Systems Analysis Investigation of Incidents
Quick Reference Guide
(To be read in conjunction with the HSE’s Handbook for Systems Analysis Investigations)
1. Introduction

Every year health service workers have millions of interactions with patients and service users. These interventions are often complex, delivered in high-pressure environments and involve multiple professionals working within multidisciplinary teams. Excellent care and outcomes are usually the result, but modern health care also carries significant risks. Adverse events happen and harm can and does occur. In many cases this harm could have been prevented. The consequences of these events for patients, service users, families, staff and organisations are so significant, that they warrant the mounting of a comprehensive response. It is the policy of the HSE that all safety incidents are identified, reported and investigated.

2. Safety Incident Management

Good safety incident management means being prepared in advance to effectively respond to a safety incident once it occurs. The HSE’s Safety Incident Management Policy describes the requirements for how we respond to serious safety incidents. The responsibilities of the Safety Incident Management Team (SIMT) include:

1. Remembering that your first responsibility is to support the patient or service user and their families and to ensure the safety of other patients or service users by conducting a risk assessment to identify any immediate actions that may be required.
2. The need for visible leadership in the aftermath of the incident, ensuring an effective and sustained management response. This includes the establishment of a Safety Incident Management Team.
3. The statutory requirement to report all serious adverse events including to the State Claims Agency.
4. Ensuring that staff affected by the incident are supported.
5. Getting an understanding of what happened and why? This means that following the management of immediate safety concerns, the Safety Incident Management Team must make an informed assessment of the incident to determine the type of investigation required.
6. Learning the lessons from what went wrong is at the heart of preventing future incidents. Identify what is wrong and take positive steps to put it right.

3. Investigations

Investigations are required to identify how and why safety incidents happen. Systems Analysis is a well recognised way of investigating safety incidents that has been adopted by the HSE as the approved approach to safety investigations. Analysis is used to identify areas for change and to develop recommendations which deliver safer care for our patients and service users.

The investigation involves the collection of data from the written and electronic records, individual interviews with those involved in delivering the care or service where the incident occurred and analysis of this data to establish the chronology of events that led up to the incident. It identifies the Key Causal Factors that the Investigation Team consider had an effect on the eventual adverse outcome, the Contributory Factors, and recommended control actions to address these, for the purpose of preventing future harm arising, as far as is reasonably practicable.

The systems analysis model for investigations focuses on prevention and learning, not blame or punishment. The focus of this type of analysis is on system-level vulnerabilities as opposed to individual performance.
4. Systems Analysis Investigation methodology

Healthcare services carry out incident investigations using systems analysis to find out:

- What happened.
- How it happened.
- Why it happened.
- What the organisation can learn from it and the changes the organisation should make to prevent it happening again.

The purpose of an investigation is to;

- Improve safety and, by doing this, to improve the quality of services
- Identify the factors in health and social care systems that contributed to the incident occurring
- Identify problems or deficiencies
- Ensure that lessons are learned
- Act as early warning mechanisms

The purpose of an investigation is not to;

- Identify publically the individuals or locations linked to the incident
- Apportion blame or fault
- Exonerate individuals or management
- Make decisions about clinical negligence
- Identify legal liability

5. Steps in the Investigation Process

**Step 1: Organise the investigation and gather the data**

i. The Chair of the SIMT (the Investigation Commissioner) will with the SIMT commission the Investigation and establish the investigation team (typically 2 members).

ii. An investigation plan is put in place by the SIMT which will be monitored by the SIMT throughout the investigation.

iii. All relevant consent is obtained to access relevant records (e.g. healthcare records).

iv. The Investigation Team collect all pertinent information about the incident and will plan and conduct the required interviews.

**Step 2: Determine the incident chronology**

i. The Investigation Team will develop a detailed chronology that demonstrates what happened and when.

**Step 3: Identify the Key Causal Factors and Incidental Findings**

i. From the analysis of relevant data and careful consideration of the chronology, the Investigation Team will determine whether any Key Causal Factors can be identified. Key Causal Factors are ‘issues that arise in the process of delivering and managing health services, which the Investigation Team consider had an effect on the eventual harm’

ii. Once the Key Causal Factors have been identified, the factors that contributed to each of the Key Causal Factors are identified. The Investigation Team may also highlight Incidental Findings. These are issues identified during the course of an investigation, which in the view of the Investigation Team did not impact on the outcome of care but point to a need for system improvement.
Step 4: Identify the Contributory Factors

i. The Contributory Factors Framework is used to analyse each identified Key Causal Factor and incidental findings (if appropriate) and to determine the Contributory Factors related to each of the Key Causal Factor(s). A Contributory Factor is defined as ‘a circumstance, action or influence which is thought to have played a part in the origin or development of an incident or to increase the risk of an incident’.

ii. Contributory factors are identified under the following areas:
   - Individual affected or harmed.
   - Task and technology related factors.
   - Individual (Staff) factors.
   - Team factors.
   - Work environmental factors.
   - Organisational and management Factors.
   - Institutional context Factors.

Step 5: Make recommendations

i. Recommendations are developed to address each Contributory Factor. In the context of the Systems Analysis Investigations, recommendations are ‘reasonable courses of action based on the best available evidence. They should address the identified Contributory Factors, and should have the best potential for preventing or reducing the risk of future harm arising from these Factors’.

ii. If the Contributory Factor is one that might exist somewhere else across the health service, this should be reflected in the investigation report and the relevant recommendations should be communicated by the Investigation Commissioner to other relevant parts of the health service for learning and quality and safety improvement purposes.

Step 6: Write the investigation report and submit to the Investigation Commissioner

The purpose of the report is to convey the methods and findings of the investigation and the proposed risk reduction and quality and safety improvement recommendations. These should be detailed in a logical, concise and comprehensive manner. The report itself will describe;

- The Investigation Team and the Terms of Reference for the Investigation
- The sources of information that were used (e.g. interviews/review of healthcare records etc.)
- The sequence of events or chronology that led to the incident or complaint.
- Analysis of the Key Causal Factors identified.
- Recommendations to prevent these causes from resulting in an incident in the future

The recommendations contained in the Final Report of the investigation must inform the development of an action plan for how the organisation will manage the causes of harm identified by the investigation.

6. Fair Procedure and Natural Justice

The investigation process must at all times ensure that fair procedures are afforded to all parties involved in the investigation.

7. Publishing reports

Final investigation reports are anonymised in terms of location and identifiable persons. They should be provided to the patient or service user and his/her family member or advocate, unless they have expressed a wish not to receive the final report. They are also made available to relevant stakeholders who have responsibility for making decisions, allocating resources, planning for and implementing related recommendations.

HSE investigations would usually only be published widely by the Commissioner, such as on the internet, when this is specifically requested by the patient or service user and where they have explicitly granted permission for investigation report to be published.

8. Associated policies and guidelines

The HSE’s Safety Incident Management Policy and Open Disclosure: National Guidelines.

- **Terms of Reference of Systems Analysis Investigation Agreed.**
- **Investigation Team commences the 6 steps of Systems Analysis Investigation.**
  - **Step 1: Organise the investigation and gather the data.**
  - **Step 2: Complete the Incident Chronology.**
  - **Step 3: Identify Key Causal Factors (KCFs) and Incidental Findings.**
    - **Can KCFs be identified?**
      - **YES**
        - The Investigation Team details the KCF(s) in the report. Several KCF may be identified for the incident.
      - **NO**
        - The Framework of Contributory Factors are used to identify the Contributory Factors related to each of the KCFs and/or Incidental Findings.
        - **Step 4: Identify the Contributory Factors related to the KCF(s) and/or Incidental Findings.**
        - If a contributory factor/hazard is one that may exist somewhere else on the HSE this should be reflected in the Investigation Report by the Investigation Team and any recommendations are to be communicated to other relevant parts of the HSE by the Investigation Commissioner.
        - **Step 5: Make Recommendations that will Reduce Risk and Improve Quality and Safety.**
        - **Step 6: Write the Investigation Report.**
      - **Can Incidental Findings be identified?**
        - **YES**
          - The Investigation Team implement principles of Fair Procedure. All who participated in the investigation process are provided an opportunity to give comments and observations on the sections of the report that are relevant to their involvement and to check those sections for factual accuracy.
          - **The Investigation Team audit the Investigation Report.**
          - Include an apology in the Investigation Report if Key Causal Factors were identified.
        - **NO**
          - **The Investigation Team seek consent from the person(s) harmed to access their healthcare records.**
          - All information pertinent to the investigation is gathered.
          - A draft chronology of events is developed.
          - **Conduct Interviews.**
          - **Confirm the chronology of events.**
          - **Commence developing ideas re Key Causal Factors and Contributory Factors.**
          - **The Investigation Team clearly indicates in the report how they came to this conclusion. Any Incidental Findings are identified.**
          - **The Investigation Team audit the Investigation Report.**
          - **Submit the report to the Investigation Commissioner.**

**Note:** The investigation process must sit within the context of the overall management responsibilities of the SIMT as outlined in Section 2 of this reference guide.
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