Reducing Avoidable Term admissions to neonatal units

A view from the Safety Data

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NRLS

- Voluntary reporting system
- Various local systems in place – e.g. Datix
- Collated at Trust level – exported to national centre based at Imperial
- Provide expertise and advice on design/methodology of larger data searches
- Central database for learning
- Aim to identify and tackle important patient safety issues at their root cause.

NRLS

Reviewer relies on the quality and quantity of the data entered

Can be an incomplete picture – “snapshot”

Assumptions

Degree of harm entered by reporter

- Subjective
- sometimes mistaken for potential rather than actual harm
- Follow up locally
- Increased numbers of reports most likely due to increases in reporting levels of trusts.
- Data not yet suitable for making valid time based comparisons.

Methodology

- All incidents from and exported to the NRLS on or before 20/10/2014
- Reported as occurring between 1st April 2011 and 31st March 2014 (NNRD)

- All incidents affecting neonates

Incident category = Access/ admission

- delay/ failure in access to hospital / care OR

- unexpected readmission / re attendance OR

- unplanned admission / transfer to specialist care unit

Methodology

Tables of all incidents by Degree of Harm:

Incident Category		PD09 Degree of harm (severity) - display				
Incident Category - Lvl1	Incident Category - Lvl2	No Harm	Low	Moderate	Severe	Death
Access, admission, transfer, discharge (including missing patient)	Access / admission - delay / failure in access to hospital / care	229	47	6	1	0
	Access / admission - unexpected readmission / reattendance	1,185	294	56	1	1
	Access / admission - unplanned admission / transfer to specialist care unit	3,511	1,409	300	25	8
Total		4,925	1,750	362	27	9

5% Samples from no harm – n = 247 /4,925

5% Samples from low harm – n = 88/1750

All moderate and severe harm and death- n = 398

→ 733 incidents reviewed → 63 not relevant (31, 6, 26)

Findings

Set out to:

- Establish reports where admitted to: neo/paeds
- Establish avoidable / unavoidable incidents
- Ascertain the most frequently reported safety incidents – top 5
- Ascertain any new themes outside of what NNRD has shown
- Understand themes behind each Top 5
- Ascertain location of admission from – IP or OP

Aim to establish location of care

Set out to:

- Establish location infant admitted to: neonatal /paeds
- No clear cut locations within NRLS which separate paeds and neonatal areas
- Helpful fields within NRLS = “ward / ICU / Public place” etc
- Use free text

- Community based example

Aim to establish location of care

Sample where reported as “No Harm” and “Moderate, Severe or Death”

Summary themes/variables =

“dehydration, jaundice, weight loss, poor feeding”

Admitted from: home

Admitted to location:

1. impact on ITU capacity
2. readmission to neonatal services policies

Consider bulk of these readmissions to be avoidable?

Aim to establish location of care

Sample where reported as:

low harm and moderate, severe or death

Level of harm reported	Not known	NICU SCBU	PICU or NICU (unclear)	TC	Ward	CAU/ A&E	Total
No harm							
Moderate severe or death							
Total							

Aim to establish location of care

Sample where reported as:

low harm and moderate, severe or death

Level of harm reported	Not known	NICU SCBU	PICU or NICU (unclear)	TC	Ward	CAU/ A&E	Total
No harm	13	7	1	5	7	5	38
Moderate severe or death	6	12	16	1	11	2	48
Total	19	19	17	6	18	7	86

Aim to establish location of care

Level of harm reported	Not known	NICU SCBU	PICU or NICU (unclear)	TC	Ward	CAU/ A&E	Total
No harm	13	**7**	**1**	5	7	5	38
Moderate severe or death	6	**12**	**16**	1	11	2	48
Total	19	**19**	**17**	6	18	7	**86 (42% ICU)**

42% of selected criteria where certainty of admission location = ICU
(capacity for those in need if these admissions avoidable)

Aim to establish location of care

Level of harm reported	Not known	NICU SCBU	PICU or NICU (unclear)	TC	Ward	CAU/ A&E	Total
No harm	13	**7**	**1**	**5**	7	5	38
Moderate severe or death	6	**12**	**16**	**1**	11	2	48
Total	19	**19**	**17**	**6**	18	7	**86 (29%)**

29% of selected criteria where certainty of admission location = neonatal service - readmission policies

Aim to establish avoidable/unavoidable

What do we determine as avoidable/unavoidable?
Not clear cut!
Babies admitted for management of asphyxia = yes
? but not APH?

Babies admitted from a PNW with hypoglycaemia and hypothermia – yes?
SGA/LBW on pathway, regular feeds – good PN care

Babies admitted from home with poor feeding, weight loss, lethargy, dehydration – yes!
Raised CRP – 184?

Each incident to be reviewed on own merits but limited information….. Assumptions?

Ascertain most frequently reported incidents

Significant overlap of clinical issues – resp+sepsis+hypothermia+ hypoglycaemia –

Need agreed methodology to unpick

Top 5 NNRD seen in NRLS – as clearly defined reasons

1. Asphyxia n = 130 (107 = MSD harm)
2. Respiratory n = 112 (42 meconium)
3. Poor feeding n = 63 (no jaundice)
4. Jaundice n = 58 (Jaundice resulting from PF, weight loss)
5. Sepsis n = 46
6. Hypoglycaemia n = 42

Asphyxia

Asphyxia (Encephalopathy)

Where clear that incident resulted in a degree of OR potential for brain injury n = 130

- *BBA in poor condition - 5*
- *Abruption with poor condition - 4*
- *Shoulder dystocia only IF led to asphyxia*
- *"Poor condition"*

Excluded where evidence that no potential or actual brain injury stated:

BBA, seizures where no cause, encephalopathy, cerebral infarct, birth trauma (fractures), cord prolapse

Other themes

1. GIT n = 25

   Pyloric stenosis, plug, bowel obstruction etc

2. Congenital abnormality/ screening for n= 23

3. NAS n = 3

Themes behind each of the Top 5

Assumptions especially when co-existing symptoms

Further searched guided by expertise within the room

Need agreed methodology and rationale

Makes the case for local review of all TA

Location of admission from

	No harm	Low harm	MSD	Total	%
In-patient	130	47	259	436	59.5
Home	56	22	92	170	23.2
Not known or not relevant	60	19	48	127	17.3
				733	100%

Specific conditions

Poor feeding

	No harm	Low harm	MSD	Total
In patient	1	2	2	5
Home	23	12	21	56
Not known	0	2	0	2

Conclusions

Rich data source

Findings show parallels between NNRD and Safety data

Needs further interrogation to improve understanding

Data provides evidence base for improvements

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