Case study two: Improvements to 2 year follow up assessments for at risk neonates in a district general hospital setting: meeting metrics vs improving quality of assessments

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2 Case study two

Improvements to 2 year follow up assessments for at risk neonates in a district general hospital setting: meeting metrics vs improving quality of assessments

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Background: Woodland Neonatal Unit at Watford General Hospital, West Hertfordshire NHS Trust caters for up to 1200 admissions per year. It is one of the busiest level 2 units within the East of England Neonatal Network. The unit has contributed data to the NNAP since its inception in 2007. Completion of two year outcome assessment forms for babies born less than 30 weeks gestation was less than satisfactory (≤80%) in 2013/2014. Moreover, none of this cohort of babies had a formal neurodevelopmental assessment. In this case study, we demonstrate how we have used NNAP 2 year follow up data benchmarks to guide our quality improvement project. We show how we improved data completion rates while at the same time increasing the proportion of babies who had a formal developmental assessment.

What we did

We arranged for brainstorming sessions between all relevant stakeholders to identify key areas for improvement and discussed potential solutions (Figure 2). The team considered providing home visits as a regular service but due to staff working patterns and constraints we were only able to provide that for two patients (at parent's request). A specialist clinic was set up to improve compliance. The team included a neonatologist, physiotherapist and a clinic coordinator. Eligible infants born at <30 weeks were prioritised. Appointments were given on discharge and reminders & alerts were set up for 18-30 months range. Bayley Scales of Infant & Toddler Development III (BSID) were used for the assessments. A BadgerNet data analyst was appointed to facilitate real time data monitoring which allowed zero latency feedback to the lead consultant.

Figure 1: Testing neuromotor skills at two year BSID assessment

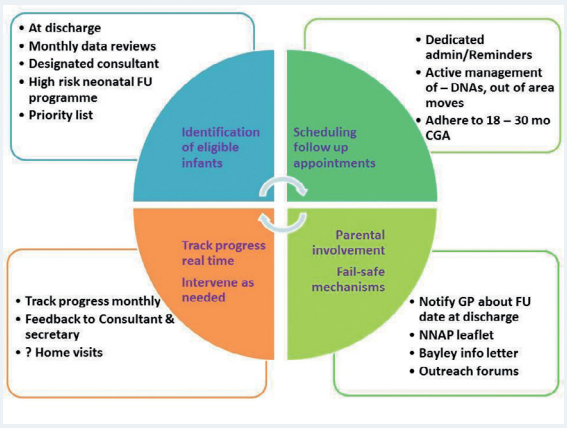

Figure 2: Key issues/solutions that emerged during brainstorming sessions

What we achieved

Table 1 shows steady improvement from 2013 to 2017 in the results for the NNAP audit measure of 2-year health status follow-up completion. There was a small decline in 2016 as 2 babies were seen outside the 18-30 months' target. Table 2 shows that BSID assessments increased from 0 in 2013 to 75% in 2017. DNA rates increased initially in 2015 on introduction of the Bayley Assessment Clinic but using iterative PDSA cycles this was brought down to 6% in 2017.

Table 1: 2 year neurodevelopmental follow up assessment over the years 2013-17

	Level 2 – Neonatal Unit		
	Eligible babies	**2-year assessment form completed***	**2-year health data completed**
2013	16	11 (69%)	11/11 (69%)
2014	25	20 (80%)	17/25 (68%)
2015	29	29 (100%)	29/29 (100%)
2016	19	17 (89%)	9/19 (47%)
2017 (to May 2017)	20	20 (100%)	15/20 (75%)

*The results in this column include babies for whom any data was entered, not only health data i.e. "Not assessed for other reason" and "Lost to follow up".

Table 2: Bayley assessment clinic attendance and DNA rates: 2013-17

	Eligible babies	**Bayley assessment**	**DNA (Bayley clinic)**	**Died**	**Moved out of area**
2013	16	0/16 (0%)	N/A	0	0
2014	25	0/25 (0%)	N/A	0	3
2015	29	9/29 (31%)	17/29 (58%)	0	3
2016	19	8/19 (42%)	3/19 (15%)	1	7
2017 (to May 2017)	20	15/20 (75%)	1/20 (5%)	0	4

Parental feedback was obtained through an anonymous questionnaire at the end of each clinic appointment which asked about pre-clinic communication, in clinic experience, parent understanding of process and communication of BSID outcomes; parents rated the service as 'very good' (5.5/6 on Likert scale).

Suggestions for adaptation for other units:

- ✓ Engage all key stakeholders when discussing NNAP report findings
- ✓ Dedicate resources towards clinic administration/data entry and feedback
- ✓ Multidisciplinary set up ideal for Bayley clinics
- ✓ Active clinic management to reduce DNA rates
- ✓ Set up avenues for user (parent) feedback

Feedback to NNAP:

Patients who move out of area pose a unique challenge for completion of two year outcome assessments and influence outcome data. We would suggest that NNAP/BadgerNet develop mechanisms to allow reassignment of patients to units closer to their home.

Acknowledgements

Mr and Mrs Martin, for sharing a picture of Issac's Bayley assessment.

N.B The RCPCH has secured permissions for the use of imagery within this case study.

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