Human Error: Management and Consequences

Police to review case of fatal calcium dose given to baby

Doctors had row before baby Abbie’s fatal overdose on 11 May 2017

Calcium overdose killed baby girl
An official report into a tragic death has revealed a series of mistakes at a hospital where a newborn baby was given a lethal dose of calcium. The inquest at Airedale General Hospital in Leeds heard that the baby, who was born prematurely, was given 20 times the recommended dose of calcium.

The baby’s mother, who was 22 weeks pregnant at the time, had to be taken to hospital by ambulance after the mistake. The inquest heard that the baby died within hours of being born.

The family of the baby, who was named as Abbie, said they were “devastated” by the loss of their baby.

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Mark Gritten, Ex-CEO NHS Acute Trusts

Mark left the Army in 1990 as a 38 year-old Lieutenant Colonel with a silver medal from the 1976 University Boat Race and an MBE for service in Northern Ireland. His first post in the NHS was as a Unit General Manager of a 'single-unit' district in Hartlepool providing all local health services. From there Mark went on to experience purchasing and joint commissioning for 12 months as executive director of planning with Tees Health Authority. In 1994 he was appointed as chief executive of East Somerset NHS Trust that at the time was a combined acute-community Trust with about 300 acute beds, 150 community hospital beds and community services. In 1998 he took up the chief executive post at the Royal Berkshire and Battle Hospitals Trust. During the next 6 years he completed a £126m site rationalisation to move acute services off the Battle Hospital site. He started his next chief executive post in Weston-super-Mare at the end of 2003. Unfortunately he had to retire in 2007 as a result of recurring health problems and now teaches and undertakes consultancy on a part-time basis. Despite this, he feels privileged and lucky to have served for 13 years as an acute Trust chief executive and has extensive experience in health and social care system-wide development and ‘turnaround’.

INDEPENDENT ROOT CAUSE ANALYSIS REPORT
INTO
THE ADVERSE INCIDENT THAT LED TO THE DEATH OF A
PAEDIATRIC CARDIAC SURGERY PATIENT
AT
UNITED BRISTOL HEALTHCARE NHS TRUST
ON
27 MAY 2005

MARK GRIFFIN
INDEPENDENT CHAIRMAN
October 2007
Conclusion

“The evidence indicates that the error was caused by inadvertent human error, *perfusion systems failures at national and local levels*, and other local system problems.”

The incident
“The incident occurred because of latent weaknesses that lay dormant for years hidden by healthcare professionals compensating for inadequacies within national and local systems

- **Nationally**: regulation and guidance on perfusion practice in cardiopulmonary bypass.
- **Locally**: infrequent risk assessment, protocols and practice not updated, and a lack of checklists and double-checking procedures.”
Problems

- Regulation
  - “In particular some questions have been raised as to the status of the perfusionist as a member of the overall clinical team with apparent responsibility for the administration of potentially dangerous substances. Furthermore it appears that, despite being in existence for 50 years as a group of clinicians who have considerable responsibility in terms of not only patient care, but also patient survival, there is little in the way of legislation governing their practice or conduct.”
Audience response

- Have you read in detail either your states licensure or your state medical code for perfusion?

Yes / No

Problems

- Inconsistent protocols and guidance
  - “National perfusion recommendations and guidance are incomplete and/or inconsistently applied across cardiac surgery units.” In this circumstance, the “national standard did not specify the frequency or circumstances of blood gas measurement”. Guidelines set minimum standards, but are not regulated and “do not suggest practical protocols” for the conduct of bypass. Rather, they “appear to propose that such protocols should be formulated locally”
  - Protocols had not been updated in 10 years. No oversight existed to discover this failure
Audience response

- Have your read your society’s perfusion standards in detail?
  Yes / No

- When was the last time you reviewed your department protocols in their entirety?
  1 year ago, 2-5 yrs ago, 6-10 yrs ago, never

Problems

- Checklists and verification
  - “It was clear that the perfusion team were not in the habit of cross checking drugs with another member of the clinical team prior to their administration. At the local level, this was directly at odds with the drug administration policy of the trust. In all but the most extreme emergency situations, a system of check-listing the clinical scenario should be carried out prior to initiating cardio-pulmonary bypass”
Audience response

• Do you have a standardized procedure for cross-checking critical procedures

Yes / No


“Overall, one drug administration error was reported for every 133 anaesthetics”

“We conclude that drug administration error during anaesthesia is considerably more frequent than previously reported”
85% of the participants had experienced at least one drug error or "near miss".

Most anesthesiologists read drug labels “most of the time” but surprisingly few consider the drug name to be the most important feature used to identify a drug. More than 25% of the respondents reported that there was not a single feature used for identification, rather, an assembly of distinct characteristics was used to identify a drug. For example, one respondent stated that the drug ampoule was identified, “like a face”, not by individual elements but rather the whole presentation.

Anesthesiologists may have been reluctant to report all their mistakes. Undoubtedly, the number of errors reported by individual participants was likely low.
The label on any drug should be carefully read before a drug is drawn up or injected. Contents of labels should be optimized according to agreed standards in respect of the information included. Formal organization of drug drawers and workspace should be used with attention to tidiness, position of ampoules and syringes, separation of similar or dangerous drugs, removal of dangerous drugs (e.g., KCL) from the OR. Labels should be checked specifically with a second person or a device. Drugs should be presented in prefilled syringes. Drugs should be drawn up and labelled by the staff who will administer them.

Problems

- **Application of oversight policies**
  - “There are weaknesses in the implementation of some policies that led to inadequate risk assessments and performance management that if undertaken more robustly might have drawn attention to weaknesses”
  - “For several years the professional body. has tried to gain professional regulation”. “This society accredits… however, it does not enforce standards of working”. “Changes to regulation should not be just to define perfusionists as ‘independent’, but to provide a better safeguard for patients”.

Problems

- Application of oversight policies
  - The perfusion society “carries some responsibility for this incident because it does not appear to have disseminated learning from other perfusion incidents between its members”

- International Consortium for Evidence Based Perfusion
- Government Relations Committee
- Safety Committee
- Standards and Guidelines
- Journal of Extracorporeal Technology
- AmSECT Today
- PERForm Registry