

When death is not death: A systematic review of patients with delayed discovery of life after erroneous pronouncement of death

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Objectives

To describe individuals pronounced dead by a healthcare professional and subsequently discovered alive after at least four hours; to identify the medical conditions that may mimic death.

Design

Systematic review.

Setting

MEDLINE(R), EMBASE, CINAHL and AMED via Ovid and generative AI were searched. Risk of bias was assessed using the Joanna Briggs Institute (JBI) Critical Appraisal Checklist for Narrative Evidence.

Participants

Individuals declared circulatory or somatically dead by a healthcare professional at least 24 hours after birth and subsequently discovered alive at least four hours after. Reports in English, French, Hindi, Marathi, and Romanian were eligible, but no geographical location restriction was applied. Reports were excluded for failing to meet eligibility criteria. Of 1610 reports screened, 102 met eligibility criteria, describing 26 unique participants from 16 countries; 17 were male.

Results

The interval between declaration of death and discovery of life ranged from four hours to five days, with most (20/26) discovered within 24 hours.

Conclusions

Erroneous death declarations occurred across a broad range of patient ages and clinical circumstances. Predominance of media reports and limited clinical documentation indicated that such events may be underreported in clinical settings, restricting our scope for statistical analysis. Systematic documentation and transparent reporting could strengthen the evidence base for research and clinical outcomes. Finally, we proposed premature death declaration as a “Never Event”.

Trial registration

Pre-registered on Open Science Framework website on 8 June 2026

Keywords

systematic review; differential diagnosis; Lazarus syndrome; death

Table of Contents

1. Introduction and background	3
2. Methods	4
a) Eligibility criteria.....	4
b) Search strategy	4
c) Screening	4
d) Data extraction	5
e) Data synthesis	5
f) Quality Analysis	6
3. Results	6
a) Search strategy, screening and data extraction results	6
b) Risk of bias assessment results.....	9
4. Discussion	9
a) Strengths and limitations	9
b) Future implications and further research	10
5. Appendix	11
6. References	14

1. Introduction and background

The biological process of dying is determined by a set criterion at a discrete point in time. It can be confirmed using somatic, circulatory, or neurological criteria depending on clinical circumstances (1). The process and professional requirements for its confirmation vary between jurisdictions (2). The determination of death has immediate clinical, ethical, and legal consequences. Once death is confirmed, resuscitative or therapeutic interventions cease, relatives may be informed, the body may be transferred to a mortuary, and certification or coronial procedures may begin (3). An erroneous declaration of death is therefore a serious patient safety event. Such errors may arise from failure to perform or correctly interpret the required examination, or from physiological and pathological conditions that obscure signs of life.

Many reports continue to describe events where patients have been pronounced dead by healthcare professionals and subsequently found to be alive (4). However, previous reviews of such events have primarily focused on autoresuscitation (5), but this is just one explanation. To our knowledge, the broader group of people pronounced dead and discovered alive after a prolonged interval has not been systematically reviewed yet.

We therefore conducted a systematic review of reports of individuals who were pronounced dead by a healthcare professional and were found to be alive at least four hours later. We aimed to describe the characteristics of reported cases, the circumstantial data of reported cases and clinical and legal outcomes.

Characterising both failures in the determination process and clinical mimics of death, this review aimed to identify gaps in clinical education and to make progress towards a stronger standardised death declaration practice.

2. Methods

We conducted a systematic review of cases where individuals were incorrectly pronounced dead by a healthcare professional and who were subsequently discovered to be alive at least four hours later.

a) Eligibility criteria

The Population, Concept and Context (PCC) framework was used to develop our eligibility criteria (6). Included reports were of humans who had been declared dead by a healthcare professional at least 24 hours after birth and were subsequently discovered to be alive at least four hours after death declaration. Eligible reports were published in English, French, Hindi, Marathi and Romanian only and there were no restrictions on the publication year. Eligible peer-reviewed articles were case reports or case series, and due to anticipated scarcity of publications in academic literature, we also included grey literature. These include conference abstracts, legal reports, media reports and AI searches.

Reports were excluded if full text was unretrievable, sources were considered unverified, reports have insufficient information to deduce eligibility, no individual patient data, fraudulent death declarations or cases where erroneous declaration of death was established forensically post-mortem.

b) Search strategy

“MEDLINE®, EMBASE, CINAHL and AMED were searched via Ovid on 8 June 2026. Searches were conducted without date restriction and were limited to case reports or case series.

c) Screening

All search results were exported into Covidence software, where duplicates were automatically removed before screening. First, title and abstract screening was conducted with two of the reviewers (MH, SP, NP, IC, RK, RS, JR). A third reviewer arbitrated where there was a disagreement and this same process was used during full text eligibility assessment.

If only one reviewer was fluent in the language of a report, Google Translate was used for an English translation that the fluent reviewer validated against the original text before being assessed by a second reviewer and, where necessary, an arbitrator.

d) Data extraction

Extracted data items included: (i) report characteristics; (ii) patient characteristics; (iii) circumstance of erroneous death; (iv) circumstances of the discovery of signs of life; and (v) subsequent clinical and legal outcomes. Reviewers searched for additional reports via web searches and AI if data items were missing.

Where we considered reports to outline the same patient, parameters of having two or more of the following identifiers matching were set: patient name/initials, age, sex, location, date of event, healthcare institution, presumed cause of death, duration of erroneous death declaration, and discovery circumstances. This was if no identifiers conflicted. Any variations between reports of the same patient were reconciled by two independent reviewers, resolved by a third for arbitration if necessary. Then, with multiple reports describing the same individual, data from all of these was consolidated into a single patient report. Discrepancies were resolved with a majority-voting among reports, where a tie resulted in prioritising the latest publication, given further facts could have been reported later than immediately after the incident.

e) Data synthesis

We used two systems to summarise results using narrative synthesis, where all analysis was performed on Google Sheets.

The first system summarised reports, giving the source and further information. The second summarised unique individuals. It provides the number of reports per patient, corresponding data range of the reports, demographic variables, clinical details of initial death diagnosis and discovery of signs of life. Any specific data items that were unavailable were recorded as 'Not mentioned'. Where a report was unclear or did not provide the date of erroneous death declaration, the year of publication was used. If the involvement of a healthcare professional was unclear, but declaration of death occurred in a hospital, the certifier was assumed to be a doctor.

For the purposes of data aggregation, reports that stated "overnight" were interpreted as 12 hours, "next day" as 24 hours and "severe hours" as too imprecise to be coded. Variables were summarised with median, interquartile range and range if continuous, or frequencies and percentages if categorical.

We hypothesised that longer intervals between declaration of death and discovery of life would be associated with reduced likelihood of hospital discharge or survival.

f) Quality Analysis

Using the Joanna Briggs Institute (JBI) Critical Appraisal Checklist (6) for textual and narrative evidence, the risk of bias of all included sources was assessed.

The quality assessment was independently conducted by two reviewers, where a third arbitrated if necessary. We categorised the quality as low (0-2 points), moderate (3-4 points), or high (5-6 points).

The tool was piloted independently by two reviewers on 10 randomly selected reports to ensure consistent interpretation of parameters and application of the criteria. Following the pilot, operational definitions and clarifications were developed to improve consistency.

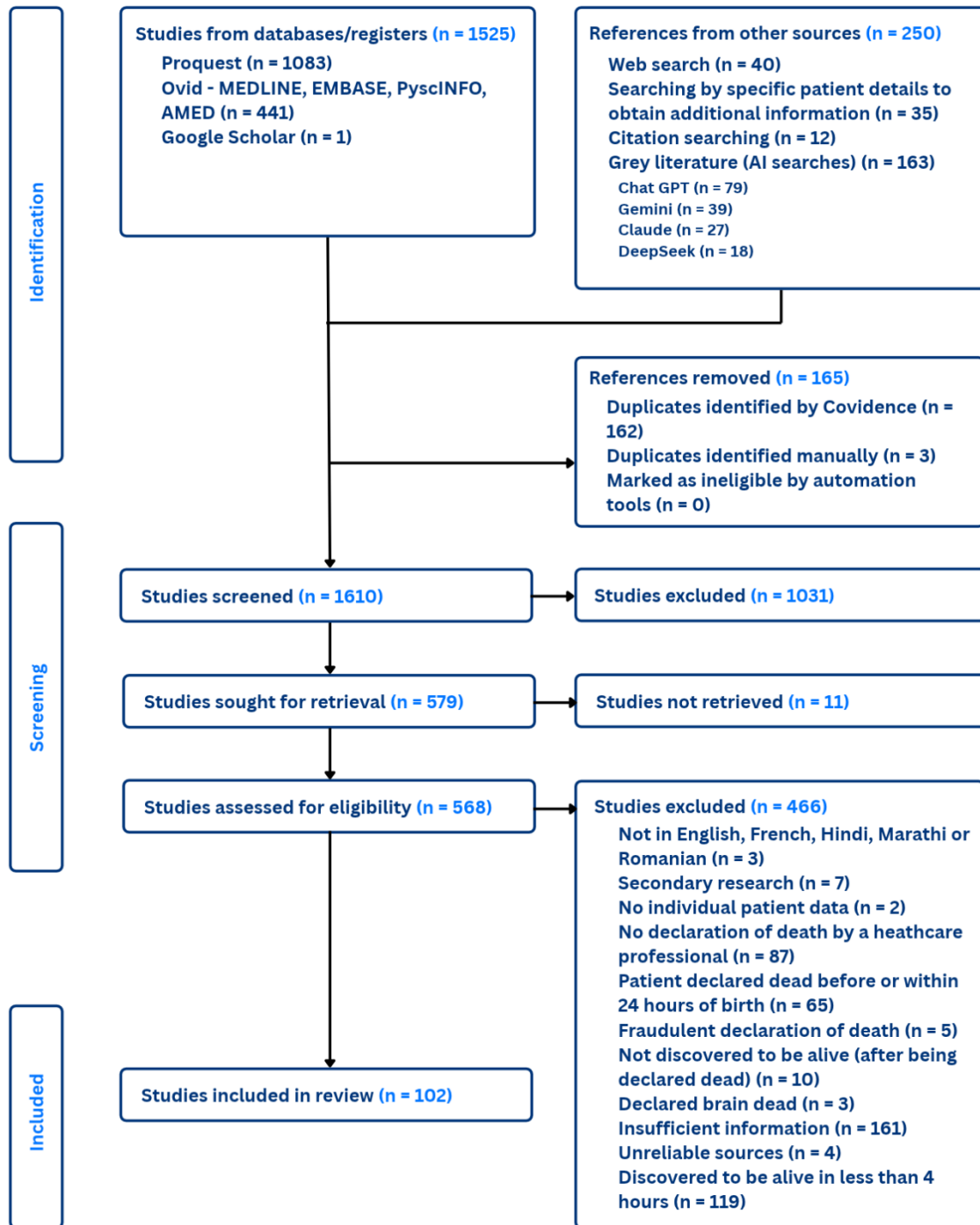
3. Results

a) Search strategy, screening and data extraction results

Our search strategy yielded 1775 articles, with a final 1610 after deduplication.

ProQuest returned 1,083 results.

A further manual AI search yielded 163 reports.



Following screening, eligibility assessment and data extraction, 102 articles were included in the review to give 26 unique cases of erroneous death declaration.

The 26 unique cases were spread across 16 countries across five continents, with Europe (n = 10, 38%) having the highest. India, Russian and the USA had the highest, which each country contributing 3 unique cases. Source publication dates ranged between 1985 and 2026.

The ages of patients ranged from 2 days to 91 years, with only one case where age was not reported. There were 17 (65%) male patients and 9 (35%) female patients.

Patients were reported to have a wide range of comorbidities. These included previous suicide attempts (n = 1, 3%), bleeding disorders (n = 1, 3%), intestinal obstruction (n = 1, 3%), dementia (n = 1, 3%), brain damage (n = 2, 7%), malignancy (n = 2, 7%), cardiovascular conditions (n = 2, 7%), respiratory conditions (n = 2, 7%), disability (n = 2, 7%), perinatal conditions (n = 3, 10%) and neurological conditions (n = 3, 10%). There were 10 (33%) where no comorbidities were mentioned.

Death was most commonly declared in a hospital setting (n = 18, 69%), followed by the patient's home (n = 3, 12%), a nursing home (n = 1, 4%), the scene of an accident (n = 1, 4%) and a nursing home (n = 1, 4%); setting was not reported for 2 cases (8%).

Where the certifying professional's role was documented (25/26 cases), a doctor certified death in the majority (n = 23, 92%), with the remainder certified by paramedics (n = 1, 4%) or emergency medical technicians (n = 1, 4%).

The most common presumed cause of death was road accidents (n = 6, 23%), cardiovascular complications (n = 5, 19%), gastrointestinal complications (n = 3, 12%), cancer (n = 1, 4%), epileptic seizure (n = 1, 4%), iatrogenic (n = 1, 4%), suicide attempt (n = 1, 4%), with it being unreported in 8 cases (31%).

The length of time of erroneous death declaration ranged from 4 hours to 5 days. Most cases (n = 20, 77%) were identified within 24 hours of initial declaration of death. The location of discovery of erroneous death included patients that were found in a mortuary (n = 18, 69%), placed in a coffin (n = 5, 19%), crematorium (n = 1, 4%), at home (n = 1, 4%) and at the hospital (n = 1, 4%).

Upon discovery, the most common main signs of life were body/eye movements (n = 18), breathing (n = 8), vocalisations (n = 8) and body temperature (n = 1), where patients had none, one or a combination of these signs of life.

The patient outcome at the last available follow-up was ambiguous or not reported for one case. Apart from this, 14 patients (54%) were reported as still alive and 11 (42%) were reported to have subsequently died following their discovery. The interval between discovery and actual death in these 11 patients ranged from 12 minutes to 47 years. Actual cause of death of patients was rarely

reported (n = 18, 69%), with the rest reported as cardiovascular complications (n = 4, 15%), hypothermia (n = 2, 8%), respiratory failure (n = 1, 4%) and dehydration, metabolic failure and central oedema (n = 1, 4%).

Half (13) of the cases went on to be investigated or had a court case pending at the time of final reporting.

Our subgroup analysis that from all the countries we screened eligible reports for, 9 (35%) were classified as high-income country, 12 (46%) as upper-middle income country and 5 (19%) as lower-middle income country.

b) Risk of bias assessment results

Following the evaluation for risk on 6 domains (source credibility, contextualisation, logical sequence, reader-narrator congruence, conclusion validity and narrative appropriateness based on the JBI criteria) we found 87 (85%) of studies were reported as having a quality assessment result of high and 15 (15%) having a result of moderate.

4. Discussion

To the best of our knowledge, this is the first systematic review of individuals medically pronounced dead and subsequently found alive after a prolonged interval of at least four hours. The clinical determination of death has clinical, legal and ethical consequences, in which errors carry significant consequences, diverting time, resources and attention (7). As the criteria for neurological death remain globally ambiguous (8), this study focuses on cases of somatic and circulatory death (9).

We identified 26 unique patients from 102 eligible reports across 16 countries, with ages ranging from two days to 91 years. The year of erroneous death diagnosis ranged from 1915 to 2024, indicating that these are not just historical events. Markedly, 14 patients (54%) were reported to be alive at the time of publication of the sources, suggesting that erroneous death declaration is not necessarily synonymous with imminent death.

a) Strengths and limitations

Strengths of this study included the international scope of the search, and the inclusion of sources rated as high or moderate following quality assessment. The use of multiple reviewers for

data extraction and, where necessary, arbitration also improved reproducibility and reduced the risk of errors and reviewer bias.

Limitations can be considered in relation to the published literature and the synthesis itself. The predominance of news and non-medical media reports is an important limitation, as cases that reach mainstream media are unlikely to be representative of the wider clinical population, introducing selection and reporting bias. This has been exacerbated by the scarcity of available clinical documentation, also restricting the scope of statistical analysis. Furthermore, the level and quality of detail varied considerably between reports, with nationality and ethnicity not consistently distinguished. Additionally, reliance on media sources, rather than clinical records, may indicate that cases are underreported within clinical settings.

Limitations of the synthesis include a small sample of 102 reports from which patient data were extracted. This reduced our statistical power and the scope of our subgroup analysis. Additionally, restricting inclusion to selected languages may have resulted in cases published in other languages being missed; the external validity of our findings was therefore limited.

b) Future implications and further research

Systematic documentation of cases involving delayed discovery of life should capture key patient and circumstantial variables, including the setting and circumstances of the death declaration, method of diagnosis, suspected cause of death, relevant comorbidities, time to discovery, and subsequent clinical outcomes. Reports should also document whether established protocols for recognising and managing conditions that may mimic death were followed, and where deviations may have occurred and the reason, as this would allow more robust research to ensure that the existing protocols are adequate (10). Such documentation may also facilitate more transparent communication with patients and their families, especially regarding the subsequent course of action.

Finally, erroneous declaration of death warrants consideration within national patient-safety reporting frameworks. Although classification as a 'Never Event' could increase institutional attention and facilitate systematic reporting and learning, the current NHS Never Events framework is under review (11), with concerns that its terminology and implementation may contribute to blame and disproportionate scrutiny. Any future framework should therefore prioritise systems-based learning and fair treatment of staff. NHS England's Being Fair tool, which

replaced the previous Just Culture Guide, provides a structured approach for considering individual accountability only where concerns about conduct or fitness to practise arise. This balance may be particularly important where fear of blame or disciplinary consequences could otherwise discourage reporting and learning from such events.

5. Appendix

Table y. Agreed operationalisation of the Quality Assessment

1. Is the generator of the narrative a credible or appropriate source?	Q1: Is there either 1) a directly sourced witness to the declaration/discovery, or 2) an identifiable authoritative source with direct institutional knowledge detailing the declaration or subsequent discovery?
2. Is the relationship between the text and its context explained? (where, when, who with, how)	Q2: Do we know what happened, to whom and where?
3. Does the narrative present the events using a logical sequence so the reader or listener can understand how it unfolds?	Q3: Can we form a basic timeline of what happened and when?
4. Do you, as reader or listener of the narrative, arrive at similar conclusions to those drawn by the narrator?	Q4: Do we agree with the narrator's own central conclusion? (attributed allegations are not the narrator's conclusion; explicitly qualified hypotheses are not firm conclusions; clearly rhetoric language is acceptable)
5. Do the conclusions flow from the narrative account?	Q5: Does the evidence justify that central conclusion, without selling an unsupported extraordinary (legal, clinical, etc) claim?
6. Do you consider this account to be a narrative?	Q6: Is there storytelling or author input beyond bare facts? (scene-setting, dialogue, character details, opinions, interpretations)

Table 2: Characteristics of included cases

Patient ID	Country	Year	Number of records	Name	Sex	Age at diagnosis of death (years unless mentioned otherwise)	Setting of death declaration	Professional role of certifier	Presumed Cause of Death
25	USA	1915	2	Essie Dumbar	F	30	Home	Doctor	Epileptic seizure
18	France	1937	1	Angelo Hays	M	19	Not mentioned	Doctor	Road accident
26	Romania	1972	3	Titus Honceriu	M	29	Hospital	Doctor	Road accident
4	Italy	1985	2	Mario Arena	M	2 days	Hospital	Doctor	Cardiovascular complication
10	South Africa	1993	1	Sipho William Mdletshe	M	20s	Not mentioned	Doctor	Road accident
7	Germany	1995	1	Erna N.	F	74	Hospital	Doctor	Cardiovascular complication
22	Taiwan	2000	2	Hsu Jui-Nien	M	75	Hospital	Doctor	Road accident
21	France	2002	14	Not mentioned	M	68	Nursing home	Doctor	Not mentioned
20	USA	2007	2	Not mentioned	M	Not mentioned	Home	Emergency medical technician	Suicide attempt

23	Brazil	2010	2	Maria das Dores da Conceica o	F	88	Hospital	Doctor	Not mentioned
6	India	2011	3	Radhe	M	17	Hospital	Doctor	Gastrointestina l complication
13	Russia	2011	3	Lyudmila Steblytska ya	F	61	Hospital	Doctor	Not mentioned
19	USA	2012	6	Jaylen Dorsey	M	8	Hospital	Doctor	Not mentioned
14	China	2013	2	Not mentione d	M	28 days	Hospital	Doctor	Not mentioned
5	Poland	2014	5	Janina Kolkiewicz	F	91	Home	Doctor	Not mentioned
9	Kenya	2014	3	Paul Mutora	M	24	Hospital	Doctor	Gastrointestina l complication
11	Russia	2015	1	Fagilyu Mukhame tzyanov	F	49	Hospital	Doctor	Cardiovascular complication
2	South Africa	2016	8	Msizi Mkhize	M	28	Accident scene	Paramedic s	Road accident
3	China	2016	5	An An	M	25 days	Hospital	Doctor	Cardiovascular complication
17	Spain	2018	5	Gonzalo Montoya	M	29	Prison cell	Doctor	Not mentioned

8	Russia	2020	1	Zinaida Kononova	F	81	Hospital	Doctor	Iatrogenic
1	India	2021	13	Sriresh Kumar	M	40	Hospital	Doctor	Road accident
12	Mexico	2022	3	Camila Roxana Martinez Mendoza	F	3	Hospital	Doctor	Gastrointestinal complication
15	Brazil	2022	5	José Ribeiro da Silva	M	62	Hospital	Doctor	Cancer
16	Ecuador	2023	7	Bella Montoya	F	76	Hospital	Doctor	Cardiovascular complication
24	India	2024	2	Rohitash Kumar	M	25	Hospital	Doctor	Not mentioned

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