

Dramatische gerechtelijke dwalingen

Forensische statistiek: wat is de kans op toeval?

Richard Gill, 8 October 2026, OKW Apeldoorn

Enige kleine voorbeelden

Beoordelen van kansen is moeilijk

- $\text{Risico} = \text{kans} \times \text{effect}$
- Kansen zijn relatief

Voorbeeld 1



- Ontslag van 3 cardiologen *Ruwaard van Putten Ziekenhuis, Spijkenisse*. Volgens Hoge Raad is een kans van 5% een “erg kleine kans”, mag op nul worden gezet
- <https://uitspraken.rechtspraak.nl/details?id=ECLI:NL:HR:2022:1454>
- <https://www.rijnmond.nl/nieuws/2262615/cardioloog-werkt-door-als-huisarts-om-strijd-tegen-de-staat-te-betalen>

> 100 - 15

[1] 85

> 85 / 15

[1] 5.666667

Voorbeeld 2

Kansen zijn relatief

- 15% van de gevangenen in Engeland zijn onschuldig.
Verhouding 15% : 85% is ongeveer 1 : 6; ongeveer 1 op de 6 is onschuldig
- In ontwikkelde landen, tussen 5% en 10%
- Maar let op: gerechtelijke dwalingen komen vaker voor bij **ernstige** en **complexe** zaken met erg veel **indirect** bewijs [*circumstantial evidence*] ... dat zijn zaken met hele **zware** straffen, dus met **lange** gevangenschap
- Het percentage van “onjuiste veroordelingen” zal dus veel lager kunnen zijn dan 15%
- Stel dat scheelt **gemiddeld** een factor 5 in gemiddeld verblijfsduur
- Verhouding tussen onschuldig/schuldig **gevangenen** ongeveer 1 : 6.
Qua **veroordelingen**, dus: 1/5 : 6, oftewel 1 : 30, oftewel: ongeveer 5% van de **veroordelingen** zijn onjuist.

Voorbeeld 3

Wat is er met Engeland aan de hand?

- Er zitten 6 verpleegkundigen in de Verenigde Koninkrijk langdurig (zo niet levenslang) vast voor moorden op patiënten mbv insuline
- In al deze zaken is de insuline-moord de enige “forensisch” bewezen moord; de andere moorden en moord-pogingen zijn mbv indirect bewijs “aangetoond”. De “bewezen” insuline-moord leverde het beslissende steunbewijs.
- Maar in verhouding is de percentage verpleegkundigen in Britse gevangenissen 10 keer groter dan je op grond van hun percentage in de beroepsbevolking zou verwachten
- Zijn Britse verpleegkundigen veel vaker psychopaten dan niet Britse?

Interlude

Heksenvervolgingen

- Niet iets van de middeleeuwen: piek in heksenvervolgingen was in heel Europa begin / midden 17e eeuw. Dus **na** “*Age of science*”, **na** de reformatie, **wel** in een tijdperk van instabiliteit en oorlog ... **maar** tezamen met begin van de Verlichting
- Voorbeeld: *Harderwijks heksenproces* (1594) tegen *Naele Aelts*. Werd beschuldigd door ene Joost Toenis van betovering van zijn vrouw in kraambed. Hij raadpleegde de pastoor van Apeldoorn om de betovering te laten bezweren. Ook illegaal, dus werd Toenis ook gevangen gezet. Aelts bekende deze betovering eerst maar trok later haar bekentenis in. Toenis werd daarom vrijgesproken (!). Het proces tegen Aelt kostte 75 gulden. Dat was heel erg duur, daarom dat heksenprocessen in Nederland heel zeldzaam bleven

Heksenvervolging in Chester (UK)

De hoed van **Peter Bradshaw**, fanatieke rechter, oorspronkelijk uit de graafschap *Cheshire*, die in London president was van het Gerechtshof die Koning Karel I tot de dood veroordeelde. De hoed is van ijzer, bedekt met vilt – hij vreesde aanslagen op zijn leven, en droeg ook een ijzeren harnas onder zijn kleding. In Chester heeft hij later 32 heksenprocessen voorgezeten, met drie doodstraffen tot gevolg.

<https://morrisoxford.co.uk/bradshaws-hat/>

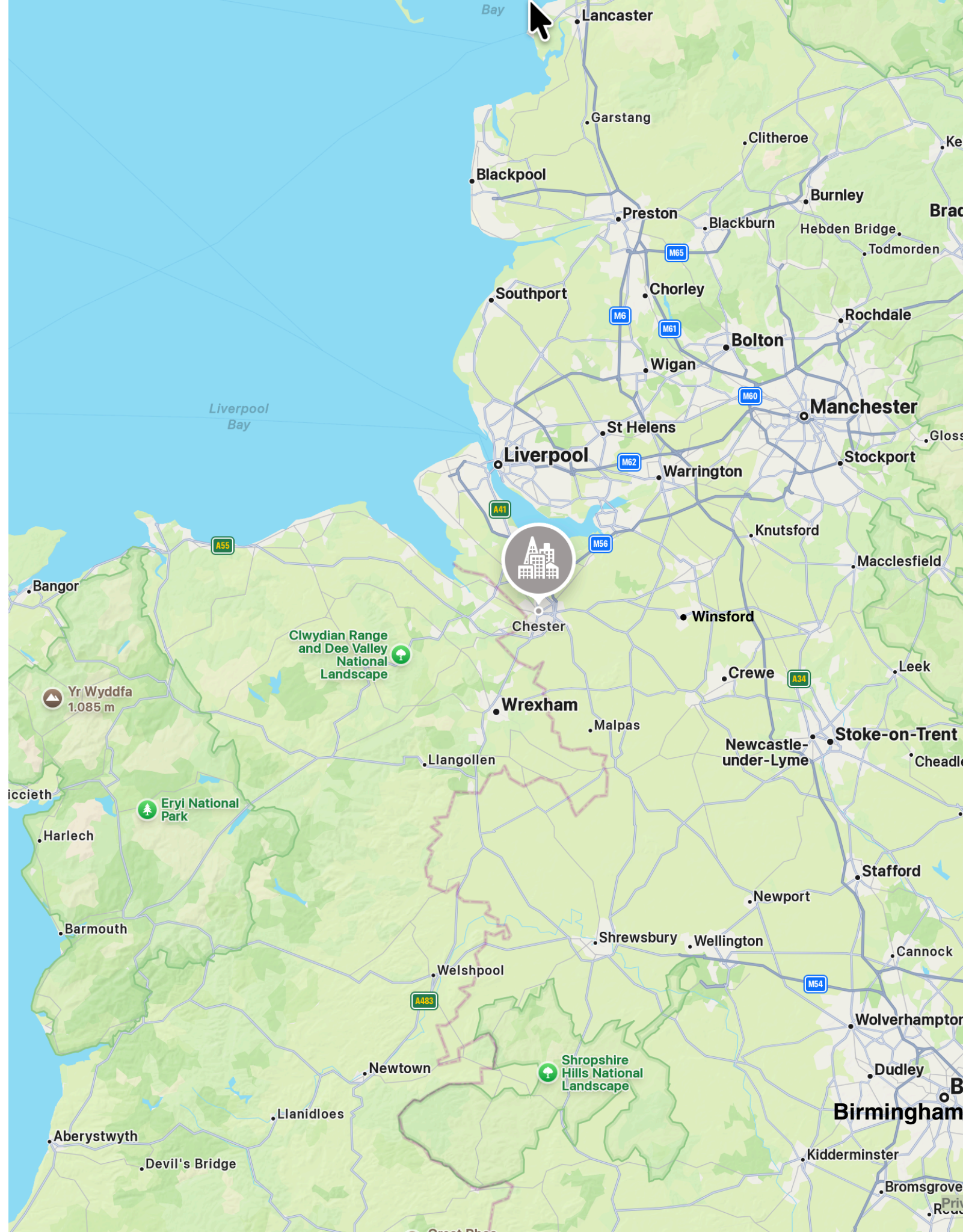
[Foto: Ashmolean museum, Oxford]



Chester

Bewaker van de grens tussen Engeland en Wales

Chester is a cathedral city and the county town of Cheshire, England, on the River Dee, close to the England-Wales border. With a built-up area population of 92,760 in 2021, it is the most populous settlement of *Cheshire West and Chester*. It is also the historic county town of Cheshire and the second-largest settlement in Cheshire after Warrington. Chester was founded in 79 AD as a "castrum" or Roman fort with the name Deva Victrix during the reign of Emperor Vespasian.



The Countess of Chester Hospital

and its Maternity Unit

Right: five years ago; left: one year ago



The Countess of Chester Hospital

The Maternity and Children Units as they are today



The case of Lucy Letby

De eerste veroordeling

August 18, 2023

- Manchester Crown Court
- Judge: Mr Justice Goss
- Lucy Letby is convicted of the murder of 7 babies (Babies A, C, D, E, I, O, and P) and attempted murder of 6 babies (Babies B, F, G, I, L, and M/N), after a ten month trial
- Methods Used: Air injection, insulin poisoning, and force-feeding milk
- Sentence: Whole life order (imprisonment for the rest of her life with no possibility of release) given in August 2023.



Credit: Cheshire Constabulary

The case of Lucy Letby

(More nails in the coffin)

- CPS was granted a retrial of one case where jury had been undecided. In July 2024, Letby was also convicted of attempting to murder Baby K.
- Letby's legal team applied to the Court of Appeal twice, one for each of the previous judgements. Both applications were dismissed by the Court of Appeal.
- Current Status: Letby is serving 15 whole-life orders for multiple murders and attempted murders.
- Cheshire Constabulary announced further (attempted) murder charges involving nine infants at Liverpool Women's Hospital. They will also charge hospital management with gross negligence manslaughter, corporate manslaughter, and perverting the course of justice.
- But: **January 2026:** Crown Prosecution Service (CPS) announced Letby would face no new criminal charges regarding the additional allegations. They concluded that the evidential test was not met.

The case of Lucy Letby

(Yet more nails in the coffin: The Thirlwall Inquiry)

- Established as a statutory public inquiry on **October 19, 2023**, by the UK Secretary of State for Health and Social Care
- Terms of Reference: Letby is a serial killer. Why was she not stopped earlier?
- **15 September 2026**. Final report. Main conclusions: management failed to listen to whistleblowers (the consultants).
- Numerous absolutely stupid recommendations.

The case of Lucy Letby

Light at the end of the tunnel?

- February 4, 2025, retired neonatologist Dr. Shoo Lee and a panel of 14 international medical experts held a press conference in London—alongside barrister Mark McDonald and Conservative MP David Davis—claiming there is no medical evidence to support the conviction of former nurse Lucy Letby
- Letby's new defence team has submitted an application to the CCRC (Criminal Cases Review Commission)
- The CCRC might refer the case to the Court of Appeal
- The Court of Appeal might allow the case to be reopened, it might even quash the existing convictions

The history

Focus on June 2015–June 2016

- **January 2012:** Lucy Letby starts work at the Countess of Chester Hospital
- **Early 2015:** Lucy Letby completes a specialist training course
- **June 2015:** Unexpected deaths of Babies A, B and D; collapse of Baby C. There are usually 2 or 3 deaths per year. Consultants notice that Lucy Letby was involved with all four events.
- **Through till June 2016:** numerous more unexpected and unexplained deaths and collapses. Consultants' suspicions of Letby keep on growing. Last straw is the triplets Babies O, P, R and then Baby Q.

The history

Investigations and recriminations

- **July 2016:** Lucy Letby is moved to administrative tasks
- **Autumn 2016:** Several internal and external medical investigations are done. No proof of malfeasance is found. Two (out of 14) deaths remain unexplained and a forensic investigation is recommended
- The RCPCH evaluates the unit and publishes damning findings. Letby is cleared. The cause of the spike in deaths is not identified. (No statistician or epidemiologist, no obstetrician on the team of 6 experts)
- Letby issues a complaint that she was unjustly bullied by the specialists. Her complaint is upheld. 6 consultants and one obstetrician are ordered to apologise to her in writing and in person. She is allowed to resume duties on the NICU
- **March 2017:** Consultant paediatricians Brearey (“lead neonatology”) and Jayaram (“lead paediatrics”) use the conclusion that two deaths are still unexplained to convince management to approach the police

The history

Investigations and recriminations

- **March 2017:** Police request medical data on all deaths and all unexpected unexplained collapses from CoCH. The material is presumably gathered and curated by Brearey. (Jayaram is very busy with his side career as TV doctor)
- The materials arrive but the police have no clue what to do next
- **May 2017: First newspaper reports**
- **July 2017:** Welsh retired paediatrician Dr Dewi Evans [witch-hunter general?] introduces himself to the police and determines in ten minutes that foul play caused Baby P or Q's liver damage

The history

Police get to work

- **3 July, 2018:** Letby is arrested at her home in Westbourne Road, Chester at 6am and officers search the three-bedroom property. **Newspaper and TV crews film police digging up her front garden.** Searches also take place at her parents' home in Hereford and at her place of work in the hospital's Risk and Patient Safety Office. Police say the investigation has widened to 17 deaths and 15 non-fatal collapses between March 2015 and July 2016.
- **10 June, 2019:** Letby is re-arrested at her parents' home.
- **10 November, 2020:** Letby is arrested again (woken at dawn) before she is charged. Police body-cam footage later sold to NetFlix. Appears in court for the first time two days later.
- **4 October, 2022:** Letby goes on trial at Manchester Crown Court accused of the murders of seven babies and the attempted murders of 10 others.

What evidence was there?

Basically, none.

- The spike in deaths and collapses, and their association with nurse Lucy Letby
 - The roster chart
- The alleged confession note
- The alleged insulin poisonings (Babies F and L)
 - 2 (?) off the chart insulin/C-peptide ratios

Lucy Letby: the spike

Early neonatal deaths
2013 + 2014
versus 2015

> 1 - pbinom(7, 14, 1 / 3)
[1] 0.0576163

Trust or Health Board/unit	Period	Late fetal loss	Stillbirth	Early neonatal deaths	Late neonatal deaths	Post neonatal deaths	All deaths
Countess of Chester Hospital NHS Foundation Trust summary by year	2013 reported deaths	4	8	3	1	2	18
	2014 reported deaths	2	9	3	1	0	15
	2015 reported deaths	4	12	8	1	0	25
	2016 reported deaths	1	2	7	1	0	11
	2017 reported deaths	0	11	2	2	0	15
	2018 reported deaths	0	6	2	0	0	8

Early neonatal deaths
2013 + 2014
versus 2015 + half 2016

> pbinom(8 + 5 - eps, 6 + 8 + 5, 1.5 / 3.5, lower.tail = FALSE)
[1] 0.02205686

3, 3, 8, 7, 2, 2

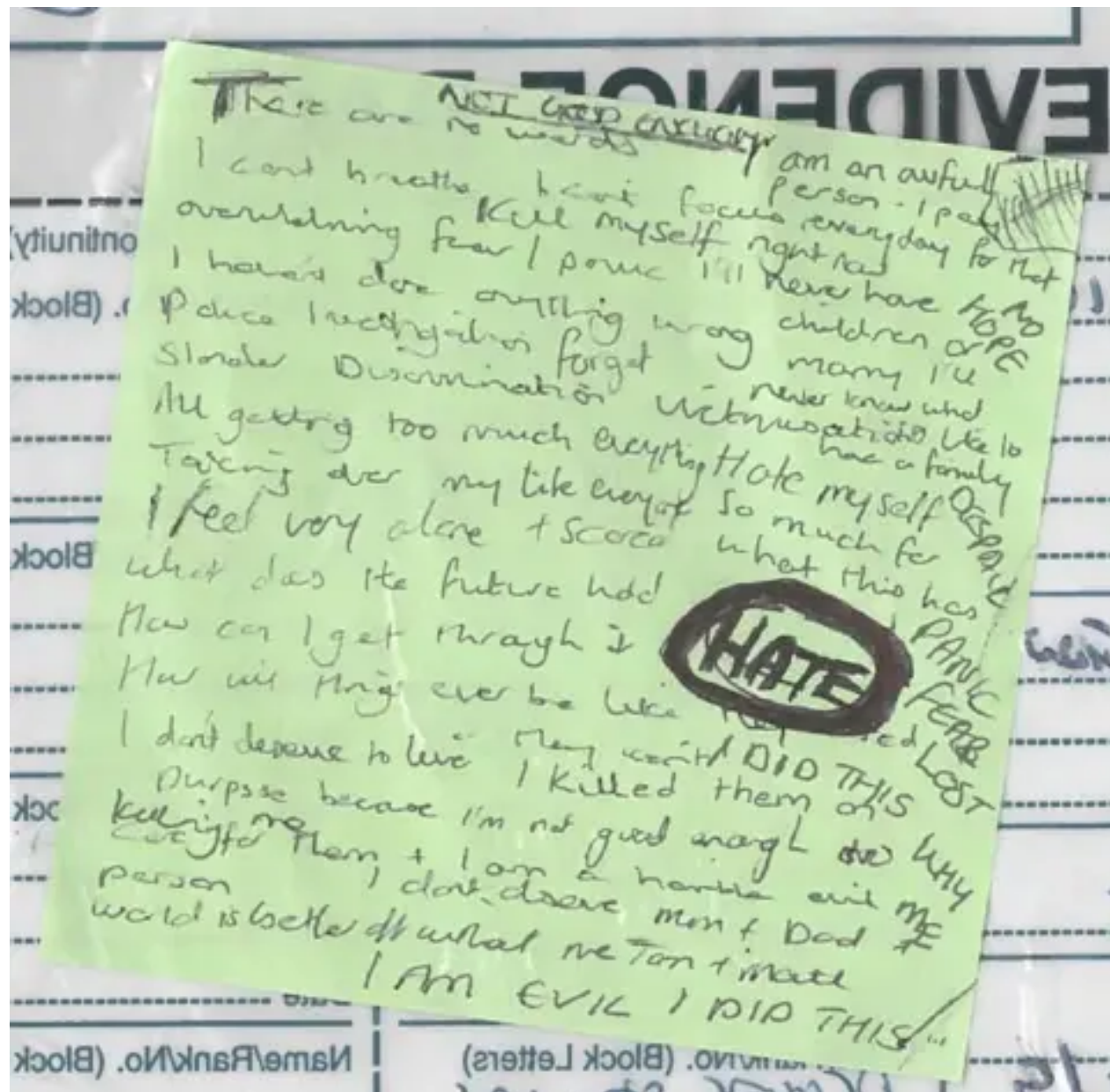
Lucy Letby: the roster chart

Operation Hummingbird				Exhibit Ref: CEH/16																				Staff Presence Report																					
Chart 1: Nurses present on clinical and administrative duties Summary																																													
Nursing Staff on Clinical and Administrative Duties																																													
Event	Baby	Date Shift Started	Shift Type	Ailsa SIMPSON		Angela McSHANE	Ashleigh HUDSON	Belinda SIMCOCK	Bernadette BUTTERWORTH	Caroline BENNION		Caroline OAKLEY	Cheryl CUTHBERTSON-TAYLOR	Christopher BOOTH	Eirian POWELL	Elizabeth MARSHALL		Janet COX	Jean PEERS	Jennifer JONES-KEY	Joanne WILLIAMS	Kathryn WARD		Laura EAGLES	Lisa WALKER	Lucy LETBY	Mary GRIFFITH	Melanie TAYLOR	Minna LAPPALAINEN	Nicola DENNISON	Patricia STEELE	Rebecca MORGAN	Samantha O'BRIEN	Shelley TOMLINS	Sophie ELLIS		Valerie PARKES	Valerie THOMAS	Vicky BLAMIRE	Yvonne FARMER	Yvonne GRIFFITHS	Total			
1	Child A + G	08/06/2015	NIGHT							X						X									X	X	X	X								X							7		
2	Child B G	09/06/2015	NIGHT										X									X			X	X	X									X							6		
3	Child C + G	13/06/2015	NIGHT													X	X									X		X			X													6	
4	Child D + G	21/06/2015	NIGHT								X	X					X					X					X																	5	
5	Child E + G	03/08/2015	NIGHT					X				X													X	X													X					5	
6	Child F G	04/08/2015	NIGHT					X					X												X	X									X	X		X					6		
7	Child G G	06/09/2015	NIGHT	X										X									X		X	X																		5	
8	Child G G	21/09/2015	DAY							X		X			X		X	X								X				X					X				X	X				11	
9	Child H NG	25/09/2015	NIGHT													X										X								X		X		X			X			5	
10	Child H + -	26/09/2015	NIGHT											X		X	X									X								X										5	
11	Child I	30/09/2015	DAY				X		X						X		X		X						X	X		X				X						X			X				11
12	Child I	12/10/2015	NIGHT				X					X						X						X	X																			5	
13	Child I	13/10/2015	NIGHT									X						X			X			X	X										X						X				7
14	Child I + G	22/10/2015	NIGHT				X							X												X		X											X					5	
15	Child J -	26/11/2015	NIGHT									X												X	X	X				X											X			6	
16	Child J -	17/12/2015	DAY												X				X		X			X	X					X		X								X		X		9	
17	Child K -	16/02/2016	NIGHT									X									X				X										X				X					5	
18	Child M	09/04/2016	DAY				X	X	X								X								X	X																		6	
19	Child L G	09/04/2016	DAY				X	X	X								X								X	X						X													7
20	Child N -	02/06/2016	NIGHT											X											X		X								X			X						5	
21	Child N -	14/06/2016	NIGHT					X	X											X		X	X		X	X																		7	
22	Child O + G	23/06/2016	DAY							X			X					X							X		X			X	X	X					X				X	X			11
23	Child P	23/06/2016	DAY							X			X					X							X		X			X	X	X					X				X	X			11
24	Child P + G	24/06/2016	DAY		X								X					X							X	X							X				X				X				8
25	Child Q -	25/06/2016	DAY														X									X	X		X	X															5
Total				1	1	2	5	5	2	2	3	7	2	7	3	5	7	6	2	1	3	3	2	4	6	25	7	7	2	3	6	3	2	3	4	4	5	6	2	6	5				
*('X' indicates 'on duty' presence on the shift, where a suspicious event has been identified)																																													

*('X' indicates 'on duty' presence on the shift, where a suspicious event has been identified)

Deaths in NICU: 7 G + 1 “-” on chart; 5 not on chart. 4 deaths very soon after transfer

The confession



NOT GOOD ENOUGH

There are no words

I can't breathe I can't focus

overwhelming fear i panic

I haven't done anything wrong

Police Investigation

Slander Discrimination Victimisation

All getting too much everything

Taking over my life every day

I feel very alone and scared

What does the future hold

How can I get through it

How did things ever be like

I don't deserve to live

purpose because I'm not good enough to

care for them + I am a horrible evil person

I don't deserve mum + dad +

world is better off without me tom + matt

I AM EVIL I DID THIS

I am an awful person - I pay everyday for that

kill myself right now

I'll never have children or

never know what like to

have a family

Hate myself so much for what this has done

DESPAIR

PANIC

FEAR

LOST

they accused

DID THIS

they went

I killed them on

WHY

ME

NO HOPE

THIS IS THE BREAKDOWN OF THE INFAMOUS "GREEN CONFESSION"
IT IS QUITE CLEARLY NOTHING OF THE SORT.

I HAVE BROKEN DOWN EVERY WORD (EXCEPT THAT ARE INDECIPHERABLE)
THE ORDER IN WHICH TO READ THE NOTE IS BY COLOUR.

FIRST TO READ IS IN REDACTED

THEN THE TEXT IN REDACTED

THEN REDACTED

FOLLOWED BY REDACTED

FINALLY THE TEXT IN REDACTED

Insulin immunoassay warning

Please note that the insulin assay performed at RLUH is not suitable for the investigation of factitious hypoglycaemia. If exogenous insulin administration is suspected as the cause of hypoglycaemia, please inform the laboratory so that the sample can be referred externally for analysis.

Insulin	
Description	A peptide hormone secreted physiologically by the β cells of the islets of Langerhans in the pancreas.
Indication	Investigation of the cause of hypoglycaemia.
Additional Info	Proteolytic cleavage of 86 amino acid proinsulin polypeptide prior to secretion produces mature insulin molecule (51 amino acids) and equimolar quantity of c-peptide. Insulin is secreted in response to activation of sulphonylurea-sensitive K^+ channel in response to hyperglycaemia and other secretagogues. Insulin is the dominant hormone regulating blood glucose concentration and has numerous modes of action that reduce circulating glucose levels. Insulin action is impaired in diabetes mellitus through either absolute deficiency (type 1) or relative tissue resistance (type 2). Tumoural secretion of insulin (insulinoma) is a rare cause of hypoglycaemia. Very rarely, tumours may cause hypoglycaemia through secretion of proinsulin or IGF-2. Please note that the insulin assay performed at RLUH is not suitable for the investigation of factitious hypoglycaemia. If exogenous insulin administration is suspected as the cause of hypoglycaemia, please inform the laboratory so that the sample can be referred externally for analysis.
Concurrent Tests	Plasma glucose to confirm hypoglycaemia. Serum c-peptide and serum ketones where appropriate.
Dietary Requirements	Fasting sample required
Interpretation	Insulin must be interpreted in the context of the prevailing glucose level, ideally when the patient is demonstrably hypoglycaemic (plasma glucose ≤ 2.5 mmol/L in adults). Normal insulin/glucose ratio: < 5.0 mU/mmol. (See also entry on c-peptide/insulin ratio: http://rlbuhtnet/jps/c_peptide_insulin_ratio.pdf)
Collection Conditions	Fasting sample (where appropriate) or sample collected during hypoglycaemic attack. <u>Inpatients</u>: Sample must be received in laboratory within 30 minutes of venepuncture. <u>External hospitals</u>: Separate serum within 30 minutes of collection and freeze immediately. Send samples frozen.
Frequency of testing	As required, contact lab for urgent analysis.

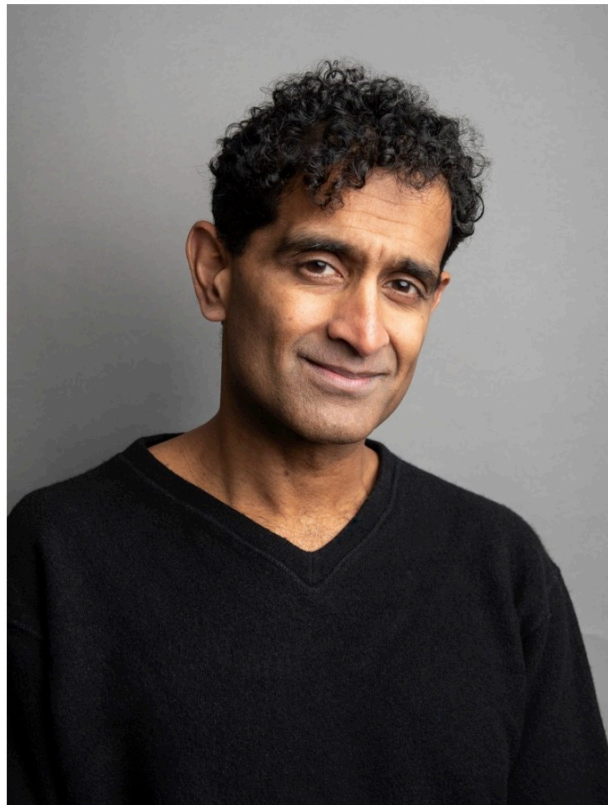
Dramatis personae (1/4)

<https://www.blueprintforfreespeech.net/en/prize/recipient/2023/jayaram-brearey-gibbs>

Dr Ravi Jayaram, Dr Steve Brearey, Dr John
Gibbs and the other paediatric consultants at
the Countess of Chester NHS Trust

2023 BLUEPRINT UK

WHISTLEBLOWING PRIZE



Dramatis personae (2/4)

https://en.wikipedia.org/wiki/James_Goss_%28judge%29



James Richard William Goss was born on 12 May 1953 to judge William Alan Belcher Goss and his wife Yvonne. He was educated at [Charterhouse School](#), an independent [boarding school](#) in Surrey. Goss studied at [Durham University](#), where he was a member of [University College](#), and graduated in 1974 with a [Bachelor of Arts](#) (BA) degree. He was later appointed an [honorary fellow](#) of [Durham Law School](#).

Dramatis personae (3/4)

Retired paediatrician Dr Dewi Evans (lead prosecution expert)



Dramatis personae (4/4)

Lady Justice Thirlwall (chair of Thirlwall Inquiry)



Twins and multiples

Baby	Baby's fate
A	Neonatal death
B	Survived
E	Neonatal death
F	Survived
J	Survived
J's sibling	Died In utero > 24 wks
L	Survived
M	Survived
N	Survived
N's sibling	Unknown
O	Neonatal death
P	Neonatal death
O & P's sibling	Survived
Q	Survived
Q's sibling	Died In utero > 24 wks