other professionals, health or otherwise. The importance of full and accurate record keeping must be emphasised for the purposes of disclosure and transparency.

6.1.5 **The role of the health professionals will include:**

- Sharing and pooling of information from all health sources, i.e. General Practitioner, community midwife, health visitor, school nurse, community paediatrician, senior nurse child protection, any hospital the child has attended, etc.

- In association with the Police, checking with Social Services.

- The medical examination of the child, history taking and liaison with the Pathologist before and after the post-mortem.

- There should always be consideration of a home visit by a trained health professional. This should either be done jointly with the investigating Police Officer or, if separate visits are made, they should confer in their assessment.

- Any Police video recording of the scene of death should be viewed by the paediatrician (and made available to the Pathologist).
The receiving hospital (normally in the area where the child resides) should arrange for a full skeletal survey. In cases where the hospital does not have the facilities to undertake the skeletal surveys, the responsibility will fall to the Coroner’s officer to make the necessary arrangements.

Two copies of the skeletal survey will be required. One copy to accompany the child to the post mortem and the second copy to be reported on by a consultant radiologist experienced in interpreting paediatric x-rays. In instances where the receiving hospital does not have the facility to complete the skeletal survey, then the Coroner’s Officer will make the necessary arrangements for the skeletal survey to be undertaken prior to post mortem.

The receiving hospital will ensure forensic samples are obtained prior to the child being transferred for post mortem.

**LABORATORY INVESTIGATIONS**

Note: After death is certified, the body is under the jurisdiction of the Coroner and complex investigations should be discussed with the Coroner first. Agreement for standard investigations may be arranged in advance.

<table>
<thead>
<tr>
<th>Sample</th>
<th>Send to</th>
<th>Handling</th>
<th>Test</th>
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</thead>
<tbody>
<tr>
<td>Blood cultures – aerobic and anaerobic 1 ml</td>
<td>Microbiology</td>
<td>If insufficient blood, aerobic only. May be obtained from femoral puncture. Do not attempt cardiac puncture</td>
<td>Culture and sensitivity</td>
</tr>
<tr>
<td>Blood</td>
<td>Haematology</td>
<td>Normal</td>
<td>Full blood count</td>
</tr>
<tr>
<td>Blood (serum) 1–2 ml</td>
<td>Clinical chemistry</td>
<td>Spin, store serum at – 20°C</td>
<td>Toxicology</td>
</tr>
<tr>
<td>Blood from Guthrie card (if available)</td>
<td>Clinical chemistry</td>
<td>Normal (fill in card; do not put into plastic bag)</td>
<td>Inherited metabolic diseases, carnitine</td>
</tr>
<tr>
<td>Blood (Lithium heparin) 1–2 ml</td>
<td>Cytogenetics</td>
<td>Normal – keep unseparated</td>
<td>Chromosomes (if dysmorphic)</td>
</tr>
<tr>
<td>Cerebrospinal fluid (CSF) (a few drops)</td>
<td>Microbiology</td>
<td>Normal</td>
<td>Microscopy, culture and sensitivity</td>
</tr>
<tr>
<td>Nasopharyngeal aspirate</td>
<td>Virology</td>
<td>Normal</td>
<td>Viral cultures, immunofluorescence and DNA amplification techniques*</td>
</tr>
<tr>
<td>Nasopharyngeal aspirate</td>
<td>Microbiology</td>
<td>Normal</td>
<td>Culture and sensitivity</td>
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The responsible Paediatrician will attend the initial and subsequent information sharing meetings.

The paediatric team will ensure appropriate counselling and support is afforded for the family.

The paediatric team will ensure that the health needs of any siblings, especially a twin, are met.

- Samples must be sent to an appropriate virological laboratory.
- See also appendix 4 for further information regarding laboratory tests.

**Examination of child; points to consider:**

- Injuries, bruising, petechiae
- Examination of fraenum and genitalia
- Lividity
- Retinal haemorrhage
- Enlarged organs or masses
- Systems examination
- Rectal temperature
- Skull palpation - fracture
- Other fractures
- Nutrition/growth
- Upon attendance at hospital note where blood has collected in the child’s body, as this will give an indication of the child’s position at the time of death. It is important this is noted as soon as possible.

- The responsible Paediatrician will attend the initial and subsequent information sharing meetings.

- The paediatric team will ensure appropriate counselling and support is afforded for the family.

- The paediatric team will ensure that the health needs of any siblings, especially a twin, are met.
6.2 Care of the Parents

6.2.1 Immediately upon their arrival at the hospital, parents should be allocated a member of staff to care for them, explain what is happening and provide them with facilities to contact friends, other family members and cultural or religious support. The member of staff allocated to the family should ensure that they are kept fully informed during the course of the resuscitation and, subject to the approval of the medical staff involved, the parents should be given the option to be present during the resuscitation. The allocated member of staff should stay with the parents throughout this period to explain what is going on, particularly the procedures that may look alarming, such as cutting off clothing or attempts at vascular access, including the use of intraosseous needles or intubation.

6.2.2 Staff will need to make an assessment of the capacity of the parents to engage in the processes unfolding around them. For some, the shock of the situation will impede their understanding; for others, there may be issues of language, health or mental capacity that need to be taken into account. If there is a possibility that the family may become witnesses or defendants in criminal proceedings, the Police will need to make an early judgement about whether they should be seen as ‘vulnerable witnesses’, and perceptions of the allocated member of staff will be of benefit in arriving at a decision.

6.2.3 Immediate responsibility for providing information and co-ordinating appropriate care and support to the family should rest with the on-call paediatric team (almost always led by the consultant paediatrician on call). Whilst senior staff from the disciplines of emergency medicine and/or intensive care may have been involved in the resuscitation, it is generally more appropriate for continuing pastoral care of the family and liaison with the primary care team or other agencies to be the responsibility of the consultant paediatrician on call, or the paediatrician with special responsibility for SUDI.

6.2.4 The consultant paediatrician on call should, as part of the initial assessment, take a detailed and careful history of events leading up to and following the discovery of the infant’s collapse. See Appendix 1 (history pro-forma). The aim should be for the paediatrician and senior Police Officer to obtain a joint history, but this should not preclude any urgent history taking that may be required at an early stage. It is important that, as far as possible, the parents’ or carers’ account of events should be recorded verbatim. At an early stage of the process, the on-call paediatrician should make contact with the paediatrician with special responsibility for SUDI (the ‘SUDI paediatrician’) and agree precise arrangements and timing for the SUDI paediatrician to meet the family. Whenever possible this should be before the family leave the hospital.

6.2.5 The parents and other close relatives should normally be given the opportunity to hold and spend time with their baby. Professional presence during such times should be discreet. Such quiet time is very important for families. The skeletal survey must always take place prior to parents having any unsupervised contact with their baby.

6.2.6 Many parents value photographs of their baby taken at this time, along with handprints or footprints and a lock of hair. Again, only in very exceptional
circumstances should such mementoes not be taken, i.e. when the death is being investigated as suspicious. In this instance the Senior Investigating Officer should be asked for their approval.

6.2.7 When the baby has been pronounced dead, the on-call Consultant Paediatrician should break the news to the parents, having first reviewed all the available information, this should be in the privacy of an appropriate room. The member of staff allocated to care for the family should also be present at this time.

6.2.8 The family must also be told at this time that the Coroner will need to be informed because the baby has died suddenly and unexpectedly and that, as a matter of routine practice, the Police also have to investigate the death. The paediatrician must explain that possible medical causes of the infant’s death will be very carefully and thoroughly sought. *For families with an established contact with a particular social worker, it will be important to inform and involve this known social worker at an early stage.*

6.2.9 Unless the cause of death is immediately apparent to the paediatrician (e.g. the typical rash of meningococcal septicaemia), it is important to explain to the parents that the cause of the death is not yet known and that the aim of the investigation is to establish the cause of death. The parents must be informed that in the majority of cases, the Coroner will order a post-mortem examination and that this may be carried out by a Pathologist with special expertise in diseases of children (a paediatric pathologist), just as if the child had a rare or serious disease and was being referred to a specialist in life. The post mortem will take place at a site authorised by each individual coroner, the site in some instances will be outside the geographical area of the coroner’s jurisdiction. The coroner’s undertaker will arrange transport of the baby both to and from the post mortem site. The nature and purpose of the post-mortem should be explained to the parents in understandable terms and they should be given a copy of the NHS leaflet on the post-mortem examination ordered by the Coroner. It is important that the family know where the post-mortem will be carried out, and are fully informed throughout by the coroner’s officer of all movements of the baby, what the approximate timescale will be and when they will be able to see the child again.

6.2.10 Parents shall be entitled to be represented at a post-mortem examination by a legally qualified medical practitioner. (Coroners Rules, 1984).

6.2.11 Part of the role of the paediatrician at this stage is to give the family help, information and support in their bereavement. This may be helped by the use of leaflets such as those published by the Foundation of the Study of Infant Deaths.

6.3 **Ambulance Staff**

6.3.1 The Ambulance Service will notify the police and relevant hospital immediately when they are called to the scene of an unexplained child death. This will generally be undertaken by the Ambulance Control contacting the Police Control Room and hospital.
The Ambulance Service will need to clarify that the SUDI Best Practice Protocols are being triggered.

6.3.2 The recording of the initial call to the Ambulance Service should be retained in case it is required for evidential purposes.

6.3.3 Ambulance staff should (adapted from national training manual):
   a) Not automatically assume that the death has occurred.
   b) Clear the airway and if in any doubt about death, apply full CPR.
   c) Inform the A&E Department giving estimated time of arrival and patient’s condition.
   d) Transport the child to the local A&E Department (for exceptions to this rule see paragraph 6.3.4).
   e) Take note of the position and location of the child and excesses in room temperature e.g. if the room feels excessively warm or cold.
   f) Note any injury and any explanation offered.
   g) Pass on all relevant information to the health professionals and/or A&E staff or investigating Police Officer.
   h) The patient clinical record is to be completed in full as a record of attendance or treatment of the patient.
   i)

6.3.4 West Midlands Ambulance Service response to 999 calls to SUDI cases;

999 call → Ambulance Emergency Operations Centre → 999 Ambulance

Cat A response - Options and actions:

a) Child requires resuscitation:
   - Nearest A&E department with parents.
b) Child found to be recently dead, not fit for resuscitation:
- Nearest A&E department with parents.
- A&E alerted by Emergency Operations Centre.
- A&E calls down Paediatric Registrar Team.
- Child and parents taken to agreed facility.

c) Child found obviously dead:
- Ambulance crew alert Emergency Operations Centre who call the Police.
- After handover, ambulance crew leave.
- Police arrange appropriate care for parents and arrange via approved undertaker to convey the child to receiving facility at nearest hospital.

d) Non ambulance response.
- G.P confirms child deceased.
- No 999 call made and Child confirmed dead at scene.
- G.P informs Police / Coroner who take actions as outlined in protocol (see para 6.4)

6.3.5 The first professional on the scene (e.g. Ambulance, GP) should note the position of the child, the clothing worn and the circumstances of how the child was found. If the circumstances allow, note any comments made by the parents / carers, any background history, any possible drug misuse and the conditions of the living accommodation. Any such information must be passed on to the receiving doctor, the Police and the Consultant Paediatrician.

6.3.6 Any concern must be reported directly to the Police and to the receiving doctor at the hospital as soon as possible.

6.4 Approved undertaker

6.4.1 Where a child is obviously dead it will not be appropriate to use the Ambulance service. The Police will arrange for the child to be conveyed to the receiving facility at the nearest hospital utilising the Force approved undertaker; Midlands Co-operative Funeral Services, Tel 0121 458-5151 or 0121 359-1919 (24hr call out).

6.4.2 Officers will need to ensure they give the undertakers details of the child’s age and approximate size, this will assist in planning transportation of the
child. Under normal circumstances the child will be transported in a Moses basket.

6.4.3 Equally the race and religion (where known) should be shared with the undertakers, as there may be specific requirements for the handling of deceased persons. The Co-operative Funeral Services are experienced in meeting racial/religious needs if they are made aware beforehand.

6.4.4 The police will also arrange for the family to be transported to the hospital to be with their child at the receiving facility, which will be within the local A & E Department.

6.4.5 Upon arrival at hospital officers must ensure the SUDI protocol is fully implemented.

6.4.6 The cost of utilising the undertakers is £135 standard rate plus £35 hourly rate. All invoices will be raised by the Midlands Co-operative Funeral Services and sent to Mr David Adams West Midlands Police Corporate Services Department, who will in turn obtain payment via a cost centre code from the OCU utilising the funeral service.

6.5 General Practitioners

6.5.1 This guidance for the GP needs to be read in conjunction with the further guidance for health professionals.

6.5.2 The GP may be the first to be called in the event of a child’s death, or may be called by the Ambulance team.

6.5.3 If there are still signs of life, resuscitation measures must be commenced and an ambulance called. The on-call consultant paediatrician in A&E should be informed of the child’s impending arrival.

6.5.4 If the baby has been dead for some time, the GP will inform the Police (it is advised that this is best done via Police Control Room Tel: 0845 113 5000), who will inform the Coroner.

6.5.5 The GP should also inform the consultant paediatrician on call at the hospital to which the child will be taken.

6.5.6 The GP should ensure that ambulance staff take the child to the A&E Department rather than the mortuary. However when death has been determined at home by the G.P and ambulance service are not utilised, the force approved undertakers should be contacted. (See paragraph 6.4 for full details).

6.5.7 The GP will further be involved in providing ongoing advice and counselling for the family, in collaboration with other professionals.

6.5.8 GP’s should ensure that all communications with other professionals (health or otherwise) are carefully and accurately recorded, bearing in mind the potential disclosure issues in any subsequent Court proceedings.
6.5.9 Additional guidance for GP’s and health visitors, particularly in relation to the longer term care of the family, is available from the Foundation for the Study of Infant Deaths.

6.6 Hospital Procedures

6.6.1 Outlined in the following paragraphs is an overview of the process to be followed by staff at the Hospital.

6.6.2 There is a need for there to be clear pathways and a clear understanding of the multi-agency Protocol, so that the same process is followed wherever the baby/child arrives; i.e.

- A&E Department
- Paediatric ward
- Community hospital
- General practitioner at home/surgery
- GP deputising service
- Other

6.6.3 For the care pathway to be triggered it is imperative that the acute Consultant Paediatrician on call is informed by the Investigating Officer and/or Coroner’s Office or the General Practitioner if the child dies at home. All of these children must be taken directly to the A&E Department, where the Consultant Paediatrician would attend.

6.6.4 All receiving facilities within A&E departments for sudden unexpected deaths in children must be aware of the need to notify the Coroner, the Police and the consultant paediatrician on call at the relevant hospital.

6.6.5 If the baby or child is brought to the A&E Department, resuscitation may still be ongoing and the consultant paediatrician will be notified immediately. Similarly if the child dies in the hospital, the Coroner, Police and acute Consultant Paediatrician on call must be notified and agreement reached regarding the role of Health.

6.6.6 It is expected that the role of the Responsible Paediatrician will initially be taken by the Consultant Paediatrician on call. At a later stage this responsibility may change to another hospital Paediatrician or Consultant Community Paediatrician. The local HealthTrust protocol should define which Paediatrician adopts this role and when.

6.6.7 Each Health Trust should have a care pathway in place, which reflects all aspects of this guidance, so that all relevant staff are aware of their roles and of actions to be taken. This should be reinforced through training and supervision.

6.6.8 In developing the care pathway there needs to be a clear understanding that the Consultant Paediatrician on call will be the initial Responsible Paediatrician.
6.6.9 There should also be later involvement of the Consultant Community Paediatrician/Senior Community Paediatrician with responsibility for Child Protection in the HealthTrust.

6.6.10 The SHA Designated Doctor/Nurse should be kept informed of all SUDI deaths.

6.6.11 The Coroner must be informed of all such deaths. The Coroner’s Officer will explain the role of the Coroner and the procedures, which take place fully to the parents and family. The Coroner’s Officer will also make the family aware that the Coroner’s investigation is carried out by the Police, and that it will be necessary for the Police to visit the scene of the death and to talk to the family as soon as possible. This information will be given sensitively to the family by the Coroner’s Officer, who will also give the family practical advice and information on what happens to their baby.

All professionals involved in this process will need to be aware of the requirements of the law, but also to be very sensitive of the distress of the family.

6.6.12 The Police and/or Coroner’s Officer will have their own procedures to follow in respect of such deaths in addition to the Multi-Agency Protocol.

6.6.13 Once life has been pronounced extinct, the responsibility for the body falls to the Coroner. In agreement with the Police and the Coroner, the paediatrician will:

- Undertake a careful medical examination
- Jointly with the Police, obtain a full history from the parents/carers (Appendix 1)
- With the informed consent of the parents or implicit permission of the Coroner, obtain samples/conduct medical investigations (Appendix 4)
- Arrange for a full skeletal survey, (In cases where the hospital does not undertake the skeletal surveys, the responsibility will fall to the Coroner’s officer to make the necessary arrangements).
- Organise collection of information from the other professionals.

6.6.14 If the death has been identified as ‘suspicious’, thereby requiring the application of the Police and Criminal Evidence Act, the Police will become the lead agency, In all other instances the Hospital process, whilst joint Police/Health, should be led by the Responsible Paediatrician.

6.6.15 Medical Examination

All findings must be carefully documented in writing and child protection body diagrams used as necessary, with metric measurements recorded on any marks/bruises.

6.6.16 Consideration should be given to photography of any visible apparent injuries. Such photographs should include metric and colour scales and should be properly labelled and stored (to provide continuity of evidence). Police
Scenes of Crimes Officers will be responsible for provision of photography services. Records should be signed, timed and dated. Abbreviations should not be used.

6.6.17 The investigations to be carried out and samples to be obtained at the hospital have been agreed with HM Coroners within the West Midlands. Samples post death may only be taken with implicit previous agreement of the local Coroner or with informed consent of the parents. If neither applies the Coroner must be contacted personally and permission for samples sought. In addition any investigations performed before death, e.g. during resuscitation, should be checked and made available to the Pathologist.

6.6.18 **History Taking**

A very carefully recorded history obtained from the parents/carers is clearly vital. They will undoubtedly have been asked pertinent questions and given accounts during the early stages, but a full detailed history will not have been obtained. The Paediatrician and senior Police Officer will obtain the history, the process being led by the paediatrician. The history will be recorded contemporaneously in the History pro-forma (Appendix 1) and may be further supplemented by detail obtained during a joint Police/Health home visit. It may not be possible to obtain the full history from grieving parents in an initial interview, it is recognised that this may be gleaned over two or more interviews.

6.6.19 **Skeletal Survey**

This needs to be performed in all cases and is requested at the designated hospital. In cases where the hospital does not undertake the skeletal surveys, the responsibility will fall to the Coroner’s officer to make the necessary arrangements. Two copies of the skeletal survey will be required, one copy to accompany the child to the post mortem and the second copy to be reported on by a consultant radiologist experienced in interpreting paediatric x-rays. If the surveys have to be performed out of hours and reported on by the local consultant radiologist, it is recommended that the x-rays be reviewed by a specialist paediatric radiologist as soon as possible. In instances where the receiving hospital does not have the facility to complete the skeletal survey, then the Coroner’s Officer will make the necessary arrangements for the skeletal survey to be undertaken prior to post mortem.

**This MUST be a full skeletal survey, not a babygram.**

6.6.20 **Collection and Sharing of Information**

The Coroner’s Officer, investigating Police Officer and the Responsible Paediatrician need to liaise regarding collection of all relevant information. There should be a clear agreement in each case on specific roles and responsibilities.

6.6.21 The following should be checked, contacted and informed:

- General Practitioner
Senior community paediatrician
Named/lead trust and LHB child protection professionals
Health visitor and/or midwife
Social Services, requesting the information that they hold (which will include the Child Protection Register)
Other relevant health professionals involved in the previous care of the child
Police Child Abuse Investigation Unit
Education (early years), if needed
(the above list is not exhaustive).

6.6.22 If the baby/child is a twin the other twin should be assessed *immediately* and consideration should be given to admitting him/her for a period of observation and investigation. It must be emphasised to the family that the admission of the surviving twin is because of the possibility of a natural medical condition.

6.6.23 If the family decline the offer of admission, this should prompt an urgent reconsideration of the family’s needs and the health needs of the surviving twin.

6.6.24 Within 24hrs (usually the same day), a home visit should be undertaken by a senior health professional (usually the responsible Paediatrician). This visit showed itself to be of great value in the CESDI/SUDI studies, given the opportunity to take a more careful history, to inspect the death scene and to try and meet some of the family’s concerns. The investigating Police Officer will also need to visit the home address and wherever possible this visit should be done jointly with the senior health professional or, if separate visits are made, the relevant professionals should confer in their assessment.

6.6.25 In addition, the paediatrician should view any police video recording of the scene of death.

6.6.26 **Briefing of the Pathologist**

All information needs to be brought together at the initial strategy and information sharing meeting, in particular any issues of concern. This information must be available to the Pathologist before the post-mortem.

As reported in the CESDI 2000 report, this was the single most important factor in enabling a correct diagnosis. Inadequate briefing may result in failure to carry out the tests that might lead to the identification of a cause of death, whether natural or unnatural.

6.6.27 This briefing is best done by the paediatrician, in consultation with the investigating Police Officer/Coroner’s Officer. A full medical report based on the history given by the parents in hospital, immediate examination of the baby, information obtained during the home visit and perusal/consultation of all relevant medical and social records. In very young babies this might include obstetric records.
7. SOCIAL SERVICES

7.1 Social Services (adult or children’s services) may hold information in respect of a child/family and should share this information with the investigating Police Officer and/or the Responsible Paediatrician.

7.2 Requests for information ‘out of hours’ which may only contain basic information from the Child Protection Register must always be followed up as soon as possible with further more detailed record checks during office hours.

7.3 Where there are immediate child protection concerns, Social Services will become involved in their role as the statutory agency, and will then become the lead agency for the welfare of the child(ren) whilst the Police will lead any criminal investigation. There may then be a particular need to ensure the protection of the remaining children in the family.

7.4 A senior Social Services representative (child protection co-ordinator, children’s services manager or team leader) will always be invited to the initial strategy and information sharing meeting and to the follow-up meeting. It is important to stress that the initial meeting could also move into a Strategy Meeting regarding the safety of the very ill child (not all children subject of the SUDI protocol will necessarily die) or other siblings.

Arrangements need to be in place to notify the Chair of the Local Safeguarding Children’s Board of any sudden and unexpected death of an infant or child, and for whom there are concerns, so that consideration can be given to the necessity for a serious case review.
8. THE ROLE OF THE CORONER AND THE POST-MORTEM

8.1 The Coroner must be informed after any unnatural or sudden death of unknown cause, and will order an investigation into the circumstances and cause of that death. After the death is pronounced, the Coroner has control of the body.

8.2 The Coroner’s officer will inform the family of HM Coroner’s roles and procedures and keep the family informed of the child’s movements until the Coroner has signed release paperwork for the child at the opening of the inquest. It is important this information is shared only by the Coroner’s officer as any misinformation may cause additional distress to the family.

8.3 As the legal authority charged with the investigation and certification of all unexpected deaths, the Coroner must be kept informed of all significant information obtained from the multi-professional communications and interviews with parents.

8.4 The post-mortem examination will be ordered by the Coroner, and should be carried out (within 2 working days of the infant’s death whenever possible) by a Pathologist with recent expertise and training in paediatric pathology. If “Significant Concern” has been raised about the possibility of neglect or abuse having contributed to the infant’s death, the paediatric pathologist should be accompanied by a forensic pathologist and a joint post-mortem protocol should be followed with the attendance of a Senior Investigating Police Officer. If at any stage during a post-mortem in the absence of a forensic pathologist the paediatric pathologist becomes concerned that the death may be a consequence of abuse, the procedure must be stopped. The examination should recommence as a joint procedure by a forensic pathologist together with the paediatric pathologist, in the presence of the Senior Investigating Police Officer or other designated Police representative. This is all subject to the Coroners overriding discretion.

8.5 Prior to commencing the post-mortem examination, the pathologist should be given a full written briefing on the history, a report from the radiographer relating to the skeletal survey and the physical findings at presentation, and the findings of the death scene investigation by the paediatrician and investigating Police Officer. In those areas where a video recording at the death scene has been made, it is very helpful for the pathologist to have the opportunity to view the video and discuss it with the paediatrician(s) and Police Officer prior to commencing the post-mortem examination. Other photographs of the child that may have been taken at presentation or in the A&E Department should also be made available. All subject to the Coroners overriding discretion and the pathologists professional judgement.

8.6 In all instances there should be where possible a full discussion between the consultant paediatrician and the pathologist both before and after the post-mortem examination to identify outstanding or unsuspected issues and to ensure accurate understanding of information.

8.7 The Protocols of the Royal College of Pathologists and the recent recommendations of the CESDI 2000 report, regarding post-mortem protocol in
SIDS/SUDS/SUDI should be followed. All subject to the Coroners overriding discretion and the pathologists professional judgement.

8.8 There should be a policy in place with clear information to the family about what organs and/or tissue samples have been retained to allow discussion of options for disposal. The family’s wishes regarding disposal must be made known to the pathologist and the Coroner.

8.9 A number of investigations should be arranged by the pathologist.

8.10 If the paediatrician has arranged any similar investigations before death, these must be made available to the pathologist and the Coroner prior to the post-mortem.

8.11 It is vital that all samples taken are properly labelled and exhibited and movement of exhibits should be closely controlled with a clear audit trail. Having agreed upon which samples are to be submitted for further examination, no further work should be commissioned on any of those samples, without prior discussion with the Senior Investigating Police Officer. The reason for this is to ensure that disclosure can be managed through careful control of exhibits and their movements.

8.12 A further multi-agency discussion, particularly with the paediatrician and the pathologist after the post-mortem is required to discuss any preliminary findings.

8.13 The preliminary result may well be ‘not yet ascertained’.

8.14 The final result must be notified in writing to the Coroner as soon as it is known. The final report should then be sent to the Coroner immediately the final result is known and in any event no later than seven days. With the prior consent of the Coroner, a copy of the post mortem report will also be sent simultaneously to the responsible Paediatrician (via designated Paediatric representatives for each area). This will ensure the final meeting is triggered and a final report is completed.

8.15 The report from the multi-agency local case discussion meeting should in all cases be sent to the Coroner, and in some instances the Coroner’s Officer will choose to be present at this meeting. This report will ensure that, where the cause of death has been certified by the Coroner without an inquest, any new or more accurate information is appropriately notified to the Registrar of Births and Deaths for onward transmission to the Office for National Statistics.

8.16 For those instances in which the Coroner has ordered an inquest, the information from the local case discussion meeting will inform and assist the conduct of the inquest.

8.17 Where the information available to the inquest shows that the death meets the international definition of sudden infant death syndrome (SIDS) i.e. ‘the death is unexpected, and remains unexplained after a careful review of the history, examination of the circumstances of death and the conduct of a full post-mortem examination to an agreed protocol’ – then the death should in all cases be registered as being due to SIDS. The medical cause of death and
the conclusion is for the Coroner to decide, having regard to the evidence at the inquest.

8.18 **Death Certificate**
At the conclusion of the inquest, the Coroner will notify the Registrar of Deaths to enable a death certificate to be issued.
Sudden Unexpected Death in Infants
Coroners Process Flow Chart

HM Coroner's Officer Informed

- Coroner's Officer will inform the family of HMO rules and procedures

- Coroner's Officer ensure full skeletal survey undertaken if not already taken

- Paediatric pathologist for Post Mortem

- Histology and toxicology taken with HMO's permission

- Post Mortem forms to Coroner's officer who inform Police

- Coroner's Officer arranges opening of Inquest with family including I.D. of baby

- Histology discussed with family and forms signed

- Inquest formally opened and adjourned (0-6 months). Body released for funeral

- Coroner's Officer obtains report from anyone involved, i.e. Social Services, GP, Hospital, Police

- Pathologist completes post mortem report. Copy to Coroner's Officer and with permission copy to GP and hospital

- Coroner's Officer collates all reports received

- F.I. to HMO for witness list

- Full Inquest held (usually within 3-6 months)
9. **THE ROLE OF THE POLICE**

9.1 All sudden unexpected deaths in children are notified to the Coroner and a full Police/Coroner investigation will take place. When a child/baby dies suddenly and unexpectedly the Coroner and therefore the Police will always lead the investigation.

9.2 A Senior Investigating Police Officer from the local West Midlands Police Child Abuse Investigation Unit will be appointed to lead the investigation.

9.3 The role of the Police is:

- To work with partner agencies in seeking to establish the cause of the child’s death.

- Protection of life, i.e. responsibilities to safeguard other siblings in the event of abuse or neglect.

- Conduct criminal investigation and work with the Crown Prosecution Service in cases involving potential prosecution of offenders.

9.4 The Association of Chief Police Officers (ACPO) published guidelines in 2002 as a supplement to the Murder Investigation Manual. The Kennedy Report endorsed these guidelines and they will form the basis of the Police response to SUDI incidents. There will be a slight degree of deviation from the guidelines in accordance with certain aspects of this protocol. The ACPO guidelines have been classified as ‘RESTRICTED’ by virtue of The Government Protective Marking Scheme.

9.5 The vast majority of such deaths are from natural causes and do not involve abuse or neglect. A small proportion of so called “cot deaths” are, however, caused deliberately by violence, by maliciously administered substances or by the careless use of drugs. Investigating officers must be aware that as the number of genuine unexplained deaths decreases, the proportion of all infant deaths which could be attributed to homicide is likely to increase. When during the SUDI process it is established that the child was murdered, the SUDI protocol should cease and a murder investigation should commence, this does not however preclude the Senior Investigating Officer from utilising certain elements of the SUDI protocol. e.g initial information sharing and planning meeting.

9.6 Irrespective of whether the cause of death appears to involve a criminal act, the Police can play a significant role in supporting the multi-agency investigation. To ensure a consistently high standard of Police input to the investigation a specially trained Detective Inspector from the Child Abuse Investigation Unit will lead the investigation into all SUDI incidents, working in close collaboration with all of the other agencies.

9.7 The aim of any investigation will be to establish, as far as possible, the cause of the child’s death. Each case must be approached with an open mind, balancing the needs of the investigation with the needs of the bereaved family.
One of the practical difficulties for investigators is that factors or evidence that raise suspicion may become apparent at any time during the process, from an early stage through to many months after the death. Police training necessarily focuses upon the need to secure and preserve evidence from the outset, as failure to do so may lead to a lost opportunity. The difficulty faced by the Police in SUDI investigation is to reconcile the traditional criminal investigation approach with the knowledge that the majority of these cases do not involve a criminal act. The processes agreed within this protocol aim to enable the multi-agency team to secure and preserve information and evidence, whilst providing a sensitive and caring service to the bereaved family.

The Police Process

If the Police are the first professionals to attend the scene, urgent medical assistance should be requested as the first priority.

However, the first Police Officer to arrive, or any other professional, may be expected by the parents to try and revive the baby, even if it is hopeless, and should be prepared for this. The Pathologist will need to be informed of any attempted resuscitation.

Upon initial attendance officer(s) should note any excess in the room temperature where the child was found. e.g. excessive warmth or cold. The Senior Investigating Officer should bring a thermometer to the scene and check the room temperature as soon as possible, as room temperature can play an important factor in child deaths. If the room has been ventilated for some time, consider if possible taking the temperature in a drawer in the room containing clothing, as this will tend to hold the original room temperature.

Police attendance should be kept to the minimum. Several Police Officers arriving at the house can be distressing, especially if they are uniformed officers in marked Police cars. Visiting officers, so far as possible, should not be in uniform, and should not arrive in marked cars.

Attending officers should at all times be sensitive in the use of personal radios and mobile phones, etc. If at all possible, the officers liaising with the family, whilst remaining contactable, should have such equipment turned off. Care should be taken to avoid terms such as referring to ‘scenes of crime’ and ‘suspicious death’.

As with all sudden deaths in children and babies there should be immediate consideration of transferring the child to the A&E Department. When the circumstances are obviously suspicious and the child/baby is obviously dead but has not been removed from the scene, a Police Surgeon will attend to certify death. Clearly, even if a Police Surgeon (FME) attends the scene, the Responsible Paediatrician must be informed so that the Protocol can be effected.

Where a child is obviously dead it will not be appropriate to use the Ambulance service. The Police will arrange for the child to be conveyed to the receiving facility at the nearest hospital utilising the force approved undertaker Midlands Co-operative Funeral Services, Tel 0121 458-5151 or 0121 359-1919 (24hr call out).
9.16 The police will also arrange for the family to be transported to the hospital to be with their child at the receiving facility, which will be within the local A & E Department.

9.17 Upon arrival at hospital officers must ensure the SUDI protocol is fully implemented.

9.18 A Detective Inspector from the Child Abuse Investigation Unit will attend the scene as soon as possible, and will become the Senior Investigating Police Officer (SIO).

9.19 The SIO will ensure that the ‘scenes’ are identified and preserved. Scenes of Crime Officers will attend the incident and take appropriate action as directed by the SIO, which will always include photographing and video recording of the scene of the infant’s collapse. Where necessary a Family Liaison Officer will be appointed.

9.20 The SIO will ensure that the Coroner’s Officer and appropriate Hospital paediatrician are notified of the death.

9.21 After making the necessary arrangements for scene preservation, the SIO will liaise with the Responsible Paediatrician at the hospital and other agencies to ensure that the protocol is actioned.

9.22 Unless the death is viewed as suspicious the procedures for joint paediatrician/Police history taking will take effect. Under the Police and Criminal Evidence Act 1984, if the Paediatrician or the Police Officer has significant suspicions that the death may be unnatural, the law demands that the suspect’s rights are protected and certain legal restrictions apply in terms of how they can be spoken to, and by whom. In the event of the death being suspicious the SIO will decide upon the appropriate course of action, which may or may not include the arrest of a suspect. There are strict legal requirements placed upon the Police when conducting a criminal investigation that govern the way in which people are questioned and evidence secured/preserved.

9.23 Following the initial meeting with the Paediatrician, the SIO will make themselves available to conduct a joint home visit with a health specialist, in order to gain a clearer understanding of how the child died.

9.24 In those circumstances when the death is suspicious a forensic Home Office Pathologist will conduct a joint post-mortem with a Paediatric Pathologist. Where a forensic Post Mortem is considered necessary, the SIO must discuss and seek permission for the procedure with the Duty senior investigating officer. If a forensic post mortem is undertaken the SIO and Scenes of Crime Officer will attend.

9.25 Irrespective of whether the death develops into a criminal investigation, the Police will assist the partner agencies throughout the investigation and will attend the meetings as set out in this protocol.
9.26 In those cases that become a criminal investigation the Police will work closely with the Crown Prosecution Service (CPS) and will follow current arrangements regarding pre-charge advice.
10. **FACTORS WHICH MAY CAUSE CONCERN**

10.1 Certain factors in the history or examination of the child may give rise to concern about the circumstances surrounding the death. If any such factors are identified, it is important that the information is documented and shared with senior colleagues and relevant professionals in other key agencies involved in the investigation. The following list is not exhaustive and is intended only as a guide.

10.2 Previous child deaths: two deaths occurring within the same family is extremely unusual, however the possibility of genetically natural disease, environmentally determined natural disease or accident must still be considered.

10.3 It is reasonable to say that the relative probability of child abuse in a family with multiple sudden infant deaths is higher than the probability of child abuse in a family with a single sudden infant death, but the possibility of natural disease must be emphasised.

10.4 Previous episodes of unexplained illness, such as cyanotic episodes or acute life threatening events (ALTE).

10.5 Previous and current child protection concerns within the family relating to this child or the siblings.

10.6 Inappropriate delay in seeking medical help.

10.7 Inconsistent explanations: the account given by the parents/carers of the circumstances of death should be documented verbatim. Any inconsistencies in the story given on different occasions should arouse suspicions, although it is important to bear in mind that some inconsistencies may occur as a result of the shock and trauma caused by the death.

10.8 Evidence of drug/alcohol abuse – particularly if the parents/carers are still intoxicated.

10.9 Evidence of parental mental health problems.

10.10 Evidence of physical abuse/unexplained injuries, e.g. unexplained bruising/burns/bite marks. However, it is very important to remember that a child may have serious internal injuries without any external evidence of trauma.

10.11 Although the presence of blood may arouse suspicion, it can be found in cases of natural death. A pinkish frothy residue around the mouth or nose is a normal finding in some children whose deaths are due to Sudden Infant Death Syndrome.

10.12 Neglect: observations about the condition of the accommodation, hygiene, cleanliness, availability of food, adequacy of clothing and bedding and the temperature of the environment where the child is found are important. This will assist in determining whether there may be any underlying neglect issues involved.
10.13 However, the following should be noted and are present in many infant deaths:

- Froth emerging from the mouth and nose. This froth results from the expulsion of air and mucus from the lungs after death. Sometimes the froth may be blood-stained – this does not mean that the death was unnatural.

- Small quantities of gastric contents around the mouth. This does not mean that death was caused by inhalation of vomit. Often there is slight regurgitation after death.

- Purple discoloration of the parts of the face and body that were lying downwards. This is not bruising, but is caused by the draining of blood in the skin after death. For the same reason the parts that were lying upwards may be very pale.

- Covering of the child’s head by the bedclothes. This has often been a feature of cot death in the past, and probably contributes to death through accidental asphyxia or overheating.

- Wet clothing or bedding (this is usually caused by excessive sweating before death).

- If the child looks as though he/she has been roughly handled, remember that this may be the result of attempts at resuscitation.

- Co-sleeping with a parent.
11. CROWN PROSECUTION SERVICE

11.1 The Crown Prosecution Service has the statutory responsibility for charging in the West Midlands. They have responsibility for deciding on any charge likely to arise out of the death of an infant, i.e. all offences triable on indictment only and all either way offences, which will be dealt with in the Crown Court in accordance with the guidance published by the Director of Public Prosecutions.

11.2 The Crown Prosecution Service provides ‘Pre-Charge Advice’ to the police. The aim is to advise the police on the evidence at an early stage, and to identify evidence that needs to be obtained in order to build strong cases, which will then become successful prosecutions when brought to Court.

11.3 The senior investigating police officer in any criminal investigation of a SUDI will liaise with the Crown Prosecution Service for advice as to the future conduct of the case, as soon as it becomes apparent that neglect or abuse may be factors in the death.

11.4 At the very earliest stage the officer should contact the Special Case Work Lawyer/Complex Case Work Unit Lawyers where the death occurred, for early advice on the case progress.

11.5 The CPS Lawyer will consider the evidence with the officer and provide a Case Action Plan, identifying:
   ♦ Any further enquiries that need to be carried out
   ♦ Any other evidence that needs to be obtained.
   ♦ Any further reports that need to be obtained

11.6 Any necessary further evidence or action identified by the CPS lawyer will need to be obtained before the charging decision is made. The CPS lawyer will consider all the evidence submitted in conjunction with the officer. The CPS Lawyer will then make the charging decision.
12. **AUDIT**

12.1 Local Safeguarding Children Boards will assume responsibility for audit and review of SUDI cases. (See Appendix 3 – Audit Document). The Boards are established across each Borough throughout the West Midlands.

12.2 One of the recommendations of The Kennedy Report is for each agency to identify a senior manager with responsibility for audit/review of SUDI investigations. It is important for each agency to ensure that cases are reviewed against the standards set out in this protocol. We all have a responsibility to identify problems encountered so that we strive towards the highest quality process possible. It may well be the case that these managers develop a suitable multi-agency forum to assist in the process of managing standards of investigation and case management.
13. FREEDOM OF INFORMATION ACT AND DATA PROTECTION

This section is still to be formally completed but the following is anticipated as the West Midlands Police position. Any differing views, please notify.

Freedom of Information Act

No anticipated difficulties in publishing the entire protocol. Note, however, that ACPO guidelines (which are not contained in the protocol) are a restricted document and should not be published.

Data Protection

The usual rules around disclosure are likely to apply in each individual case. A brief passage on this matter will be prepared in due course.

Destruction Policy

Albeit this is a matter for each agency, West Midlands Police are likely to introduce a policy of retaining documents from all SUDI investigations for a minimum period of 100 years, with minimum reviews at 10 year periods.
Appendix 1

Investigation of Sudden Unexplained Death in Infancy in West Midlands

HISTORY PROFORMA

1. Identification Data:

<table>
<thead>
<tr>
<th>Name of Child</th>
<th>Sex M/F</th>
<th>Date of Death</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOB</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Address:

Postcode

<table>
<thead>
<tr>
<th>Name of father (+address if different from child)</th>
<th>DOB</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Name of mother (+address if different from child)</th>
<th>DOB</th>
</tr>
</thead>
</table>

| Name of partner (if relevant + address) | DOB |

GP Name & Address:

Consultant :

SUDI Consultant:

2. Details of transport of child to Hospital:

Place of death: Home address as above / Another location (specify) / DGH (specify)

Time found : Time arrived in A&E :

Resuscitation carried out ? Y/N Where? At scene of death / Ambulance / A&E

By whom: carers / GP / ambulance crew/hosp staff / others (specify)

Certification of death Date Time Location By whom?
3. Physical Examination

To be carried out by consultant paediatrician and CPT supervisor/manager – CSI to be utilised for photographs etc where relevant.

*Physical examination carried out by:*

- Rectal Temp (low reading thermometer) _________
  Date/Time ______________________ and interval from death _____

- Full Growth Measurements
  - length ______________ Centile _____
  - head circumference ______________ Centile _____
  - weight ______________ Centile _____

- Retinal Examination

- State of nutrition and hygiene

- Marks, Livido, Bruises or evidence of injury – To include any medical puncture sites and failed attempts: *(Should also be drawn on body chart)*
  - NB: Check genitalia and back.
    - Check mouth: Is the fraenum of lips/tongue intact?

- **Further Details, observations and comments**

- List all drugs given at hospital and any interventions carried out at resuscitation

- Document direct observation of position of endotracheal tube prior to removal
4. History
Taken in A&E by:

___________________________
History given by:
Relationship to child:

Events surrounding death:

Child found by - Mother/father/partner/Other (specify)
Time found

Who called emergency services?
- Child last seen alive Date Time
By whom

Who was child looked after by in last 24 hrs?

Resuscitation Y/N
By whom?
If Y, describe
(basic life support, blew on face, slapped on back etc)

Any response?

The Final Sleep - description of when and where the baby was put to sleep

When put down?
Where?
Any change from usual?
Sleep position: prone / supine / side
Anyone else in the bed /cot?

What was baby wearing?
Bed coverings

How often checked
Last checked?
Last heard?
Did baby wake – when?

Who found baby?
What time?
Position of bedding / covers
What did the baby look like?

Any blood in mouth or nostrils?
**Feeding:**

Time of last feed  
Type of feed  
Quantity  
Any change from usual?  
Was the baby feeding as well as or less well than usual in the past 24-48 hours?  

Any vomiting in last 48 hrs?  
Any vomitus when found?

---

**Detailed account of last 24 – 48 hrs**  
Any changes to routine or feeding  
unusual cry/irritability/fever/ medication given  
breathing difficulties or coughing  
difficulties with sleeping or waking  
unusual activity or alertness

---

**Last seen by a doctor**  
Date  
Time  
Where?  
Why?

---

**FAMILY HISTORY**

**MOTHER:**  
Age:  
Parity:  

Occupation:  
Ethnic group:  

Past marriages / Live-in relationships?  
Yes / No  
How long has mother lived with father?

Children from other partners?  
Yes / No  
Drugs (including habit forming):  
Smoking:  
Alcohol  
Illnesses / disabilities:  
Other comments:

**FATHER:**  
Age:  
Other children:  

Occupation:  
Ethnic group  

Past marriages / Live-in relationships?  
Yes / No  
How long has father lived with mother?
Children from other partners?  Yes / No  Was father living with child at time of death?  Y/N

Drugs (including habit forming)
Smoking:
Alcohol
Illnesses / disabilities:
Other comments:

CHILDREN IN THE FAMILY:  (Including any children by previous partners)
Name:  Health
Age:

Name:  Health
Age:

Name:  Health
Age:

Name:  Health
Age:

Any previous childhood deaths in the family ?

PAST MEDICAL HISTORY

Birth History
Pregnancy
Delivery
Gestation  Birth Weight
Apgar score
Perinatal problems

Type of feeding at birth
Feeding now
Weight gain in last few weeks ?

Routine checks eg 6 week medical ?
Immunisations

Previous illnesses?
Previous hospital admissions?

Previous unexplained illness eg cyanotic episodes, acute life threatening events(ALTE)
Excessive sweating ?
Episodes of pallor ?

Any past respiratory difficulties eg noisy breathing or wheezing ?
Contacts with infections
Allergies
Medication

West Midlands SUDI Protocol
SOCIAL HISTORY
Type of housing?
Number of people in household?
Family on benefits or income support?
Recent major life events in family eg move house?
Child or family known to social services?
Any family mental health problems?
Maternal depression PNDS?

Other relevant history:

Scene Examination
Child’s Name ........................................................................................................................................
Date of Birth ............................................. Date of Death ...........................................
Address ..............................................................................................................................................
Date of scene visit ...........................................
Persons Present ..................................................................................................................................
...........................................................................................................................................................

Room
Note: Size; orientation (compass); contents; “clutter”
Ventilation: windows & doors (open or shut),
Heating: (including times switched on/off); measure drawer temperature .......................°C

Sleep environment
Note: Location, Position of bed /cot in relation to other objects in room
Mattress, bedding, objects

Position of baby
When put down; When found

• Any evidence of over-wrapping or over-heating? Yes/No
• Any restriction to ventilation or breathing? Yes/No

West Midlands SUDI Protocol
<table>
<thead>
<tr>
<th>Question</th>
<th>Yes/No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any risk of smothering?</td>
<td></td>
</tr>
<tr>
<td>Any potential hazards?</td>
<td></td>
</tr>
<tr>
<td>Any evidence of neglectful care?</td>
<td></td>
</tr>
</tbody>
</table>

**Diagram of Scene**

Note: North/South orientation; room measurements
Location of doors, windows, heating
Any furniture and objects in the room
Appendix 2

The Avon Clinicopathological classification of SUDI.

<table>
<thead>
<tr>
<th>Classification</th>
<th>0</th>
<th>I A</th>
<th>I B</th>
<th>II A</th>
<th>II B</th>
<th>III</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contributory or potentially &quot;causal&quot; Factors</td>
<td>Information not collected</td>
<td>No factors identified</td>
<td>Present but not likely to have contributed to ill health or to death.</td>
<td>Present, and may have contributed to ill health, or possibly to death</td>
<td>Present, and certainly contributed to ill health, and probably contributed to the death</td>
<td>Present, and provides a complete and sufficient cause of death</td>
</tr>
</tbody>
</table>

| Social factors |
| Non-accidental injury/ evidence of abuse or harm |
| Past Medical history |
| Family history |
| History of final events |
| Death-scene examination |
| Radiology |
| Toxicology |
| Microbiology / Virology |
| Gross pathology |
| Histology |
| Biochemistry |
| Metabolic investigations |
| Special investigations (e.g. histochemistry) |
| Other (specify) |

(*note if present at Local Case Discussion meeting)
** Overall classification **

** This will equal the highest individual classification listed above. NB an entry (0, I, II, or III) MUST be made on every line of the grid. A brief free text explanation of each notable factor should also be given below: (continue over page if necessary)**

…………………………………………………………………………………………………………..
…………………………………………………………………………………………………………..
…………………………………………………………………………………………………………..
…………………………………………………………………………………………………………..

West Midlands SUDI Protocol
### Sudden Unexpected Death in Infants (SUDI) Protocol

**Audit Checklist**

<table>
<thead>
<tr>
<th>Name of Child</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(1) D.o.B.</th>
</tr>
</thead>
<tbody>
<tr>
<td>D.o.D</td>
</tr>
<tr>
<td>Address</td>
</tr>
</tbody>
</table>

| (2) Did Ambulance Service inform the Police and the Hospital that SUDI protocol applies? | Yes | No |

<table>
<thead>
<tr>
<th>(3) Did the Paediatrician</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Confirm the death with the Police?</td>
</tr>
<tr>
<td>b) Give the name of the lead Consultant?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(4) Did the Police inform:</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Social Care?</td>
</tr>
<tr>
<td>b) Coroner</td>
</tr>
</tbody>
</table>

| (5) Was home visit carried out within 24 hours? | Yes | No |

If yes

| (a) Attended by Police | Yes | No |
| (b) Attended by Paediatrician? | Yes | No |
| (c) Health Professional? | Yes | No |
| (d) Other? | Yes | No |

<table>
<thead>
<tr>
<th>(e) Please state</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

| (6) Did Police convene information sharing meeting within two working days? | Yes | No |

If no, why

If yes

| (b) Attended by Police? | Yes | No |

---

West Midlands SUDI Protocol
### Multi-Agency Case Review

(7) Did the Police convene M.A.C.R?

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

(a) Date Held

<p>| |</p>
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
</table>

(8) Attendance

<table>
<thead>
<tr>
<th>(a) Police</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>(b) Coroner</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>(c) Responsible Paediatrician</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>(d) Social Care</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>(e) GP</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>(f) Health Visitor</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

(g) Other:

(h) Please state:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
</table>

Has the ‘family’s wishes form’ in relation consent for tissue retention been completed?

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

(9) Findings (Please include what, if any local difficulties you encountered when following the SUDI protocol).

{empty box}
Once completed, this form should be sent to your local Safeguarding Board Lead Officer at:
........................................................................................................................................
........................................................................................................................................
Appendix 4 tests undertaken by medical professionals.

Obtain specimens: Blood  10–15 mls (heart stab if needed - this must be documented) within 30 mins of death if possible and preferably not >4hrs; Urine (SPA); Nasopharyngeal swab.

<table>
<thead>
<tr>
<th>Sample</th>
<th>send to</th>
<th>handling</th>
<th>Test</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>blood</strong> (serum) brown top</td>
<td>Clinical chemistry</td>
<td>normal</td>
<td>U&amp;Es</td>
</tr>
<tr>
<td>1 ml</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>blood</strong> (serum) brown top</td>
<td>Clinical chemistry</td>
<td>spin, store serum - 20°C</td>
<td>toxicology (City Hosp)</td>
</tr>
<tr>
<td>1 ml</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>blood</strong> Li Heparin orange</td>
<td>Clinical chemistry</td>
<td>spin, store plasma - 20°C</td>
<td>inherited metabolic disease (BCH)</td>
</tr>
<tr>
<td>top 1 ml</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>?blood</strong> Li Heparin orange</td>
<td>Clinical chemistry</td>
<td>normal (keep unseparated)</td>
<td>chromosomes (if dysmorphic)</td>
</tr>
<tr>
<td>top 5 ml</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>blood</strong> Fluoride yellow</td>
<td>Clinical Chemistry</td>
<td>collect pre-mortem spin, store plasma - 20°C</td>
<td>3 OH Butyrate, FFA, lactate (BCH)</td>
</tr>
<tr>
<td>top 2 ml</td>
<td>Haematology</td>
<td>normal</td>
<td>FBC</td>
</tr>
<tr>
<td><strong>blood</strong> EDTA red top</td>
<td>Microbiology</td>
<td>if insufficient blood, aerobic only</td>
<td>C&amp;S</td>
</tr>
<tr>
<td>1 ml</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>blood</strong> cultures aerobic/</td>
<td>Microbiology</td>
<td>if insufficient blood, aerobic only</td>
<td>C&amp;S</td>
</tr>
<tr>
<td>anaerobic 2 ml</td>
<td>blood culture</td>
<td></td>
<td></td>
</tr>
<tr>
<td>incubator</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>blood</strong> from syringe onto</td>
<td>Clinical Chemistry</td>
<td>normal (fill in card, don’t put in plastic bag)</td>
<td>inherited metabolic disease (BCH)</td>
</tr>
<tr>
<td>Guthrie card</td>
<td>Haematology</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Nasopharyngeal swab</strong></td>
<td>Microbiology</td>
<td>&lt;8hrs from death</td>
<td>virology</td>
</tr>
<tr>
<td>viral culture medium</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>?Other swabs</td>
<td>Microbiology</td>
<td>normal</td>
<td>C&amp;S (as indicated)</td>
</tr>
<tr>
<td>Urine (SPA) 2 mls</td>
<td>Microbiology</td>
<td>normal</td>
<td>C&amp;S</td>
</tr>
<tr>
<td>Urine (SPA) 2 mls</td>
<td>Clinical Chemistry</td>
<td>spin, store supernatant -20°C</td>
<td>Toxicology (City Hosp)</td>
</tr>
<tr>
<td>Urine (SPA) 2 mls</td>
<td>Clinical Chemistry</td>
<td>spin, store supernatant -20°C</td>
<td>amino and organic acids, oligosaccharides (BCH)</td>
</tr>
<tr>
<td>Cerebrospinal fluid (CSF)</td>
<td>Microbiology</td>
<td>Normal</td>
<td>Microscopy, culture and sensitivity</td>
</tr>
<tr>
<td>(a few drops)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Inform Consultant Paediatrician for Child Protection, if not already done.

**Skin biopsy** tissue culture within 24 hours.

Consider **muscle biopsy** – rarely needed, do only after discussing with IMD lab. Inherited Metabolic Disease (IMD) lab at BCH (0121 333 9942) – normal working hours.

Take a full **history**, using special history / examination sheet to record this information. This sheet will be used also by Consultant Paediatrician at subsequent visits, and any information not possible to collect initially can be collected then.

Complete **clinical examination** – rectal temperature, injuries, bruising, petechiae, retinal haemorrhage, dysmorphic, nourishment, any skull fracture? Record on special history / examination sheet.

Radiology – **skeletal survey**.

**Investigations**

Consider **infection**, **inherited metabolic disorders** and **forensic** causes.

**Infections**

*blood cultures* into aerobic and anaerobic bottles; if only a small volume available, set up aerobic in preference; put in incubator at 37°C (Microbiology dept.) if out of hours.

*Urine* by SPA into sterile bottle for microscopy and culture, save in refrigerator.

*Nasopharyngeal swab* if <8 hrs post-mortem: put in viral transport medium in fridge.

*Swabs* from any wounds or body fluids for microbiology into fridge.

**Inherited metabolic disorders (IMD)** are rare, but can cause death without significant prodromal symptoms and infection can precipitate an attack. Factors suggesting metabolic disorder include:

- consanguineous parents
- older age at death (over 6 months)
- previous infant death in family
- history of hypotonia or developmental delay
- hepatomegaly or hepato-splenomegaly.
These disorders may result in hyperammonaemia, hypoglycaemia without ketonuria, cardiomyopathy, or apnoeic attacks. Investigation is limited post-mortem by specimens available and interval between death and tissue sampling time.

If you suspect a metabolic disorder contact the IMD lab at BCH for advice (0121 333 9942)

In addition to blood and urine samples, skin biopsy should be performed if possible – follow the technique below and put the specimen in viral culture medium in Clinical Chemistry fridge at +4°C until transported to IMD at BCH. Transport within 24 hours of collection – before sending sample discuss with duty biochemist at IMD lab if normal working day, or on-call MLSO for Clinical Chemistry at BCH if weekend / holiday.

Specimens required
Blood – at least 1 ml in lithium heparin separate, freeze plasma at -20°C dried blood spots directly from syringe onto Guthrie card fluoride specimen (if available pre-mortem) separate, freeze plasma at -20°C Urine – in plain bottle spin and freeze supernatant at -20°C Skin biopsy for tissue culture at +4°C in viral culture medium. (See next page for detail.) Muscle biopsy rarely may be needed – get advice from IMD at BCH if metabolic disorder suspected.