

Extremely Preterm Births at NWH

**Outcomes for babies born at 23-25
weeks gestation**

Background

- The birth of a baby at the threshold of viability (22–24 weeks of gestation) presents complex clinical and ethical challenges
- Decision to offer intensive care can be highly controversial
- Decisions have to focus on the best interests of the baby while outcomes are difficult to predict
- Attitudes of HCP can impact outcomes

Background

- Evidence of improved outcomes at extremely preterm gestation over the years
- Outcomes for 23 week babies not too dissimilar to babies born at 24 weeks gestation if survived to NICU admission
- Critique of Annual Clinical Report 2014
- PMMRC report 2018

Change in approach

- Previous guideline – active intervention from 24⁺⁰ weeks gestation
- 2015-2016 guideline amended to allow for more proactive intervention from 23⁺⁰ weeks
- Multidisciplinary & family-centred approach with development of an individualised plan including comfort care or active intervention

2016 ACR

Preterm outcomes 23 week infants

- Previous external reviewer highlighted low survival of infants born at 23 weeks compared to some ANZNN NICUs
- 5 liveborn infants in 2016
- 4 infants admitted to NICU
 - (cf 4 infants admitted between 2008 and 2015)
 - All received antenatal steroids (but only 1 “complete”)
 - All developed IVH (2 Grade 4, 1 Grade 3, 1 Grade 2)
 - Only one survivor
 - Deaths of 3 infants with major IVH on days 3, 3 and 5
- Overall survival since 2007 nearly 60% - selection bias previously?

2016 ACR

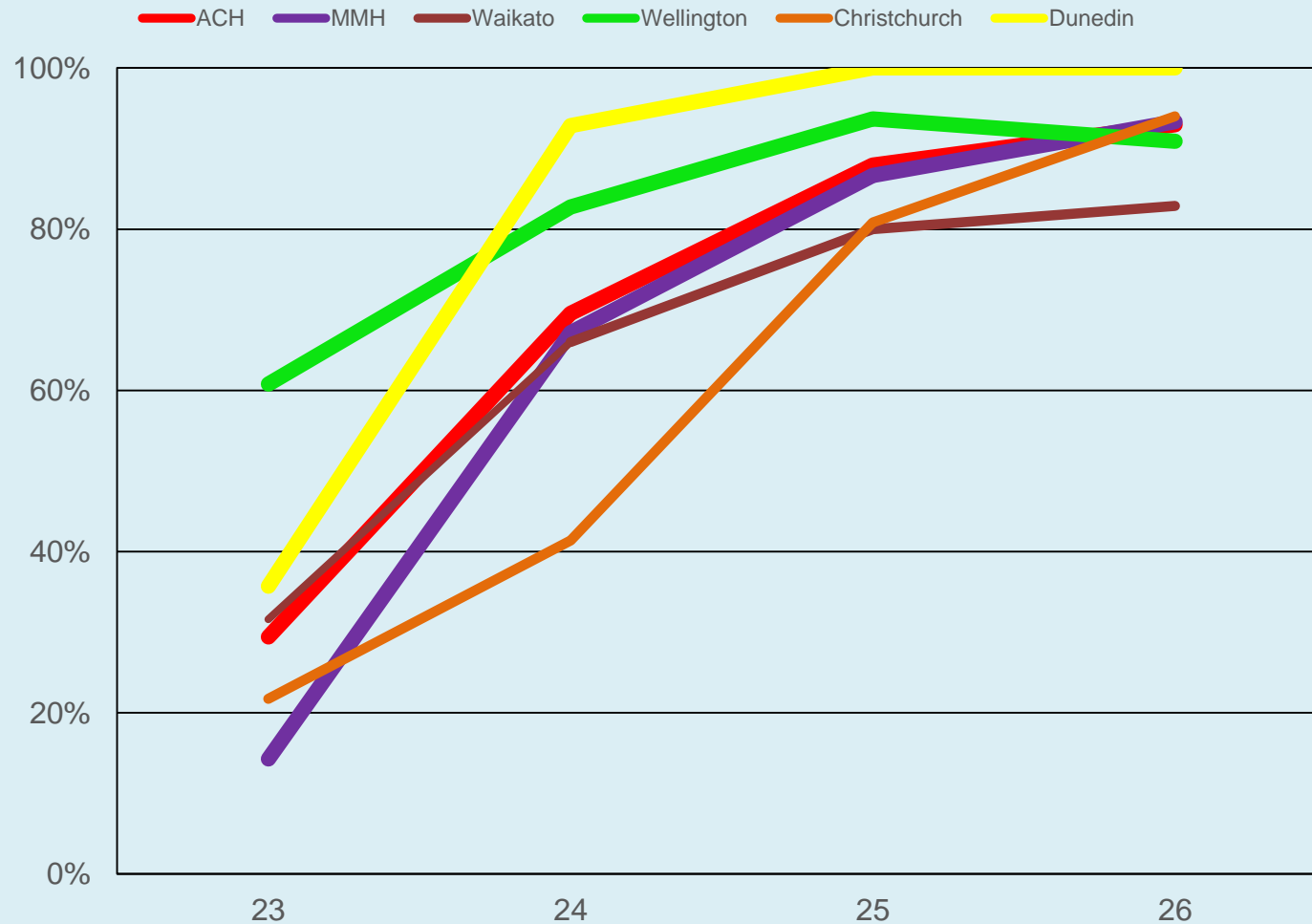
Approach to borderline viability

- Previous guideline superseded
 - Appropriate to consider a more proactive approach to care at 23⁰-23⁶ weeks
 - Collaborative approach with obstetrics around use of steroids, delivery considerations
- Newborn Clinical Network plans to write a national periviability guideline

Recommendations

- Monitor outcomes at 23 weeks
 - Small numbers make gaining experience and assessing outcomes difficult

Survival to 28 days of very preterm babies by hospital of birth 2007-2016



New Zealand Child and Youth Clinical Networks (NZCYCN)

NZCYCN national guidelines

Clinical Guideline

New Zealand Consensus Statement on the care of mother and baby(ies) at periviable gestations

Date last published: 30 September 2019

The consensus statement on care at periviable gestations at 23 and 24 weeks aims to achieve equitable care across New Zealand for parents faced with this difficult clinical situation.

<https://www.starship.org.nz/guidelines/new-zealand-consensus-statement-on-the-care-of-mother-and-baby-ies-at>

SHORT COMMUNICATION

Perinatal care provided for babies born at 23 and 24 weeks of gestation

Lisa Dawes^{1,2} , Mariam Buksh², Lynn Sadler^{2,3} , Jason Waugh^{2,3} and Katie Groom^{1,2}

- NWH Guideline amended in 2017 for more proactive intervention for 23-24 week babies
 - multidisciplinary and family-centred approach with development of an individualised plan including comfort care or active intervention
 - observational study reviewed all babies born at 23⁺⁰–24⁺⁶ weeks from 01/01/2017 to 31/12/2018 at NWH

Results

Aspect of care	Birth at 23 weeks (10)*	Birth at 24 weeks (14)
Neonatal resuscitation		
Neonatologist present at birth¶	7/9 (77.8%)	13/14 (92.9%)
Resuscitation attempted if live born	9/9 (100.0%)	13/13 (100.0%)
Admitted to neonatal unit if live born	5/9 (55.6%)	12/13 (92.3%)

- EFW 400 g – active intervention not offered, 22 mothers offered active intervention
- ¶ Neonatologist present within 2 min for all remaining cases

Conclusions

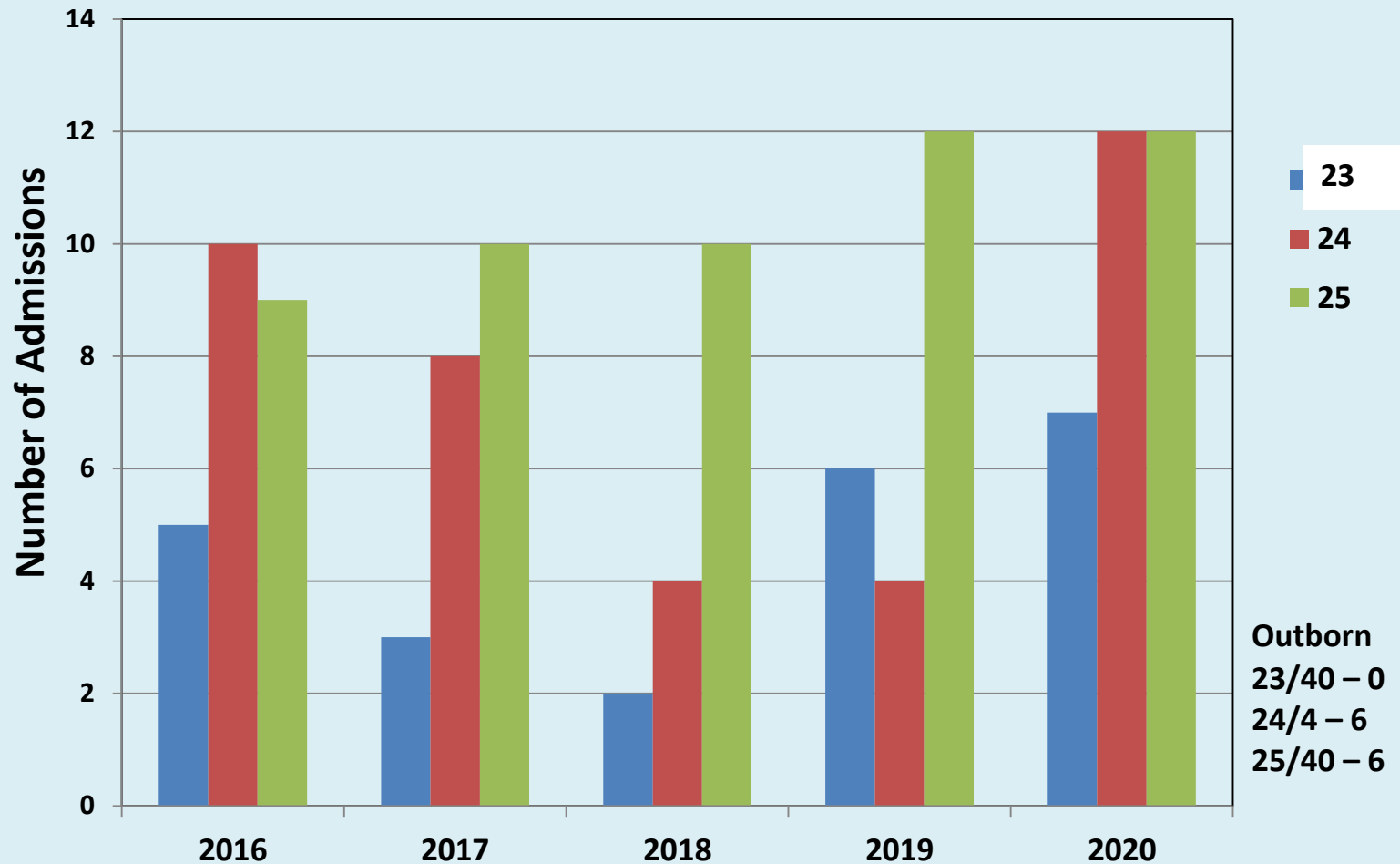
- In majority of births at 23–24 weeks, there is time for counselling and perinatal interventions to improve outcomes
- Most families choose active intervention
- The quality of counselling and perinatal care can be improved

Dawes, L., et al. (2020). Perinatal care provided for babies born at 23 and 24 weeks of gestation. *Australian and New Zealand Journal of Obstetrics and Gynaecology*, 60(1), 158-161.

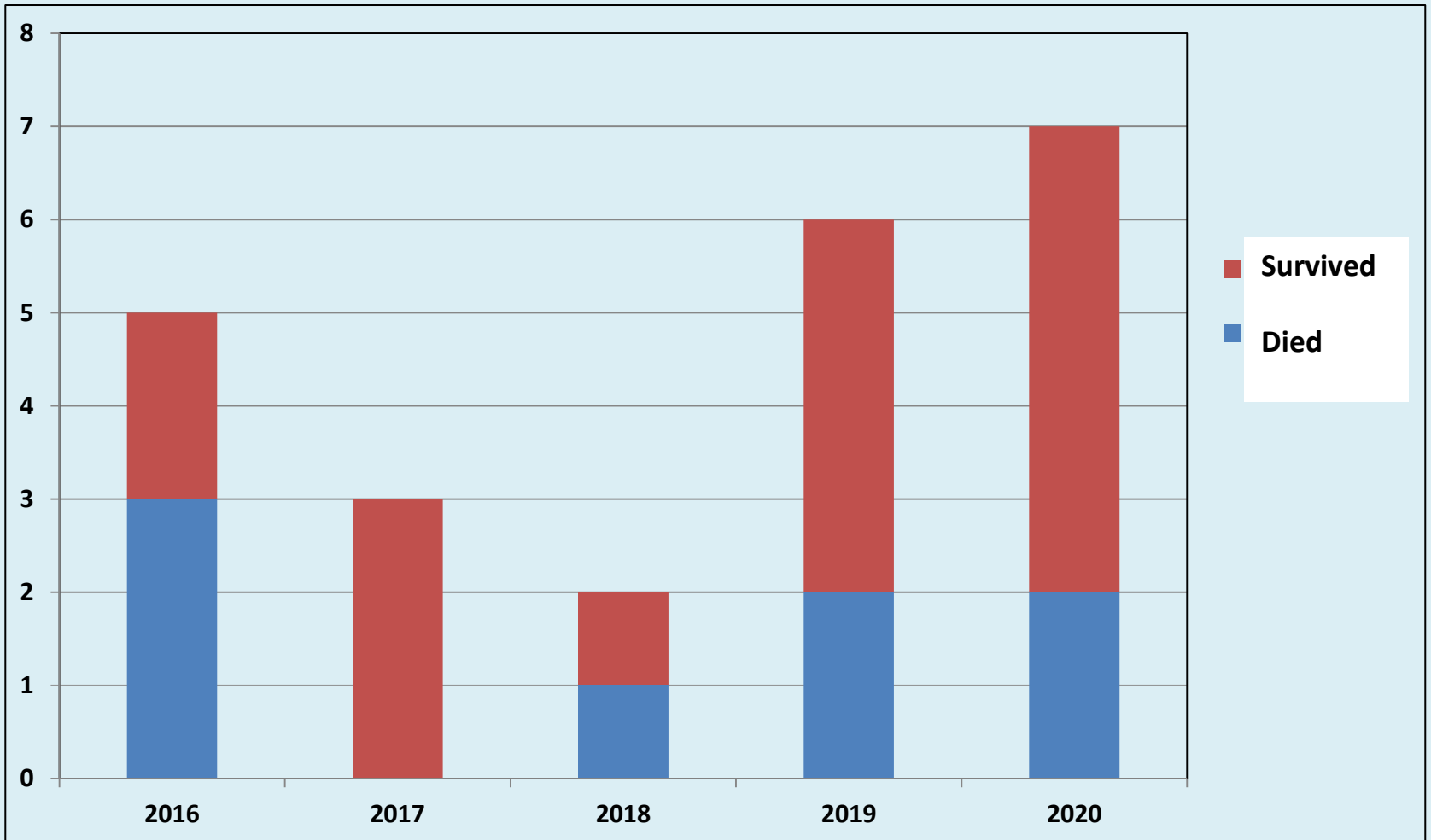


AT
09/12/17
23⁺¹, 615 g
In NICU and at 3y

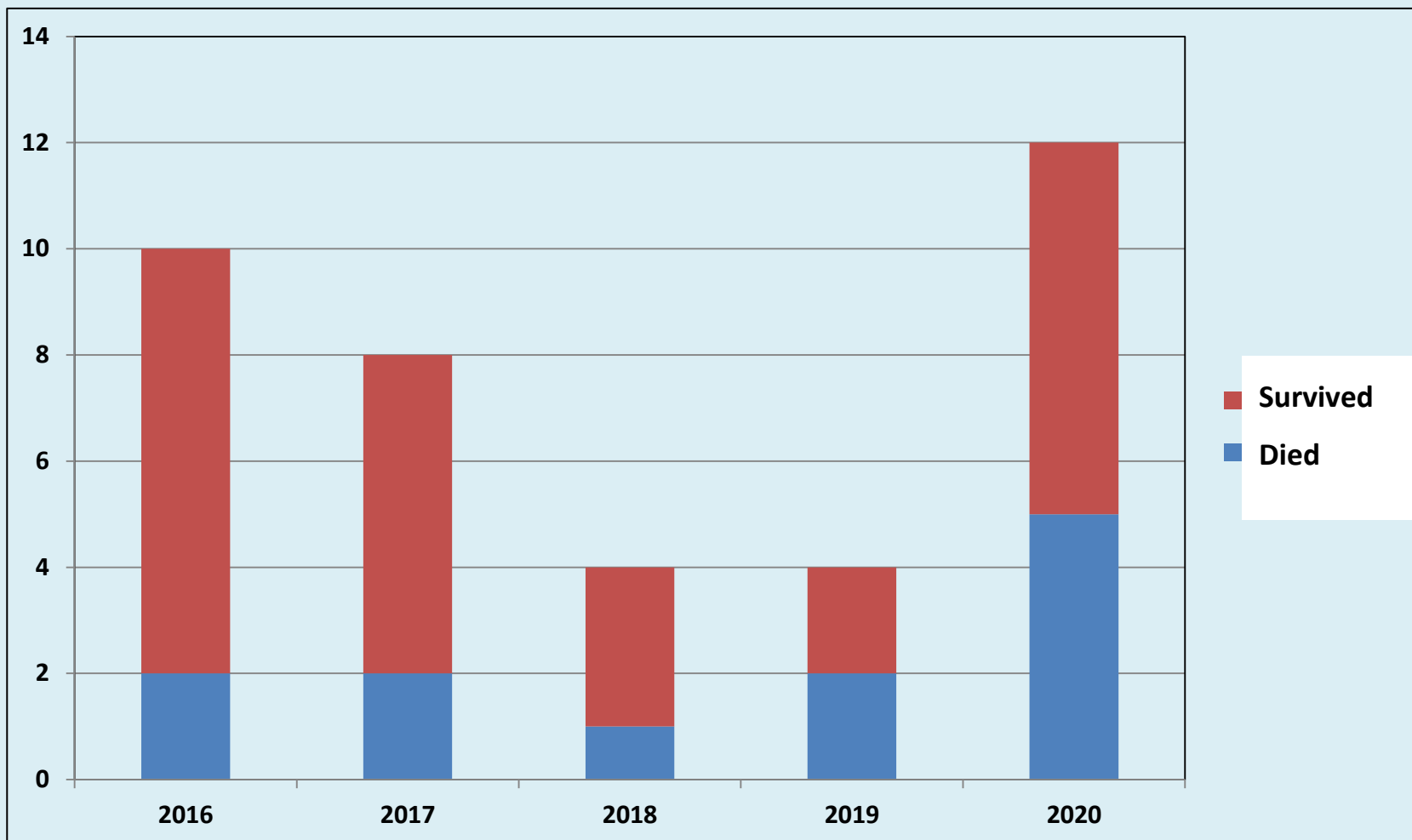
Admissions at 23, 24 & 25 week gestation 2016-2020



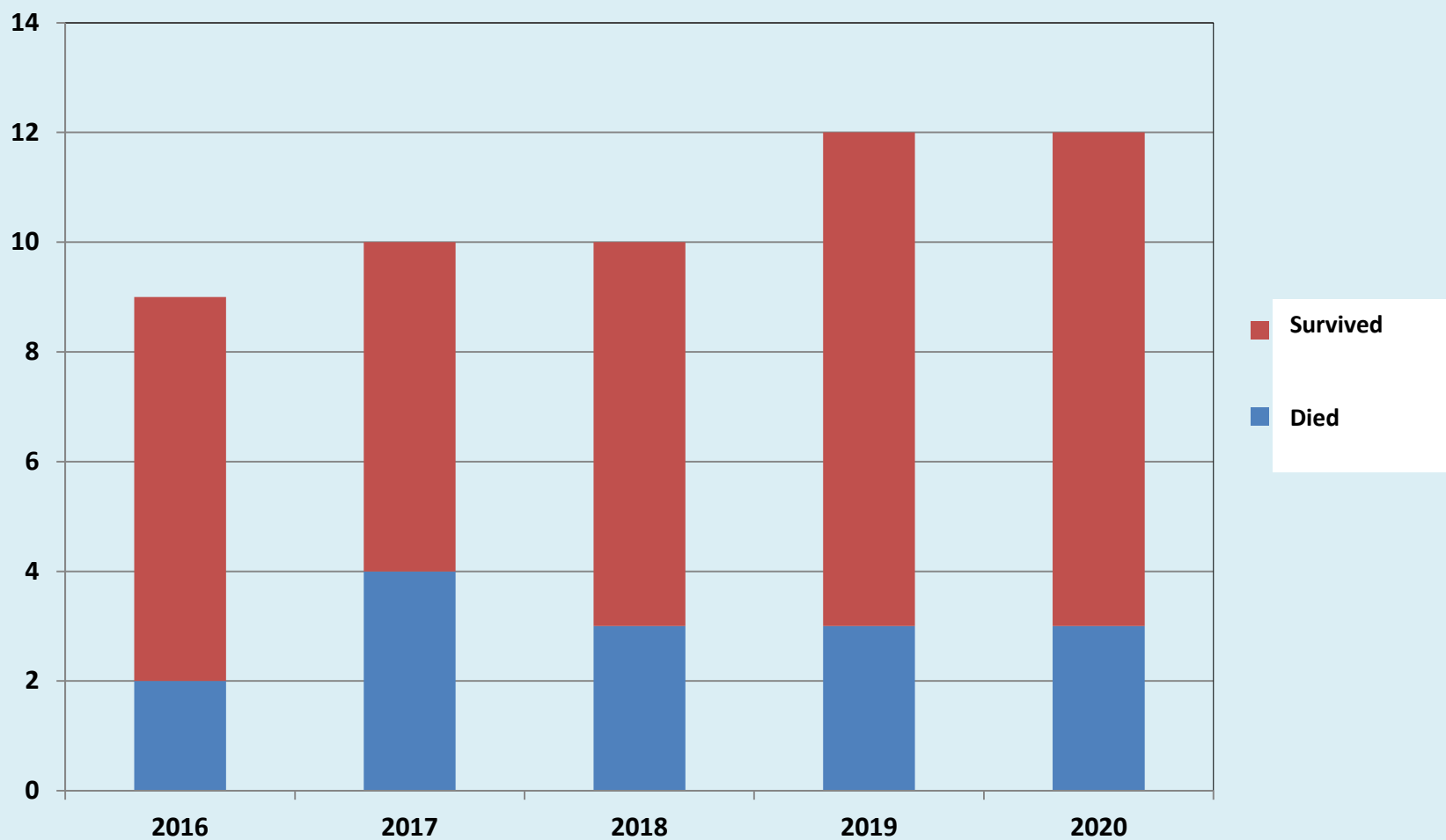
Inborn 23 weeks



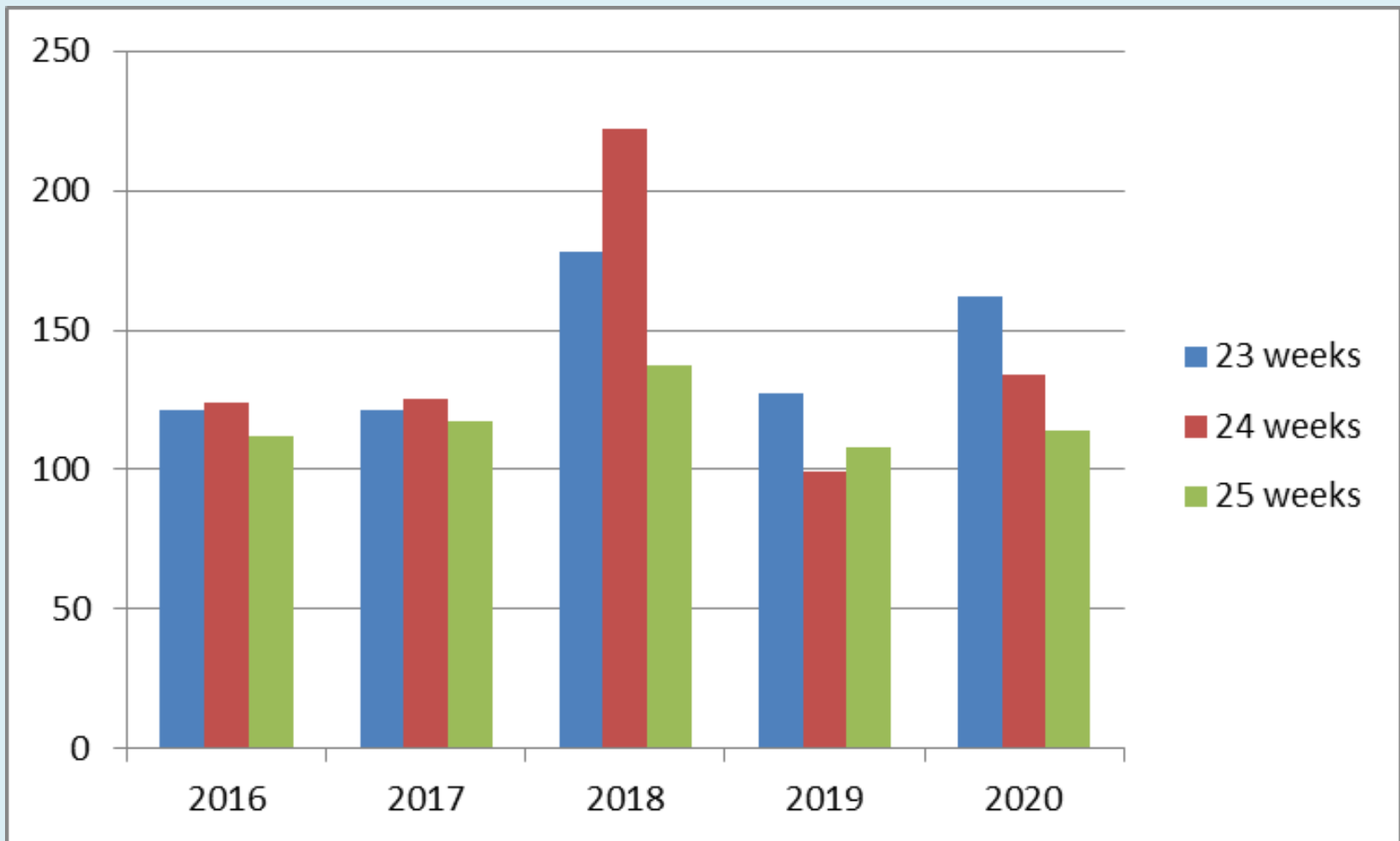
Inborn 24 weeks



Inborn 25 weeks



Length of stay



Outcomes

KT 23⁺⁰
635 g
30/08/17



KT now
3 years



Chronic Lung disease

- Hang around for the next talk

Retinopathy of prematurity

23 weeks GA

	N	No ROP	Stage 1	Stage 2	Stage 3	Stage 4	Laser	VEGF	Both
2016	2			2	-	-	-	-	-
2017	3	1		2				1	
2018	1			1			-	-	-
2019	4			4			1		
2020	5			2	3			1	2

Retinopathy of prematurity

24 weeks GA

	N	No ROP	Stage 1	Stage 2	Stage 3	Stage 4	Laser	VEGF	Both
2016	8		3	2	3	-	-	-	-
2017	6		2	4	-	-	-	-	-
2018	3			3			1	-	-
2019	2	1		1			-	-	-
2020	7			7			-	-	-

Retinopathy of prematurity

25 weeks GA

	N	No ROP	Stage 1	Stage 2	Stage 3	Stage 4	Laser	VEGF	Both
2016	7	1	3	1	2	-	1	-	-
2017	6		2	3	1	-	-	1	-
2018	7	2	2	3	-	-	-	-	-
2019	9	4	2	3	-	-	-	-	-
2020	9	1	3	5	-	-	-	-	-



JA
23+6
765 g
16/09/11



Two year follow-up

	23 weeks					24 weeks					25 weeks				
	N	Cat 1	Cat 2	Cat 3	Cat 4	N	Cat 1	Cat 2	Cat 3	Cat 4	N	Cat 1	Cat 2	Cat 3	Cat 4
2016	2				1	8				8	7	1			5
2017	3				2	6		1		4	6		3		3
2018	1	1				3	1			2	7	1		2	1

Future challenges?

Perinatal Management of Extreme Preterm

Birth before 27 weeks of gestation: A Framework for Practice October 2019

- Neonatal stabilisation may be considered for babies born from 22+0 weeks of gestation following
 - assessment of risk *and*
 - multi-professional discussion with parents
- It is not appropriate to attempt to resuscitate babies born before 22+0 weeks of gestation.

THANK YOU