PS02

Perinatal Services Sub Group

2nd Meeting – 12 January 2018– AK Bell Library, Perth

Attendees:	Heather Knox	Cathy Grieve
	Rod Harvey	Fiona Collins
	Lesley Jackson	Ann Holmes
	Alison Wright	Tara Fairley
	Allan Jackson	Edile Murdoch
	Shetty Bhushan	Jan McClean
	Lyn Clyde	

Teleconference:	Caroline Lee Davey	Ann Marie Wilson
	Una MacFadyen	Alan Cameron
	Morag Campbell	Sarah Cooper

Secretariat:	Kirstie Campbell	Beverley Lamont

Apologies:	Elizabeth McGrady	Jenny Boyd
	Corinne Love	Paul Bassett

Item 1: Welcome and Apologies

1. HK welcomed everyone to the second meeting of the Perinatal sub group and apologies were noted.

Item 2: Minutes of the last meeting

2. The minutes of the last meeting were agreed.

Item 3: Update on actions from the last meeting

Major Service change

3. The group agreed that the Secretariat should seek guidance from the Scottish Health Council. The Secretariat will also speak to the team within the Scottish Government who has policy responsibility for the regional delivery plans to make links with them. The handling of consultation and engagement would be reassessed as the process moves forward.

Action: Secretariat

Refresh of data

4. The group agreed that clarification should be sought from Boards on how the data was collected. AW and FC/CG to work with the Secretariat to produce a step by step guide to be shared with the Boards.

Action: Alison Wright, Fiona Collins, Cathy Grieve

5. The group agreed that the data, once checked, should be used in the options appraisal with more detail on modelling commissioned if needed, at implementation stage.

What defines a neonatal unit

6. The group agreed that the areas identified in the paper should be categorised and used as the criteria for the options appraisal. An amended version of the paper that includes changes made by AJ will be circulated.

Action: Secretariat

Refresh of evidence

7. The group agreed that the paper was a useful summary of the existing evidence. They agreed that it would be helpful for a similar piece of work to be undertaken for obstetric evidence. Alan Cameron, Tara Fairly and Lesley Jackson to work on.

Action: Alan Cameron, Tara Fairly, Lesley Jackson

Options appraisal

8. The group agreed the need for a structured and robust options appraisal process that reflected the recommendation contained within The Best Start. A small group will be established to carry out the options appraisal once the criteria and weightings have been agreed. Support from an external facilitator should be sought to guide the process. The group also agreed that dates for the options appraisal should be agreed.

Action: Secretariat

9. The group agreed that a robust communications plan should be produced showing the different stages and decision making processes, who involved, who communicated with. It was agreed that the Chairs should agree with Jane Grant when to bring the work to the Implementation Programme Board.

Actions: Chairs, Secretariat

Item 4: Work plan

10. The group agreed the format of the work plan and noted the requests from other sub groups.

Item 5: Engagement

11. The group agreed that wide engagement should take place following the options appraisal. A list of key messages should be drafted for sub group members to use. A more detailed newsletter outlining the timescales for the options appraisal should be produced and circulated to keep staff informed.

Action: Secretariat

12. The Secretariat agreed to amend the Terms of Reference to clarify communications with members.

Action: Secretariat

Item 6: AOCB

13. The group requested that the dates of all meetings were agreed in calendars as soon as possible and that video conferencing should be available at all meeting venues.

Action: Secretariat

14. The next meeting will be held on Wednesday 28 March, 14:00-16:00 at a venue TBC in Perth.

(11)

PS04/03

The Scottish Government
Riaghaltas na h-Alba

THE BEST START

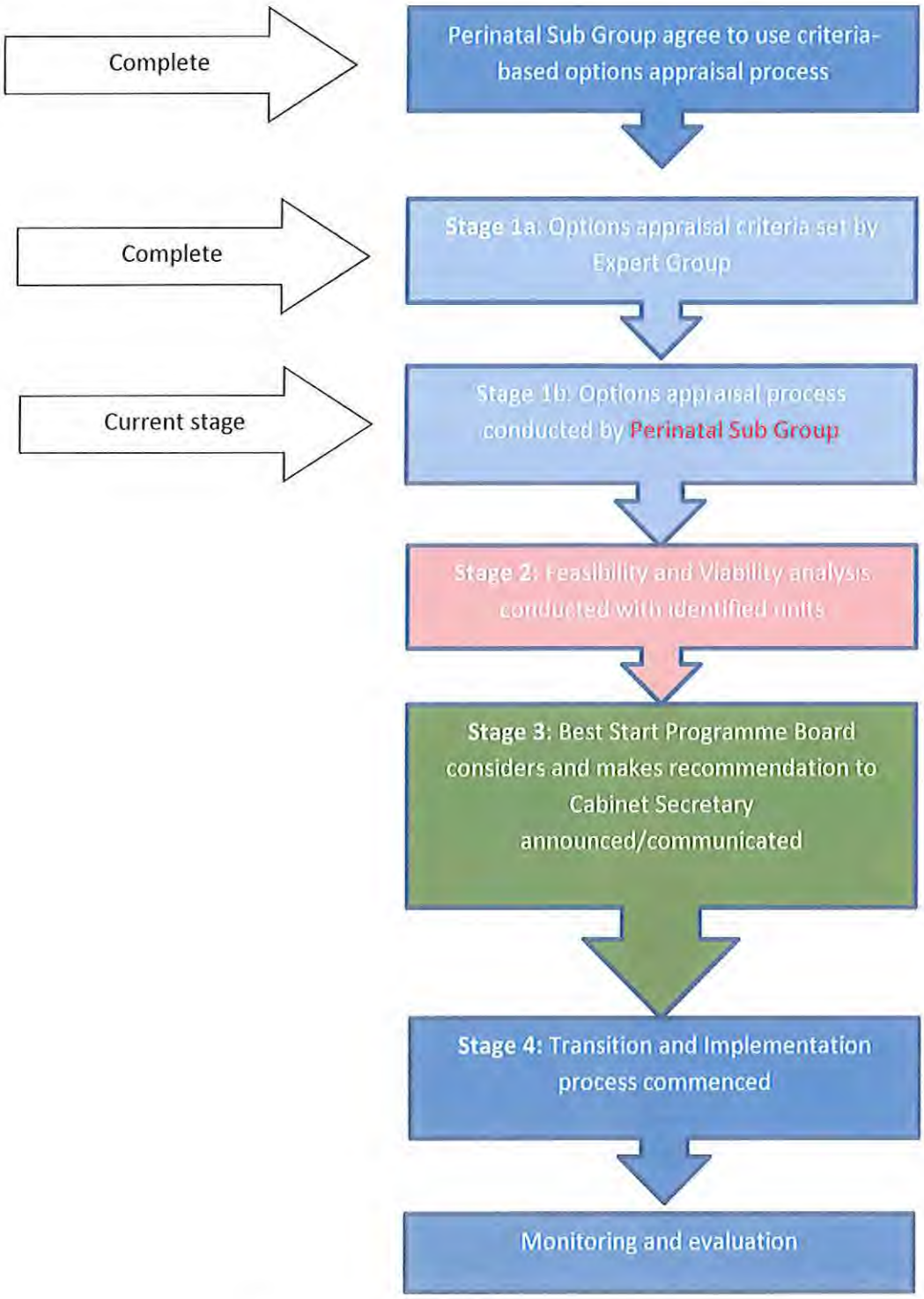
Neonatal intensive care: Options appraisal process

IPB Secretariat

June 2018

SECTION 1

DECISION MAKING and IMPLEMENTATION PROCESS FLOW CHART



NEONATAL OPTIONS APPRAISAL – SCORING AND MAKING RECOMMENDATIONS

STAGE 1 OF OPTIONS APPRAISAL PROCESS

Using the criteria and weighting identified by the expert group and the data provided by Boards, the Perinatal Sub Group will be invited to:

- Consider the criteria with a view to identifying any uncertainties or concerns and address any questions about the approach.
- Consider the information provided by Boards to identify any ambiguities or areas of uncertainty.
- Score the 8 neonatal intensive care units against the criteria and weighting. Attendees to be broken into groups to discuss and will then be invited to score individually. Scoring sheet attached.
- Scores for each Board in each category will be compiled and presented to the group for further discussion with a view to agreeing a recommendation to take to Stage 2 of the Options Appraisal process.

IPB Secretariat
June 2018

Neonatal Intensive Care Options Appraisal Scoring Template

Criteria	Source/ Evidence	Scoring	Definition for scoring	Aberdeen Maternity	Crosshouse Hospital	Ninewells Hospital	Princess Royal	Royal Hospital, QUEH	Simpsons Maternity, ERI	Victoria Hospital	Wishaw Hospital
1. Neonatal surgery	BAPM	0 or 25	Minimum score: 0 No neonatal surgery is performed on site. Maximum score: Full range of neonatal surgery is performed on site. [Possible range in between based on comparative levels of neonatal surgery provided.]	15 ~~20~~	0	10	0	25	20	0	0
2 . Paediatric medical sub speciality services	BAPM	25	Minimum score: No paediatric medical sub specialities or paediatric critical on site. Maximum score: All paediatric medical sub speciality care and paediatric critical care on site. [Possible range in between based on comparative levels of services provided.]	20	0	20	05	25	25	05	05
3. Fetal medicine sub speciality services	RCOG Framework for Maternity Standards EGAMS	20	Maximum score: Full range of fetal sub speciality services available on site provided by consultants trained in subspecialist maternal and fetal medicine. Minimum score: No fetal sub speciality services on site. [Possible range in between based on comparative levels of service available and staff training.]	10	0	05	10	20	20	06	00
4. Maternal medicine sub speciality services	The Best Start p79 RCOG Framework for Maternity Standards MBRACE Confidenti al Inquiry EGAMS	20	Maximum score: Full range of maternity sub speciality services and adult ITU available on site provided by consultants trained in subspecialist maternal and fetal medicine Minimum score: No maternity sub speciality services or adult ITU on site. [Possible range in between based on comparative levels of maternity sub speciality services and/or adult ITU provided and staff training.]	10	0	15	~~0~~ 20	20	20	10	10
5. 24/7 Paediatric Radiology	Expert Group	10	Maximum score: 24/7 paediatric radiology service on site capable of providing full range of investigations. Minimum score: No 24/7 paediatric radiology service on site.	10	05	10	2	10	10	0	0

Neonatal Intensive Care Options Appraisal Scoring Template

Criteria	Source/ Evidence	Scoring	Definition for scoring	Aberdeen Maternity	Crosshouse Hospital	Ninewells Hospital	Princess Royal	Royal Hospital, QUEH	Simpsons Maternity, ERI	Victoria Hospital	Wishaw Hospital
1. Neonatal surgery	BAPM	0 or 25	Minimum score: 0 No neonatal surgery is performed on site. Maximum score: Full range of neonatal surgery is performed on site. [Possible range in between based on comparative levels of neonatal surgery provided.]	15	0	5	0	25	20	0	0
2 . Paediatric medical sub speciality services	BAPM	25	Minimum score: No paediatric medical sub specialities or paediatric critical on site. Maximum score: All paediatric medical sub speciality care and paediatric critical care on site. [Possible range in between based on comparative levels of services provided.]	14	6	12	10	25	15	8	12
3. Fetal medicine sub speciality services	RCOG Framework for Maternity Standards EGAMS	20	Maximum score: Full range of fetal sub speciality services available on site provided by consultants trained in subspecialist maternal and fetal medicine. Minimum score: No fetal sub speciality services on site. [Possible range in between based on comparative levels of service available and staff training.]	18	2	2	12	20	18	2	4
4. Maternal medicine sub speciality services	The Best Start p79 RCOG Framework for Maternity Standards MBRACE Confidenti al Inquiry EGAMS	20	Maximum score: Full range of maternity sub speciality services and adult ITU available on site provided by consultants trained in subspecialist maternal and fetal medicine Minimum score: No maternity sub speciality services or adult ITU on site. [Possible range in between based on comparative levels of maternity sub speciality services and/or adult ITU provided and staff training.]	15	5	12	16	20	18	5	12
5. 24/7 Paediatric Radiology	Expert Group	10	Maximum score: 24/7 paediatric radiology service on site capable of providing full range of investigations. Minimum score: No 24/7 paediatric radiology service on site.	10	2	2	2	10	10	2	2

Neonatal Intensive Care Options Appraisal Scoring Template

Criteria	Source/ Evidence	Scoring	Definition for scoring	Aberdeen Maternity	Crosshouse Hospital	Ninewells Hospital	Princess Royal	Royal Hospital, QUEH	Simpsons Maternity, ERI	Victoria Hospital	Wishaw Hospital
1. Neonatal surgery	BAPM	0 or 25	Minimum score: 0 No neonatal surgery is performed on site. Maximum score: Full range of neonatal surgery is performed on site. [Possible range in between based on comparative levels of neonatal surgery provided.]	20	0	5	0	25	20*	0	0
2 . Paediatric medical sub speciality services	BAPM	25	Minimum score: No paediatric medical sub specialities or paediatric critical on site. Maximum score: All paediatric medical sub speciality care and paediatric critical care on site. [Possible range in between based on comparative levels of services provided.]	15	5	10	0	25	20*	5	8
3. Fetal medicine sub speciality services	RCOG Framework for Maternity Standards EGAMS	20	Maximum score: Full range of fetal sub speciality services available on site provided by consultants trained in subspecialist maternal and fetal medicine. Minimum score: No fetal sub speciality services on site. [Possible range in between based on comparative levels of service available and staff training.]	15	5	10	15	20	20	5	5
4. Maternal medicine sub speciality services	The Best Start p79 RCOG Framework for Maternity Standards MBRACE Confidenti al Inquiry EGAMS	20	Maximum score: Full range of maternity sub speciality services and adult ITU available on site provided by consultants trained in subspecialist maternal and fetal medicine Minimum score: No maternity sub speciality services or adult ITU on site. [Possible range in between based on comparative levels of maternity sub speciality services and/or adult ITU provided and staff training.]	12	5	10	10	17	18	8	8
5. 24/7 Paediatric Radiology	Expert Group	10	Maximum score: 24/7 paediatric radiology service on site capable of providing full range of investigations. Minimum score: No 24/7 paediatric radiology service on site.	8	0	2	4	10	10*	0	0

Neonatal Intensive Care Options Appraisal Scoring Template

Criteria	Source/ Evidence	Scoring	Definition for scoring	Aberdeen Maternity	Crosshouse Hospital	Ninewells Hospital	Princess Royal	Royal Hospital, QUEH	Simpsons Maternity, ERI	Victoria Hospital	Wishaw Hospital
1. Neonatal surgery	BAPM	0 or 25	Minimum score: 0 No neonatal surgery is performed on site. Maximum score: Full range of neonatal surgery is performed on site. [Possible range in between based on comparative levels of neonatal surgery provided.]	25	0	0	0	25	25	0	0
2 . Paediatric medical sub speciality services	BAPM	25	Minimum score: No paediatric medical sub specialities or paediatric critical on site. Maximum score: All paediatric medical sub speciality care and paediatric critical care on site. [Possible range in between based on comparative levels of services provided.]	5	0	5	1	25	25	3	0
3. Fetal medicine sub speciality services	RCOG Framework for Maternity Standards EGAMS	20	Maximum score: Full range of fetal sub speciality services available on site provided by consultants trained in subspecialist maternal and fetal medicine. Minimum score: No fetal sub speciality services on site. [Possible range in between based on comparative levels of service available and staff training.]	10	0	0	0	20	20	0	0
4. Maternal medicine sub speciality services	The Best Start p79 RCOG Framework for Maternity Standards MBRACE Confidential Inquiry EGAMS	20	Maximum score: Full range of maternity sub speciality services and adult ITU available on site provided by consultants trained in subspecialist maternal and fetal medicine Minimum score: No maternity sub speciality services or adult ITU on site. [Possible range in between based on comparative levels of maternity sub speciality services and/or adult ITU provided and staff training.]	20	3	20	8	18	20	3	5
5. 24/7 Paediatric Radiology	Expert Group	10	Maximum score: 24/7 paediatric radiology service on site capable of providing full range of investigations. Minimum score: No 24/7 paediatric radiology service on site.	10	5	5	0	10	10	1	5

Neonatal Intensive Care Options Appraisal Scoring Template

Criteria	Source/ Evidence	Scoring	Definition for scoring	Aberdeen Maternity	Crosshouse Hospital	Ninewells Hospital	Princess Royal	Royal Hospital, QUEH	Simpsons Maternity, ERI	Victoria Hospital	Wishaw Hospital
1. Neonatal surgery	BAPM	0 or 25	Minimum score: 0 No neonatal surgery is performed on site. Maximum score: Full range of neonatal surgery is performed on site. [Possible range in between based on comparative levels of neonatal surgery provided.]	20	0	5	0	25	20	0	0
2 . Paediatric medical sub speciality services	BAPM	25	Minimum score: No paediatric medical sub specialities or paediatric critical on site. Maximum score: All paediatric medical sub speciality care and paediatric critical care on site. [Possible range in between based on comparative levels of services provided.]	20	6	14	~~25~~ 3-5	25	20	6	5 ~~4-5~~
3. Fetal medicine sub speciality services	RCOG Framework for Maternity Standards EGAMS	20	Maximum score: Full range of fetal sub speciality services available on site provided by consultants trained in subspecialist maternal and fetal medicine. Minimum score: No fetal sub speciality services on site. [Possible range in between based on comparative levels of service available and staff training.]	19	0	0	19	20	19	0	0
4. Maternal medicine sub speciality services	The Best Start p79 RCOG Framework for Maternity Standards MBRACE Confidential Inquiry EGAMS	20	Maximum score: Full range of maternity sub speciality services and adult ITU available on site provided by consultants trained in subspecialist maternal and fetal medicine Minimum score: No maternity sub speciality services or adult ITU on site. [Possible range in between based on comparative levels of maternity sub speciality services and/or adult ITU provided and staff training.]	~~18~~ 19	3	~~20~~ 17	10-5	18	~~18~~	9	6
5. 24/7 Paediatric Radiology	Expert Group	10	Maximum score: 24/7 paediatric radiology service on site capable of providing full range of investigations. Minimum score: No 24/7 paediatric radiology service on site.	10	0	5	2	10	10	2	2

Neonatal Intensive Care Options Appraisal Scoring Template

Criteria	Source/ Evidence	Scoring	Definition for scoring	Aberdeen Maternity	Crosshouse Hospital	Ninewells Hospital	Princess Royal	Royal Hospital, QUEH	Simpsons Maternity, ERI	Victoria Hospital	Wishaw Hospital
1. Neonatal surgery	BAPM	0 or 25	Minimum score: 0 No neonatal surgery is performed on site. Maximum score: Full range of neonatal surgery is performed on site. [Possible range in between based on comparative levels of neonatal surgery provided.]	20	0	15	0	25	22	0	0
2 . Paediatric medical sub speciality services	BAPM	25	Minimum score: No paediatric medical sub specialities or paediatric critical on site. Maximum score: All paediatric medical sub speciality care and paediatric critical care on site. [Possible range in between based on comparative levels of services provided.]	15	10	15	5	25	20	10	10
3. Fetal medicine sub speciality services	RCOG Framework for Maternity Standards EGAMS	20	Maximum score: Full range of fetal sub speciality services available on site provided by consultants trained in subspecialist maternal and fetal medicine. Minimum score: No fetal sub speciality services on site. [Possible range in between based on comparative levels of service available and staff training.]	18	5	15	15	20	18	5	10
4. Maternal medicine sub speciality services	The Best Start p79 RCOG Framework for Maternity Standards MBRACE Confidential Inquiry EGAMS	20	Maximum score: Full range of maternity sub speciality services and adult ITU available on site provided by consultants trained in subspecialist maternal and fetal medicine Minimum score: No maternity sub speciality services or adult ITU on site. [Possible range in between based on comparative levels of maternity sub speciality services and/or adult ITU provided and staff training.]	20	5	20	15	20	20	5	10
5. 24/7 Paediatric Radiology	Expert Group	10	Maximum score: 24/7 paediatric radiology service on site capable of providing full range of investigations. Minimum score: No 24/7 paediatric radiology service on site.	10	5	7	3	10	10	3	5

Neonatal Intensive Care Options Appraisal Scoring Template

Criteria	Source/ Evidence	Scoring	Definition for scoring	Aberdeen Maternity	Crosshouse Hospital	Ninewells Hospital	Princess Royal	Royal Hospital, QUEH	Simpsons Maternity, ERI	Victoria Hospital	Wishaw Hospital
1. Neonatal surgery	BAPM	0 or 25	Minimum score: 0 No neonatal surgery is performed on site. Maximum score: Full range of neonatal surgery is performed on site. [Possible range in between based on comparative levels of neonatal surgery provided.]	20	0	5	0	25	25	0	0
2 . Paediatric medical sub speciality services	BAPM	25	Minimum score: No paediatric medical sub specialities or paediatric critical on site. Maximum score: All paediatric medical sub speciality care and paediatric critical care on site. [Possible range in between based on comparative levels of services provided.]	15	8	15	5	25	22	10	10
3. Fetal medicine sub speciality services	RCOG Framework for Maternity Standards EGAMS	20	Maximum score: Full range of fetal sub speciality services available on site provided by consultants trained in subspecialist maternal and fetal medicine. Minimum score: No fetal sub speciality services on site. [Possible range in between based on comparative levels of service available and staff training.]	18	1	5	3	20	19	1	3
4. Maternal medicine sub speciality services	The Best Start p79 RCOG Framework for Maternity Standards MBRACE Confidenti al Inquiry EGAMS	20	Maximum score: Full range of maternity sub speciality services and adult ITU available on site provided by consultants trained in subspecialist maternal and fetal medicine Minimum score: No maternity sub speciality services or adult ITU on site. [Possible range in between based on comparative levels of maternity sub speciality services and/or adult ITU provided and staff training.]	19	1	15	15	19	20	6	8
5. 24/7 Paediatric Radiology	Expert Group	10	Maximum score: 24/7 paediatric radiology service on site capable of providing full range of investigations. Minimum score: No 24/7 paediatric radiology service on site.	10	8	6	1	10	10	1	6

Neonatal Intensive Care Options Appraisal Scoring Template

Criteria	Source/ Evidence	Scoring	Definition for scoring	Aberdeen Maternity	Crosshouse Hospital	Ninewells Hospital	Princess Royal	Royal Hospital, QUEH	Simpsons Maternity, ERI	Victoria Hospital	Wishaw Hospital
1. Neonatal surgery	BAPM	0 or 25	Minimum score: 0 No neonatal surgery is performed on site. Maximum score: Full range of neonatal surgery is performed on site. [Possible range in between based on comparative levels of neonatal surgery provided.]	20	0	10	0	25	20	0	0.
2 . Paediatric medical sub speciality services	BAPM	25	Minimum score: No paediatric medical sub specialities or paediatric critical on site. Maximum score: All paediatric medical sub speciality care and paediatric critical care on site. [Possible range in between based on comparative levels of services provided.]	18.	8	15.	5.	25	25	10	10.
3. Fetal medicine sub speciality services	RCOG Framework for Maternity Standards EGAMS	20	Maximum score: Full range of fetal sub speciality services available on site provided by consultants trained in subspecialist maternal and fetal medicine. Minimum score: No fetal sub speciality services on site. [Possible range in between based on comparative levels of service available and staff training.]	~~22~~ 17	0	0	~~22~~ 17	~~25~~. 20	~~22~~ 17	0	0
4. Maternal medicine sub speciality services	The Best Start p79 RCOG Framework for Maternity Standards MBRACE Confidenti al Inquiry EGAMS	20	Maximum score: Full range of maternity sub speciality services and adult ITU available on site provided by consultants trained in subspecialist maternal and fetal medicine Minimum score: No maternity sub speciality services or adult ITU on site. [Possible range in between based on comparative levels of maternity sub speciality services and/or adult ITU provided and staff training.]	18	5.	18	15.	20	20.	5.	13.
5. 24/7 Paediatric Radiology	Expert Group	10	Maximum score: 24/7 paediatric radiology service on site capable of providing full range of investigations. Minimum score: No 24/7 paediatric radiology service on site.	10.	5.	8	2	10	10.	2	0.

(2)

Neonatal Intensive Care Options Appraisal Scoring Template

Criteria	Source/ Evidence	Scoring	Definition for scoring	Aberdeen Maternity	Crosshouse Hospital	Ninewells Hospital	Princess Royal	Royal Hospital, QUEH	Simpsons Maternity, ERI	Victoria Hospital	Wishaw Hospital
1. Neonatal surgery	BAPM	0 or 25	Minimum score: 0 No neonatal surgery is performed on site. Maximum score: Full range of neonatal surgery is performed on site. [Possible range in between based on comparative levels of neonatal surgery provided.]	25	0	15	0	25	25	0	0
2 . Paediatric medical sub speciality services	BAPM	25	Minimum score: No paediatric medical sub specialities or paediatric critical on site. Maximum score: All paediatric medical sub speciality care and paediatric critical care on site. [Possible range in between based on comparative levels of services provided.]	20	5	12	5	25	20	10	10
3. Fetal medicine sub speciality services	RCOG Framework for Maternity Standards EGAMS	20	Maximum score: Full range of fetal sub speciality services available on site provided by consultants trained in subspecialist maternal and fetal medicine. Minimum score: No fetal sub speciality services on site. [Possible range in between based on comparative levels of service available and staff training.]	15	10	12.	5	20	15	10	10
4. Maternal medicine sub speciality services	The Best Start p79 RCOG Framework for Maternity Standards MBRACE Confidential Inquiry EGAMS	20	Maximum score: Full range of maternity sub speciality services and adult ITU available on site provided by consultants trained in subspecialist maternal and fetal medicine Minimum score: No maternity sub speciality services or adult ITU on site. [Possible range in between based on comparative levels of maternity sub speciality services and/or adult ITU provided and staff training.]	18	10	20	20	20	20	10	15
5. 24/7 Paediatric Radiology	Expert Group	10	Maximum score: 24/7 paediatric radiology service on site capable of providing full range of investigations. Minimum score: No 24/7 paediatric radiology service on site.	10	10	5	2	10	10	2	10

Neonatal Intensive Care Options Appraisal Scoring Template

Criteria	Source/ Evidence	Scoring	Definition for scoring	Aberdeen Maternity	Crosshouse Hospital	Ninewells Hospital	Princess Royal	Royal Hospital, QUEH	Simpsons Maternity, ERI	Victoria Hospital	Wishaw Hospital
1. Neonatal surgery	BAPM	0 or 25	Minimum score: 0 No neonatal surgery is performed on site. Maximum score: Full range of neonatal surgery is performed on site. [Possible range in between based on comparative levels of neonatal surgery provided.]	25	0	5	0	25	25	0	0
2 . Paediatric medical sub speciality services	BAPM	25	Minimum score: No paediatric medical sub specialities or paediatric critical on site. Maximum score: All paediatric medical sub speciality care and paediatric critical care on site. [Possible range in between based on comparative levels of services provided.]	25	5	17	8	25	25	12	15
3. Fetal medicine sub speciality services	RCOG Framework for Maternity Standards EGAMS	20	Maximum score: Full range of fetal sub speciality services available on site provided by consultants trained in subspecialist maternal and fetal medicine. Minimum score: No fetal sub speciality services on site. [Possible range in between based on comparative levels of service available and staff training.]	15	5	10	20	20	20	5	15
4. Maternal medicine sub speciality services	The Best Start p79 RCOG Framework for Maternity Standards MBRACE Confidential Inquiry EGAMS	20	Maximum score: Full range of maternity sub speciality services and adult ITU available on site provided by consultants trained in subspecialist maternal and fetal medicine Minimum score: No maternity sub speciality services or adult ITU on site. [Possible range in between based on comparative levels of maternity sub speciality services and/or adult ITU provided and staff training.]	17	5	15	10	20	20	10	10
5. 24/7 Paediatric Radiology	Expert Group	10	Maximum score: 24/7 paediatric radiology service on site capable of providing full range of investigations. Minimum score: No 24/7 paediatric radiology service on site.	10	5	7	3	10	10	2	7

Neonatal Intensive Care Options Appraisal Scoring Template

Criteria	Source/ Evidence	Scoring	Definition for scoring	Aberdeen Maternity	Crosshouse Hospital	Ninewells Hospital	Princess Royal	Royal Hospital, QUEH	Simpsons Maternity, ERI	Victoria Hospital	Wishaw Hospital
1. Neonatal surgery	BAPM	0 or 25	Minimum score: 0 No neonatal surgery is performed on site. Maximum score: Full range of neonatal surgery is performed on site. [Possible range in between based on comparative levels of neonatal surgery provided.]	20	0	2	0	25	20	0	0
2 . Paediatric medical sub speciality services	BAPM	25	Minimum score: No paediatric medical sub specialities or paediatric critical on site. Maximum score: All paediatric medical sub speciality care and paediatric critical care on site. [Possible range in between based on comparative levels of services provided.]	No ITU. 18	2	10	5	25	25	10	10
3. Fetal medicine sub speciality services	RCOG Framework for Maternity Standards EGAMS	20	Maximum score: Full range of fetal sub speciality services available on site provided by consultants trained in subspecialist maternal and fetal medicine. Minimum score: No fetal sub speciality services on site. [Possible range in between based on comparative levels of service available and staff training.]	ITT > 4. 18	0	No Sub Spec 10	2.	20	18	No Sub Spec. 10	10
4. Maternal medicine sub speciality services	The Best Start p79 RCOG Framework for Maternity Standards MBRACE Confidential Inquiry EGAMS	20	Maximum score: Full range of maternity sub speciality services and adult ITU available on site provided by consultants trained in subspecialist maternal and fetal medicine Minimum score: No maternity sub speciality services or adult ITU on site. [Possible range in between based on comparative levels of maternity sub speciality services and/or adult ITU provided and staff training.]	18	0	No Sub spec 15	10	18 No Cardiac ITU	20	10	10
5. 24/7 Paediatric Radiology	Expert Group	10	Maximum score: 24/7 paediatric radiology service on site capable of providing full range of investigations. Minimum score: No 24/7 paediatric radiology service on site.	10	5	9-5 5.	0	10.	10	1	9-5 5

[redacted] [redacted]

Neonatal Intensive Care Options Appraisal Scoring Template

③ ✓ 7= ④ ⑤ ✓ ① ✓ ② ✓ ⑥ 7=.

Criteria	Source/ Evidence	Scoring	Definition for scoring	Aberdeen Maternity	Crosshouse Hospital	Ninewells Hospital	Princess Royal	Royal Hospital, QUEH	Simpsons Maternity, ERI	Victoria Hospital	Wishaw Hospital
1. Neonatal surgery	BAPM	0 or 25	Minimum score: 0 No neonatal surgery is performed on site. Maximum score: Full range of neonatal surgery is performed on site. [Possible range in between based on comparative levels of neonatal surgery provided.]	25	45. 0	10.	0	25.	87 25.	50 0	64 0
2 . Paediatric medical sub speciality services	BAPM	25	Minimum score: No paediatric medical sub specialities or paediatric critical on site. Maximum score: All paediatric medical sub speciality care and paediatric critical care on site. [Possible range in between based on comparative levels of services provided.]	20	5.	20	5.	25.	20	10.	5.
3. Fetal medicine sub speciality services	RCOG Framework for Maternity Standards EGAMS	20	Maximum score: Full range of fetal sub speciality services available on site provided by consultants trained in subspecialist maternal and fetal medicine. Minimum score: No fetal sub speciality services on site. [Possible range in between based on comparative levels of service available and staff training.]	18.	0.	12.	5.	20.	18	0	0
4. Maternal medicine sub speciality services	The Best Start p79 RCOG Framework for Maternity Standards MBRACE Confidential Inquiry EGAMS	20	Maximum score: Full range of maternity sub speciality services and adult ITU available on site provided by consultants trained in subspecialist maternal and fetal medicine Minimum score: No maternity sub speciality services or adult ITU on site. [Possible range in between based on comparative levels of maternity sub speciality services and/or adult ITU provided and staff training.]	15.	5.	15.	15.	20.	20	10.	10.
5. 24/7 Paediatric Radiology	Expert Group	10	Maximum score: 24/7 paediatric radiology service on site capable of providing full range of investigations. Minimum score: No 24/7 paediatric radiology service on site.	10.	5.	10	0	10.	10.	0	0.
				85	15.	67	25	100	93	20	15.

Neonatal Intensive Care Options Appraisal Scoring Template

Criteria	Source/ Evidence	Scoring	Definition for scoring	Aberdeen Maternity	Crosshouse Hospital	Ninewells Hospital	Princess Royal	Royal Hospital, QUEH	Simpsons Maternity, ERI	Victoria Hospital	Wishaw Hospital
1. Neonatal surgery	BAPM	0 or 25	Minimum score: 0 No neonatal surgery is performed on site. Maximum score: Full range of neonatal surgery is performed on site. [Possible range in between based on comparative levels of neonatal surgery provided.]	20	0	5	0	25	25	0	0
2 . Paediatric medical sub speciality services	BAPM	25	Minimum score: No paediatric medical sub specialities or paediatric critical on site. Maximum score: All paediatric medical sub speciality care and paediatric critical care on site. [Possible range in between based on comparative levels of services provided.]	15	8	15	5	25	22	10	10
3. Fetal medicine sub speciality services	RCOG Framework for Maternity Standards EGAMS	20	Maximum score: Full range of fetal sub speciality services available on site provided by consultants trained in subspecialist maternal and fetal medicine. Minimum score: No fetal sub speciality services on site. [Possible range in between based on comparative levels of service available and staff training.]	18	1	5	3	20	19	1	3
4. Maternal medicine sub speciality services	The Best Start p79 RCOG Framework for Maternity Standards MBRACE Confidential Inquiry EGAMS	20	Maximum score: Full range of maternity sub speciality services and adult ITU available on site provided by consultants trained in subspecialist maternal and fetal medicine Minimum score: No maternity sub speciality services or adult ITU on site. [Possible range in between based on comparative levels of maternity sub speciality services and/or adult ITU provided and staff training.]	19	1	15	15	19	20	6	8
5. 24/7 Paediatric Radiology	Expert Group	10	Maximum score: 24/7 paediatric radiology service on site capable of providing full range of investigations. Minimum score: No 24/7 paediatric radiology service on site.	10	8	6	1	10	10	1	6

PS 02 01

The Best Start: Perinatal Services Sub Group

Purpose:

- The Perinatal Sub Group agreed to that standardised definitions of neonatal units were needed to discuss the movement to 3 units.
- Edile Murdoch has drawn up this draft paper for discussion
- The Sub Group are invited to discuss the attached

Board Secretariat

January 18

Perinatal sub group

Defining the category of neonatal units

Key points for consideration in the configuration of neonatal units in Scotland

1. The standards and guidance from BAPM and UK neonatal networks. Below are excerpts from key BAPM and neonatal NHS network publications.
2. The use of BAPM nursing ratios for intensive care to determine when units should be closed for staffing reasons needs reviewed
3. Neonatal intensive care units have key critical co dependencies with other specialty services and should be co located
4. National pathways of care are needed for pregnant women and babies with high risk low volume conditions such as HIE, congenital diaphragmatic hernia, cardiac conditions. These pathways support the information needed for the configuration of neonatal services
5. A process of exception reporting needs to be established to manage quality assurance and service performance
6. A process to manage any identified risk during the period of reconfiguration

1. **The consensus is that babies <27 wks gestation are cared for in a neonatal intensive care unit** https://www.networks.nhs.uk/nhs-networks/staffordshire-shropshire-and-black-country-newborn/documents/StandardsAssessmentDefinitions_000.pdf

BAPM Optimal Arrangements for Neonatal Intensive Care Units in the UK including guidance on their Medical Staffing. A Framework for Practice June 2014

- Neonatal Intensive Care Units (NICUs) in the UK should admit at least 100

  very low birth weight (VLBW) babies per year
- NICUs in the UK should undertake at least 2000 days of respiratory support

  per year
- All UK NICUs should comply to existing standards of nurse to baby ratios and cot occupancy as well as those related to family and parent quality experience
- Units with more than 7000 deliveries should augment their tier 1 medical support *
- NICUs undertaking more than 2500 Intensive care (IC) days per annum should augment their tier 2 medical cover and provide two consultant led teams during normal hours*
- Neonatal consultant staff should be available on site in all NICUs for at least

  12 hours a day and for units undertaking more than 4000 intensive care days per annum* consideration should be given to 24 hour consultant

Nursing and Allied Health staffing of NICUs

- All NICUs should have sufficient nursing staff to deliver BAPM's recommended nurse to patient ratios (1:1 NICU, 1:2 HDU, and 1:4 SC) (1, 2, 25)
- All NICUs should deliver the recommended level of therapy and other Allied Health professional support

Activity of Neonatal Intensive Care Units

- Neonatal Intensive Care Units in the UK should have a throughput of at least 100 VLBW infants per year (VLBW = less than 1500g)
- Neonatal Networks that include NICUs admitting less than 50 VLBW should develop plans to amalgamate NICUs (or NICUs plus LNUs) to increase throughput
- NICUs should undertake at least 2000 days of respiratory support per annum (endotracheal ventilation plus non-invasive ventilation which includes nasal CPAP, nasal High Flow and other non-invasive modalities but excludes low flow oxygen.)
- Where geography allows within networks, NICUs should be provided in centres that also deliver neonatal general surgery and if possible cardiac surgery.
- Where possible all VLBW referrals into NICUs should be in utero. Where transfer is ex utero there must be case review at network level.
- All NICUs should have sufficient space to provide the footprints for each cot as defined in the BAPM standards.
- All NICUs should adhere to the Bliss Baby Charter Standards and offer free accommodation on or near the unit and free car parking to parents.
- All NICUs should submit outcome and benchmarking data to a benchmarking organisation
- All NICUs should implement quality improvement programmes to constantly monitor and improve

Medical staffing of NICUs

- The minimum staffing of any NICU is outlined in the DoH toolkit, the Scottish Quality Framework, the Welsh and the Northern Irish Standards and the CRG neonatal service specification and for resident out of hours care should include a tier one clinician - ANNP or junior doctor ST1-3 and at tier 2 an experienced junior doctor ST 4-8 or appropriately trained specialty doctor or ANNP (1,2).
- Consultant staff in NICUs should be on the General Medical Council specialist register for neonatal medicine or equivalent and have primary duties on the neonatal unit alone (1,2). As units increase in size more staff would be required at all levels:
- NICUs with more than 2500* intensive care days per annum should double tier 2 cover at night by adding a second experienced junior doctor ST4-8 or appropriately trained specialty doctor or ANNP. A consultant present and immediately available on NICU in addition to tier 2 staff would be an alternative (* consensus)
- NICUs co-located with a maternity service delivering more than 7000* deliveries per year should augment their tier 1 cover at night by adding a second junior doctor, an ANNP and/or by extending nurse practice. (* consensus)
- It is recommended that all NICUs seek to extend consultant presence on the unit to at least 12 hours per day.
- NICUs undertaking more than 4000* intensive care days per annum with onerous on call duties should consider having a consultant present and immediately available 24 hours per day.
- NICUs undertaking more than 2500* intensive care days per annum should consider the presence of at least 2 consultant led teams during normal daytime hours.
- NICUs undertaking more than 4000* intensive care days per annum should consider the presence of three consultant led teams during normal daytime hours.
- Intensive care days are defined by BAPM's Categories of Care 2011 and it is acknowledged that there will be considerable HDU and SC days associated with this intensive care workload

Categories of Care 2011
INTENSIVE CARE
General principle

This is care provided for babies who are the most unwell or unstable and have the greatest needs in relation to staff skills and staff to patient ratios

Definition of Intensive Care Day

- Any day where a baby receives any form of mechanical respiratory support via a tracheal tube
- **BOTH** non-invasive ventilation (e.g. nasal CPAP, SIPAP, BIPAP, vapotherm) and PN
- Day of surgery (including laser therapy for ROP)
- Day of death
- Any day receiving any of the following
    - o Presence of an umbilical arterial line
    - o Presence of an umbilical venous line
    - o Presence of a peripheral arterial line
    - o Insulin infusion
    - o Presence of a chest drain
    - o Exchange transfusion
    - o Therapeutic hypothermia
    - o Prostaglandin infusion
    - o Presence of replogle tube
    - o Presence of epidural catheter
    - o Presence of silo for gastroschisis
    - o Presence of external ventricular drain
    - o Dialysis (any type)

HIGH DEPENDENCY CARE

General principle

This is care provided for babies who require highly skilled staff but where the ratio of nurse to patient is less than intensive care.

Definition of High Dependency Care Day

Any day where a baby does not fulfil the criteria for intensive care where any of the following apply**:**

- Any day where a baby receives any form of non invasive respiratory support

(e.g. nasal CPAP, SIPAP, BIPAP, HHFNC)

- Any day receiving any of the following:
    - o parenteral nutrition
    - o continuous infusion of drugs (except prostaglandin &/or insulin)
    - o presence of a central venous or long line (PICC)
    - o presence of a tracheostomy
    - o presence of a urethral or suprapubic catheter

    - o presence of trans-anastomotic tube following oesophageal atresia repair
    - o presence of NP airway/nasal stent
    - o observation of seizures / CF monitoring
    - o barrier nursing
    - o ventricular tap

2. The use of BAPM nursing rations for intensive care and unit closure definitions

One of the key points of discussion at the neonatal sub group was that Scottish neonatal units use the BAPM nursing standards as a means of defining unit closure. Scottish units use a more literal interpretation of the 1:1 ratio than in the rest of the UK. The BAPM standards were intended to raise the level of nurse staffing at the time and the ratios should be achieved over a period of time e.g. monthly rather than a shift by shift basis. In order to understand existing capacity a more flexible approach to the interpretation of these standards will be needed and a standard agreement on how to use these rations when agreeing unit closure. This should be agreed and put in place to understand if any additional intensive care nursing workforce is needed.

3. Co location of other services and critical interdependencies

- Regional / national fetal sub specialty services that are undertaking regular fetal assessment, interventions of complex pregnancies. Non subspecialty fetal medicine is delivered at other units, but this level of service does not have to be co located with a neonatal intensive care unit
- Neonatal surgery
- Paediatric intensive care units
- Paediatric cardiology and surgery
- Adult intensive care that provides subspecialty, regional and national services e.g. neuro intensive care, cardiac intensive care

4. National pathways

The principle of cohorting low volume high risk work has been a theme of this review based on the improved quality of care and outcome if a service and workforce have the greatest possible experience of managing rare complex conditions.

Consensus agreed pathways should be developed by the co dependent specialties such as Neonatal surgery, Fetal medicine, paediatric cardiology and high risk obstetrics. This work should include the specialties involved.

Examples of pathways needed for low volume complex conditions

- HIE babies requiring therapeutic hypothermia and neuro intensive care
- Neonatal surgery such as congenital diaphragmatic hernia
- Monochorionic twins with TTTS
- Fetal hydrops
- Congenital upper airway obstruction needing ENT support at birth
- NTD requiring early surgery and shunts
- Maternal conditions such as adult congenital heart disease

The patterns of these pathways in the rest of the UK suggest that 2 of the 3 neonatal intensive care units would need to be co located with other sub specialty services

5. Providing quality assurance

A process of national exception reporting across a network is needed to support the delivery of high quality intensive care. This should include monthly collection of data, review of all exceptions with individual health boards and the network and a process of feedback and learning to support improvement.

6. Management of any identified risk

Agree the process to manage moderate to significant risks to a baby and their family through this period of reconfiguration when there are multiple service and organisational changes.

PS 03 02

The Best Start: Perinatal Services Sub Group

Purpose:

- The Perinatal Sub Group agreed to that standardised definitions of neonatal units were needed to discuss the movement to 3 units.
- Edile Murdoch has drawn up this draft paper for discussion and this paper has been revised since 12th January meeting.
- The Sub Group are invited to discuss the attached

Board Secretariat

January 18

Perinatal sub group

Defining the category of neonatal units

Key points for consideration in the configuration of neonatal units in Scotland

1. The standards and guidance from BAPM and UK neonatal networks. Below are excerpts from key BAPM and neonatal NHS network publications.
2. To address recommendation 57 within Best Start (Nationally agreed pathways for declaring cot availability should be agreed and formal processes should be in place for the management of periods of unusually high), a group has been convened to progress a uniform approach to declaration of cot availability across NHS Scotland. A meeting is scheduled for the 1st of February which will include BAPM representation to provide clarity around the use of current BAPM staffing standards in relation to declaration of cot availability. The output from this meeting should be reviewed by the Perinatal Subgroup of the Best Start implementation board.
3. activity.
4. Neonatal intensive care units have key critical co dependencies with other specialty services and should be co located
5. Existing National pathways of care for pregnant women and babies with high risk low volume conditions such as HIE, congenital diaphragmatic hernia, cardiac conditions should be reviewed and updated in line with the Best Start recommendations. These pathways support the information needed for the configuration of neonatal services
6. A process of exception reporting needs to be established to manage quality assurance and service performance
7. A process to manage any identified risk during the period of reconfiguration

1. **The consensus is that babies <27 wks gestation are cared for in a neonatal intensive care unit** https://www.networks.nhs.uk/nhs-networks/staffordshire-shropshire-and-black-country-newborn/documents/StandardsAssessmentDefinitions_000.pdf

BAPM Optimal Arrangements for Neonatal Intensive Care Units in the UK including guidance on their Medical Staffing. A Framework for Practice June 2014

- Neonatal Intensive Care Units (NICUs) in the UK should admit at least 100

  very low birth weight (VLBW) babies per year
- NICUs in the UK should undertake at least 2000 days of respiratory support

  per year
- All UK NICUs should comply to existing standards of nurse to baby ratios and cot occupancy as well as those related to family and parent quality experience
- Units with more than 7000 deliveries should augment their tier 1 medical support *
- NICUs undertaking more than 2500 Intensive care (IC) days per annum should augment their tier 2 medical cover and provide two consultant led teams during normal hours*
- Neonatal consultant staff should be available on site in all NICUs for at least

  12 hours a day and for units undertaking more than 4000 intensive care days per annum* consideration should be given to 24 hour consultant

Nursing and Allied Health staffing of NICUs

- All NICUs should have sufficient nursing staff to deliver BAPM's recommended nurse to patient ratios (1:1 NICU, 1:2 HDU, and 1:4 SC) (1, 2, 25)
- All NICUs should deliver the recommended level of therapy and other Allied Health professional support

Activity of Neonatal Intensive Care Units

- Neonatal Intensive Care Units in the UK should have a throughput of at least 100 VLBW infants per year (VLBW = less than 1500g)
- Neonatal Networks that include NICUs admitting less than 50 VLBW should develop plans to amalgamate NICUs (or NICUs plus LNUs) to increase throughput
- NICUs should undertake at least 2000 days of respiratory support per annum (endotracheal ventilation plus non-invasive ventilation which includes nasal CPAP, nasal High Flow and other non-invasive modalities but excludes low flow oxygen.)
- Where geography allows within networks, NICUs should be provided in centres that also deliver neonatal general surgery and if possible cardiac surgery.
- Where possible all VLBW referrals into NICUs should be in utero. Where transfer is ex utero there must be case review at network level.
- All NICUs should have sufficient space to provide the footprints for each cot as defined in the BAPM standards.
- All NICUs should adhere to the Bliss Baby Charter Standards and offer free accommodation on or near the unit and free car parking to parents.
- All NICUs should submit outcome and benchmarking data to a benchmarking organisation
- All NICUs should implement quality improvement programmes to constantly monitor and improve

Medical staffing of NICUs

- The minimum staffing of any NICU is outlined in the DoH toolkit, the Scottish Quality Framework, the Welsh and the Northern Irish Standards and the CRG neonatal service specification and for resident out of hours care should include a tier one clinician - ANNP or junior doctor ST1-3 and at tier 2 an experienced junior doctor ST 4-8 or appropriately trained specialty doctor or ANNP (1,2).
- Consultant staff in NICUs should be on the General Medical Council specialist register for neonatal medicine or equivalent and have primary duties on the neonatal unit alone (1,2). As units increase in size more staff would be required at all levels:
- NICUs with more than 2500* intensive care days per annum should double tier 2 cover at night by adding a second experienced junior doctor ST4-8 or appropriately trained specialty doctor or ANNP. A consultant present and immediately available on NICU in addition to tier 2 staff would be an alternative (* consensus)
- NICUs co-located with a maternity service delivering more than 7000* deliveries per year should augment their tier 1 cover at night by adding a second junior doctor, an ANNP and/or by extending nurse practice. (* consensus)
- It is recommended that all NICUs seek to extend consultant presence on the unit to at least 12 hours per day.
- NICUs undertaking more than 4000* intensive care days per annum with onerous on call duties should consider having a consultant present and immediately available 24 hours per day.
- NICUs undertaking more than 2500* intensive care days per annum should consider the presence of at least 2 consultant led teams during normal daytime hours.
- NICUs undertaking more than 4000* intensive care days per annum should consider the presence of three consultant led teams during normal daytime hours.

- Intensive care days are defined by BAPM's Categories of Care 2011 and it is acknowledged that there will be considerable HDU and SC days associated with this intensive care workload

Categories of Care 2011

INTENSIVE CARE

General principle

This is care provided for babies who are the most unwell or unstable and have the greatest needs in relation to staff skills and staff to patient ratios

Definition of Intensive Care Day

• Any day where a baby receives any form of mechanical respiratory support via a tracheal tube

• **BOTH** non-invasive ventilation (e.g. nasal CPAP, SIPAP, BIPAP, vapotherm) and PN

• Day of surgery (including laser therapy for ROP)

• Day of death

• Any day receiving any of the following
  - o Presence of an umbilical arterial line
  - o Presence of an umbilical venous line
  - o Presence of a peripheral arterial line
  - o Insulin infusion
  - o Presence of a chest drain
  - o Exchange transfusion
  - o Therapeutic hypothermia
  - o Prostaglandin infusion
  - o Presence of replogle tube
  - o Presence of epidural catheter
  - o Presence of silo for gastroschisis
  - o Presence of external ventricular drain
  - o Dialysis (any type)

HIGH DEPENDENCY CARE

General principle

This is care provided for babies who require highly skilled staff but where the ratio of nurse to patient is less than intensive care.

Definition of High Dependency Care Day

Any day where a baby does not fulfil the criteria for intensive care where any of the following apply**:**

• Any day where a baby receives any form of non invasive respiratory support

(e.g. nasal CPAP, SIPAP, BIPAP, HHFNC)

• Any day receiving any of the following:
  - o parenteral nutrition
  - o continuous infusion of drugs (except prostaglandin &/or insulin)
  - o presence of a central venous or long line (PICC)
  - o presence of a tracheostomy
  - o presence of a urethral or suprapubic catheter

  - o presence of trans-anastomotic tube following oesophageal atresia repair
  - o presence of NP airway/nasal stent

- o observation of seizures / CF monitoring
- o barrier nursing
- o ventricular tap

2. The use of BAPM nursing rations for intensive care and unit closure definitions

One of the key points of discussion at the neonatal sub group was that Scottish neonatal units use the BAPM nursing standards as a means of defining unit closure. Scottish units use a more literal interpretation of the 1:1 ratio than in the rest of the UK. The BAPM standards were intended to raise the level of nurse staffing at the time and the ratios should be achieved over a period of time e.g. monthly rather than a shift by shift basis. In order to understand existing capacity a more flexible approach to the interpretation of these standards will be needed and a standard agreement on how to use these rations when agreeing unit closure. This should be agreed and put in place to understand if any additional intensive care nursing workforce is needed.

3. Co location of other services and critical interdependencies

- Regional / national fetal sub specialty services that are undertaking regular fetal assessment, interventions of complex pregnancies. Non subspecialty fetal medicine is delivered at other units, but this level of service does not have to be co located with a neonatal intensive care unit
- Neonatal surgery
- Paediatric intensive care units
- Paediatric cardiology and surgery
- Adult intensive care that provides subspecialty, regional and national services e.g. neuro intensive care, cardiac intensive care
- Adult and Paediatric Radiology (e.g. availability of MRI and MRS)services including interventional radiology

4. National pathways

The principle of cohorting low volume high risk work has been a theme of this review based on the improved quality of care and outcome if a service and workforce have the greatest possible experience of managing rare complex conditions.

Existing pathways should be reviewed and further developed as required to meet the recommendations of Best Start. These agreed pathways will require collaboration between co dependent specialties such as Neonatal surgery, Fetal medicine, paediatric cardiology and high risk obstetrics. This work should include the specialties involved.

Examples of pathways for low volume complex conditions to be reviewed utilising this strategy includes:

- o HIE babies requiring therapeutic hypothermia and neuro intensive care
- o Neonatal surgery such as congenital diaphragmatic hernia
- o Monochorionic twins with TTTS
- o Fetal hydrops
- o Congenital upper airway obstruction needing ENT support at birth
- o NTD requiring early surgery and shunts
- o Maternal conditions such as adult congenital heart disease

The patterns of these pathways in the rest of the UK suggest that 2 of the 3 neonatal intensive care units would need to be co located with other sub specialty services

5. Providing quality assurance

A process of national exception reporting across a network is needed to support the delivery of high quality intensive care. This should include monthly collection of data, review of all exceptions with individual health boards and the network and a process of feedback and learning to support improvement.

6. Management of any identified risk

Agree the process to manage moderate to significant risks to a baby and their family through this period of reconfiguration when there are multiple service and organisational changes.

THE BEST START

Neonatal intensive care: Options appraisal and decision making process

IPB Secretariat

February 2018

THE BEST START:
NEONATAL INTENSIVE CARE – OPTIONS APPRAISAL AND DECISION MAKING PROCESS

Introduction

The Best Start Recommendation 45: Neonatal intensive care:
'The new model of neonatal services should be redesigned to accommodate the current levels of demand, with a smaller number of intensive care neonatal units, supported by local neonatal and special care units. Formal pathways should be developed between these units to ensure that clear agreements are in place to treat the highest risk preterm babies and the sickest term babies in need of complex care in fewer centres, while returning babies to their local area as soon as clinically appropriate. Three to five neonatal intensive care units should be developed, supported by 10 to 12 local neonatal and special care units.'

The Best Start also recommends (p53) that the most complex maternity care is managed at a regional or national level. It also recommends (p54) that units providing the most specialised maternity and neonatal care should be co-located.

TASK: TO DEVELOP A PROCESS LEADING TO DECISION ON LOCATION OF NEONATAL INTENSIVE CARE UNITS IN SCOTLAND

The Perinatal Sub Group of The Best Start agreed to undertake an Options Appraisal Process to identify which units in Scotland should be identified as neonatal intensive care, local neonatal units and special care units. The output of that process should be a recommendation that identifies 5 neonatal intensive care units in the short/medium term, and 3 neonatal intensive care units in the medium/long term and proposals for timing and implementation of that decision.

The purpose of this paper is to:

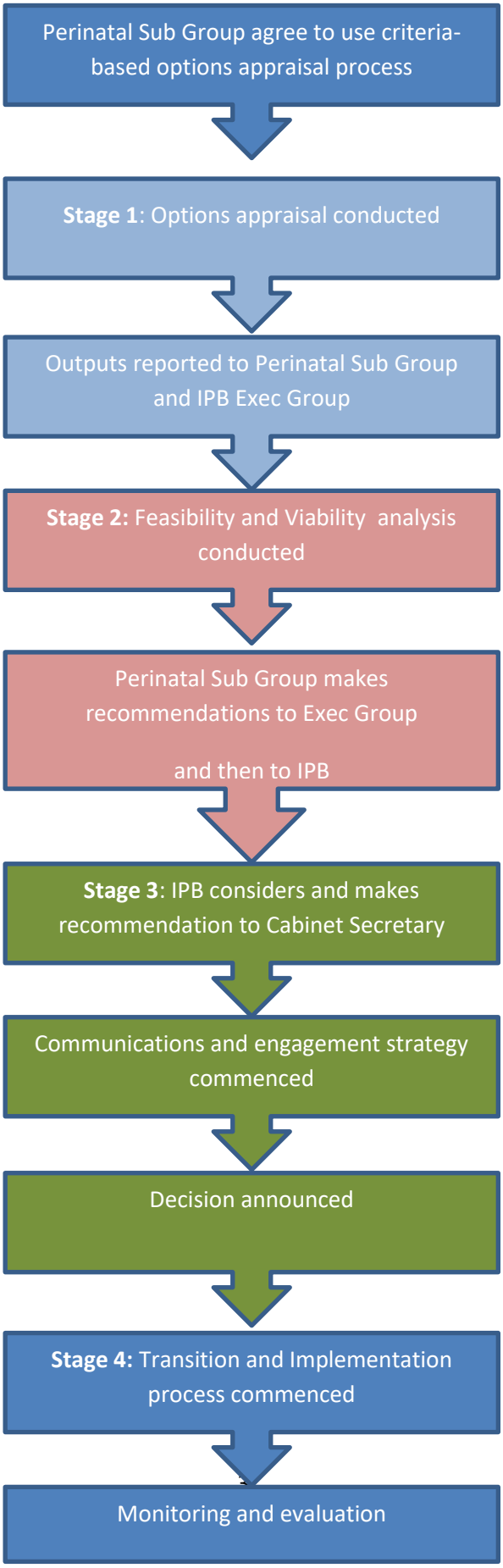
- Describes the process to decision and implementation,
- Propose options for stages in the process
- Include information to inform the options appraisal process in the annexes.

Section 1 – Decision making flow chart and Options appraisal process
Section 2 – Criteria and weighting - possible model
Annexes
Annex A – The Best Start vision for Neonatal Care
Annex B – Neonatal Unit Data
Annex C – BAPM categories of Neonatal Care
Annex D – Neonatal units in Scotland – capacity
Annex E – EGAMS criteria for maternity units
Annex F – NSD Guidance on Options Appraisal

PS 03 03

SECTION 1

DECISION MAKING FLOW CHART



SECTION 1: Proposed Options Appraisal and Decision Making Process:

ACTIONS		PARTICIPANTS	INPUTS/OUTPUTS
Stage 1: Options appraisal – March – April 2018			
1.1	1.1.1 Establish Criteria for Options Appraisal 1.1.2 Establish scoring and weighting system	**Options Appraisal Group** • Identify composition of group • Identify chair • Agree if external facilitation required	Inputs: 1. Outline of proposed criteria drawn from EM paper, and other possible considerations. 2. Outline of proposed scoring and weighting system. 3. BAPM criteria 4. EGAMS data on levels/categorisation of Maternity Units 5. Neonatal unit data 6. Other data/information to be determined by criteria for options appraisal. **Output: Agreed specification for options appraisal process, including criteria and scoring and weighting system.**
1.2	1.2.1 Carry out options appraisal based on specification. 1.2.2 Agree report.	As above	Inputs: As above Specification for Options appraisal process. **Output: Report of Stage 1 Options Appraisal Process**
1.3	Report of conclusions of Stage 1 of Options	Chair of options appraisal process	

	Appraisal Process sent by Chair of group to Chair of IPB		
1.4	Chair of IPB meets with Chairs of Perinatal Sub Group and agrees next steps.	Chair of IPB, Chairs of Perinatal sub group,	
Stage 2: Viability and Feasibility assessment –May – June 2018			
2.1	Chairs of Perinatal Sub Group lead national level work, with support from Boards to: 2.1.1 Work up patient flow, staffing and capacity data to assess viability (including cost) and feasibility for both maternity and neonatal care (based on new model of care). 2.1.2 Work on planning for transition and implementation. 2.1.3. Assessment of Boards readiness to meet BAPM criteria for neonatal intensive care.	Led by Chairs of Perinatal Sub Group, carried out by operational planner(s) with Neonatal & Maternity input from MCN staff plus CD's.	Inputs: Report of stage 1 options appraisal process. Available neonatal data. **Output: Stage 2 Report Outlining viability, feasibility, transition and implementation plans.**
2.3	Commence communications and engagement planning to outline plans for communication and engagement with key stakeholders in neonatal and maternity community, other NHS NHS CE's, Regional Planning, public/neonatal service users, MSPs/MPs, SG, media in advance of decision making and at the point of announcing decision.	Members of Perinatal Sub Group Secretariat Elsbeth Campbell	**Output: Outline Communications & Engagement strategy**
2.4	Report to IPB outlining: • Outcomes of stage 1 Options Appraisal and stage 2 Viability and Feasibility Assessment • Proposed recommendation to Ministers on names of units, timescales and implementation process of moving to 5	Secretariat, IPB	

	and then 3 Neonatal ITUs. • Proposed communications strategy.		**Output: Report to take to IPB,**
2.5	Preliminary discussion with Cabinet Secretary in advance of formal presentation of recommendation.	JG JF AH CL	
Stage 3: Decision Making and Communications – July – October 2018			
3.1	IPB consider report of options appraisal process and agree recommendations to go to Ministers. [August]	IPB	Letter communicating decision from JG to Cabinet Secretary
3.2	Meeting with Cabinet Secretary and decision making. [September]	JG/AH/CL	
3.3	Commence communications and engagement strategy. [Sept/Oct]	BL/EC/Perinatal Sub Group	
3.4	Formal decision announced. [October]	Cab Sec (to Parliament)/JG (to NHS)	
Stage 4: Implementation			
4.1	Commence implementation process (informed by stage 2 discussions)		
4.2	Monitoring and reporting arrangements in place		

SECTION 2:

STAGE 1 OPTIONS APPRAISAL CRITERIA AND WEIGHTING – POSSIBLE MODEL

Process:

Identify Options:
8 current Neonatal Intensive Care Units: Queen Elizabeth University Hospital, Princess Royal Maternity Hospital, Edinburgh Royal Infirmary, Aberdeen Maternity Unit, Ninewells, Wishaw General, Victoria Hospital, Crosshouse Hospital.

Identify essential criteria, desirable criteria for Stage 1
Criteria should be established that are underpinned by evidence or policy, are unambiguous and can be scored.
Definition of Essential criteria: Unit must meet this criteria to be designated as a neonatal intensive care unit and these criteria will have the highest weighting.
Definition of Desirable criteria: criteria that need to be considered but are not 'deal breakers'. Weighting will reflect relative importance.

Weighting and Scoring
Weighting representing the relative importance should be assigned to each criterion. This is usually a number between one and 5, with 5 representing an extremely important criterion and 1 representing one that is not so important.
A system of scoring should also be developed so that each option can be scored against each criterion. Scoring definitions should be developed before this exercise is undertaken.

Scoring can be done as a group or individually and then the results discussed as a group before coming to a final consensus on the appropriate score. Once the scoring is complete, the results should be entered into a spreadsheet which uses the pre-agreed weightings along with the scores to calculate a score for each criteria, and then a total score for each option.

Considering results

There may be considerations that are difficult to score or weight, for example regional distribution. Any such considerations should be defined when establishing criteria and considered at the end.

Possible Criteria and weighting – for discussion

CRITERIA	**Source/Evidence**	**Relative weighting**	**Definition for Scoring**
Essential criteria			
1. Colocation with neonatal general surgery	BAPM requirement	1-5	1-10
2. Colocation with specialist maternity services	The Best Start p54, EGAMs & BAPM	1-5	1-10
3. Post implementation will unit admit at least 100 VLBW babies per year?	The Best Start p79	1-5	1-10
4. Post implementation will unit undertake at least 2000 days of respiratory support per year?	The Best Start p79	1-5	1-10
5. *Other possible criteria – have to be specific and measureable*			
Desirable criteria:			
1. Fetal sub speciality services,	BAPM requirement	1-5	1-10
2. Cardiac surgery,	BAPM requirement	1-5	1-10
3. Paediatric intensive care	BAPM requirement	1-5	1-10
4. Paediatric cardiology and surgery	BAPM requirement	1-5	1-10
5. Sub-speciality adult intensive care	BAPM requirement	1-5	1-10
6. Adult and Paediatric Radiology	Perinatal Sub group		
7. Other possible criteria – have to be specific and measureable			

ANNEXES

ANNEX A

NEONATAL MODEL OF CARE – SUMMARY OF THE BEST START – P77-80

Vision

The key features of the proposed redesigned family-centred model are:

- The further development of a model of neonatal care across Scotland that keeps mothers and babies together in a postnatal ward when the baby has modest additional care needs, and minimises the need for admission to a neonatal unit.
- The provision of care for all babies as near to home as possible, while recognising that a small number of the most vulnerable preterm babies and the sickest term babies in need of complex care will receive some of their neonatal care in one of a smaller number of neonatal intensive care units. When this happens parents will be supported to be with their babies.
- The development of clear, agreed pathways for babies to be returned to their local or special care neonatal unit (or, if possible, home), following treatment in a neonatal intensive care unit or local neonatal unit.
- Parents must be involved in decision making throughout and particularly in the practical aspects of care as much as possible. This includes encouraging kangaroo skin-to-skin care and early support for breastfeeding.
- The provision of support and facilities to allow parents to spend as much time with their babies as possible while they are in neonatal care, including the provision of overnight accommodation.
- The development of a model of early discharge for babies who have additional care needs who can be safely managed in the community.

Evidence clearly shows that outcomes for very low birth weight babies (VLBW), both in terms of survival and longer term neurodevelopmental outcomes are better when they are delivered and/or treated in neonatal intensive care units with full support services, experienced staff and a critical mass of activity. Future models of neonatal care should be designed to ensure that designated neonatal intensive care units care for a minimum of 100 VLBW babies per year (VLBW =<1500g) and are suitably experienced in caring for babies who need help with breathing (the latter is measured as more than 2000 respiratory care days per year).

The Best Start Review proposed that three to five neonatal intensive care units should be the immediate model for Scotland, progressing to three units within five years. This will lead to improved staff competencies and best clinical practice in these units and safer care for the babies most at risk. Development of the model should be phased in recognition of the co-dependencies between maternity and neonatal care.

The remaining neonatal units will provide local neonatal care and/or special care for less sick infants and babies who no longer need neonatal intensive care. Local neonatal units will continue to carry out low risk neonatal intensive care, however care for the highest risk preterm babies and the sickest term babies in need of complex care will be in a smaller number of neonatal intensive care units.

ANNEX B

NEONATAL UNITS: DATA 2016

Unit/Level	**Deliveries (ISD)**	**Neonatal Admissions**	**<27 Weeks**	**BAPM Criteria**									
				VLBW <1500g	Respiratory days	Neonatal surgery	Maternity unit level#	Fetal Sub Specialty	Cardiac surgery	Paediatric ITU	Paediatric card/surg	Adult spec ITU	Adult/ paeds radiology
QEUH (3)	5728	593	9	64	7457	Y	III##						
PRM (3)	5964	466	18	62	3718	N	III						
ERI (3)	6241	815	22	87	4773	Y*	III						
AMH (3)	5134	886	6	56	3448	Y	III						
Wishaw Gen (3)	4669	787	15	64	5217	N	IIc						
Ninewells (3)	3975	566	13	59	2021	N	IIc						
Crosshouse (3)	3549	480	8	45	1827	N	IIc						
Victoria, Fife(3)	3473	366	11	50	1910	N	IIc						
Forth Valley (2)	3118	362	6	21		N	IIc##						
Raigmore(2)	2035	263	3	10		N	IIc						
St Johns (2)	2629	269	1	-		N	IIc						
RAH (2)	3546	383	2	20		N	IIc						
Cresswell (2)	1211	199	3 (?)	16		N	IIc						
Borders (2)	991	112	1	7		N	IIb						
Dr Grays (1)	1013			-		N	IIb						
Total				~570									

* Paediatric ITU and Neonatal Surgery will be co-located at ERI from 2019

Maternity Unit level taken from EGAMS report, where available

Forth Valley and QEUH post date EGAMS. For Forth Valley assume designation of Falkirk and Stirling (both level 2c) and for QEUH assume designation of Queen Mothers maternity unit level 3 designation.

Annex C

Categories of Neonatal Intensive Care: BAPM standards

Neonatal Intensive Care
A Neonatal Intensive Care Unit is a specialised unit which operates as part of a regional network of neonatal units.

The following categories of care should only be provided in Neonatal Intensive Care Units: Care for babies born at less than 27 weeks gestation.

BAPM-based requirements for NICU:

1. Admit at least 100 very low birth weight (VLBW) babies per year (VBLW =<1500g);
2. Undertake at least 2000 days of respiratory support per year;
3. Where geography allows within networks, NICUs should be provided in centres that also deliver neonatal general surgery and, if possible, fetal sub speciality services, cardiac surgery, paediatric intensive care, paediatric cardiology and surgery, sub-speciallity adult intensive care.
4. Have sufficient space to provide the footprints for each cot as defined in the BAPM standards.
5. Operate with 12 hour neonatal consultant cover and, for units undertaking more than 4000 intensive care days per annum, consideration should be given to 24 hour consultant cover;
6. Comply with existing standards of nurse to baby ratios and cot occupancy and have required levels of AHP support;
7. Units with more than 7000 deliveries should augment their tier 1 medical support;
8. NICUs undertaking more than 2500 Intensive care (IC) days per annum should augment their tier 2 medical cover and provide two consultant led teams during normal hours;
9. Adhere to the Bliss Baby Charter Standards and comply with quality standards for family and parent experience;
10. Submit outcome and benchmarking data to a benchmarking organisation
11. Robust clinical governance, performance management and quality improvement programmes in place to ensure quality insurance and improvement.
12. Units should play a role in providing clinical leadership and support throughout the patient pathway to ensure patients receive coordinated, appropriate and definitive care quickly, and support other hospitals in the network in optimising the neonatal patient pathway.

Annex D
[Extract from The Best Start]

NEONATAL UNITS IN SCOTLAND

The cot numbers on this list are indicative figures, as there is flexibility built into the operation of levels of care.

NHS Board	Designation Level	Cot Type and Number			
		Intensive Care Unit	High Dependency Unit	Special Care	Transitional Care
NHS Ayrshire & Arran					
University Hospital Crosshouse	3	5	4	11	4
NHS Borders					
Borders General, Melrose	2	0	2	6	*
NHS Dumfries & Galloway					
Cresswell, Dumfries & Galloway	2	2	0	9	0
NHS Fife					
Victoria Hospital, Kirkcaldy	3	4	2	14	0
NHS Forth Valley					
Forth Valley Royal Hospital, Larbert	2	5	2	13	0
NHS Grampian					
Aberdeen Royal	3	10	7	19	**
Dr Gray's, Elgin	1	0	0	4	0
Greater Glasgow and Clyde					
Neonatal Unit, Royal Children's Hospital, Glasgow	3	16	14	20	0
Princess Royal Maternity, Glasgow	3	4	6	18	0
Royal Alexandra, Paisley	2	3	3	10	0
Highland					
Raigmore, Inverness	2	2	1	8	***
Lanarkshire					
Wishaw General	3	8	10	11	6

Lothian					
Simpson Centre for Reproductive Health, ERI	3	9	8	22	0
St John's Hospital, Livingston	2	0	2	8	0
Tayside					
Ninewells, Dundee	3	4	3	14	4
Orkney					
	-	-	-	-	-
Shetland					
	-	-	-	-	-
Western Isles					
	-	-	-	-	-
Total Neonatal Cots in Scotland		**72**	**64**	**187**	**14**

***** provided on postnatal ward and therefore varies from day to day

** 1 Isolation room, 3 Parentcraft rooms, 1NNU clinic

*** Cots are used flexibly to a maximum of 18 points, ITU: 4 points, HD: 2 points, SC: 1 point

EGAMS

EGAMS report
http://www.gov.scot/Resource/Doc/47021/0013918.pdf

EXTRACT – SECTION V PAGES 52 - 55

Level Ia-d Maternity Care

11. In addressing the risk assessment and management approach for women who deliver at home or in Level Ib-d units, it is important to highlight that all women should receive a holistic approach to care. Manpower in CMUs will largely consist of qualified midwives, some student midwives, maternity care assistants and where relevant allied health care professionals (AHPs) such as physiotherapists. In certain areas there may be GP involvement and support. It is envisaged that many healthy low risk women, who go into spontaneous labour at term and who do not wish epidural analgesia, will opt to deliver in a CMU. **The entry criteria to Levels Ia-d intrapartum care are identical and have been agreed as follows:**

- Low risk, healthy woman
- Singleton pregnancy
- Cephalic presentation
- Spontaneous labour between 37 weeks gestation and 40/52 + 10 days
- Primigravidae or multigravidae <5

12. The exit examples for Levels Ia-d are purposely not all inclusive and these should be considered and specifically agreed locally within the overall network of maternity provision. Any woman with criteria that are listed in Annex E1 under general characteristics, maternal medical and surgical history, poor past obstetric and neonatal history, present pregnancy morbidity should be referred for incremental care. A number of maternal and neonatal morbidities are identified within this Annex which should result in referral for advice regarding management or transfer depending on locally agreed guidelines (Annex E, page 136).

Level IIa-c Maternity Care

13. All Level II units will provide facilities for low risk women as described in Level I but also will manage more complex conditions, and this will vary depending on the designation of the unit being Level IIa, IIb and IIc. The exit examples are intended as a guide and will vary from unit to unit and should be considered on an individual patient basis depending on geography, existing services, manpower and morbidity. All units should clearly state the level of service offered, allowing mothers informed choice of the type of facility and level of service that they wish for the birth of their baby. These Level II units must have haematology and blood transfusion services available on site. Obstetric anaesthesia and epidural analgesia should be provided on a 24 hour basis. Isolated consultant obstetric units at a distance from general hospitals present difficulties in terms of anaesthetic staffing and access to specialised medical or surgical care and intensive care and stressed the importance of innovative approaches to managing care in these units, working towards location within a DGH site (CEMD (2001)).

Level IIa

14. Entry to this level of care is similar to Level I and these units consist of a consultant-led maternity unit with <1000 deliveries per annum with no neonatal facility. This type of unit is suitable for healthy low risk women, essentially at term. Women who choose to deliver in Level IIa units will be able to undergo caesarean section, operative vaginal delivery and normally will have access to a limited epidural analgesia service. Although this unit will be able to carry out obstetric intervention, any woman with a significant past medical or surgical morbidity, poor past obstetric or neonatal history and identified current pregnancy morbidities might not be a suitable candidate for delivery in a unit, without adult intensive care or neonatal support. The exclusion criteria for Level IIa care are identified in Annex E2. Once again criteria for maternal or neonatal referrals have been identified.

15. Referral may be for advice regarding management or transfer depending on locally agreed guidelines. In Level IIa units it is crucial that appropriate referral pathways are used for any mother and baby who gives cause for concern. It is not advisable for any at risk fetus to be delivered in this type of unit.

Level IIb Maternity Care

16. This refers to a consultant-led maternity unit with <1000 deliveries per annum, with 24 hour paediatric cover and a SCBU. Units of this nature will provide Level II neonatal care (Table 1.2, page 9) and ill neonates will only be transferred after resuscitation and stabilisation, should neonatal intensive care be required. A table of exit criteria for Level IIb care is identified in Annex E3. It is envisaged that a local and regional referral pathway with agreed criteria will be developed and adopted to ensure that all woman and babies receive the highest quality of care as locally as possible. As well as midwives and obstetricians, the skill mix for this level of care will include anaesthetists providing 24 hour cover for anaesthesia, analgesia and resuscitation. Due to the likely workload in a Level II unit, it is envisaged that the obstetric anaesthesia duties will be shared with other duties such as intensive care.

17. Special Care Baby Units in Level IIb units will have resident paediatric staff. Out of hours this will be a trainee, a non consultant career grade doctor with a minimum of one year's experience in paediatrics including the minimum of 6 months experience in a neonatal intensive care unit, or in some units an Advanced Neonatal Nurse Practitioner (ANNP). Each unit will have a consultant paediatrician with a designated responsibility for direction and management of the unit including the monitoring of clinical policies, practice and standards. Consultants appointed to posts with responsibility for providing cover for Level II b units should have had at least one year of specialist training in a post or posts approved for neonatal training and they should maintain their professional development in the care of newborn babies: this should include regular revalidation in Newborn Life Support.

18. Referral for maternal and fetal conditions may be for advice regarding management or actual transfer, in line with locally agreed guidelines. Exit examples for Level IIb units are identified in Annex E3. All Level II b units must have clearly identified referral pathways to designated professionals and maternity units for an escalation in intrapartum care.

Level IIc Maternity Care

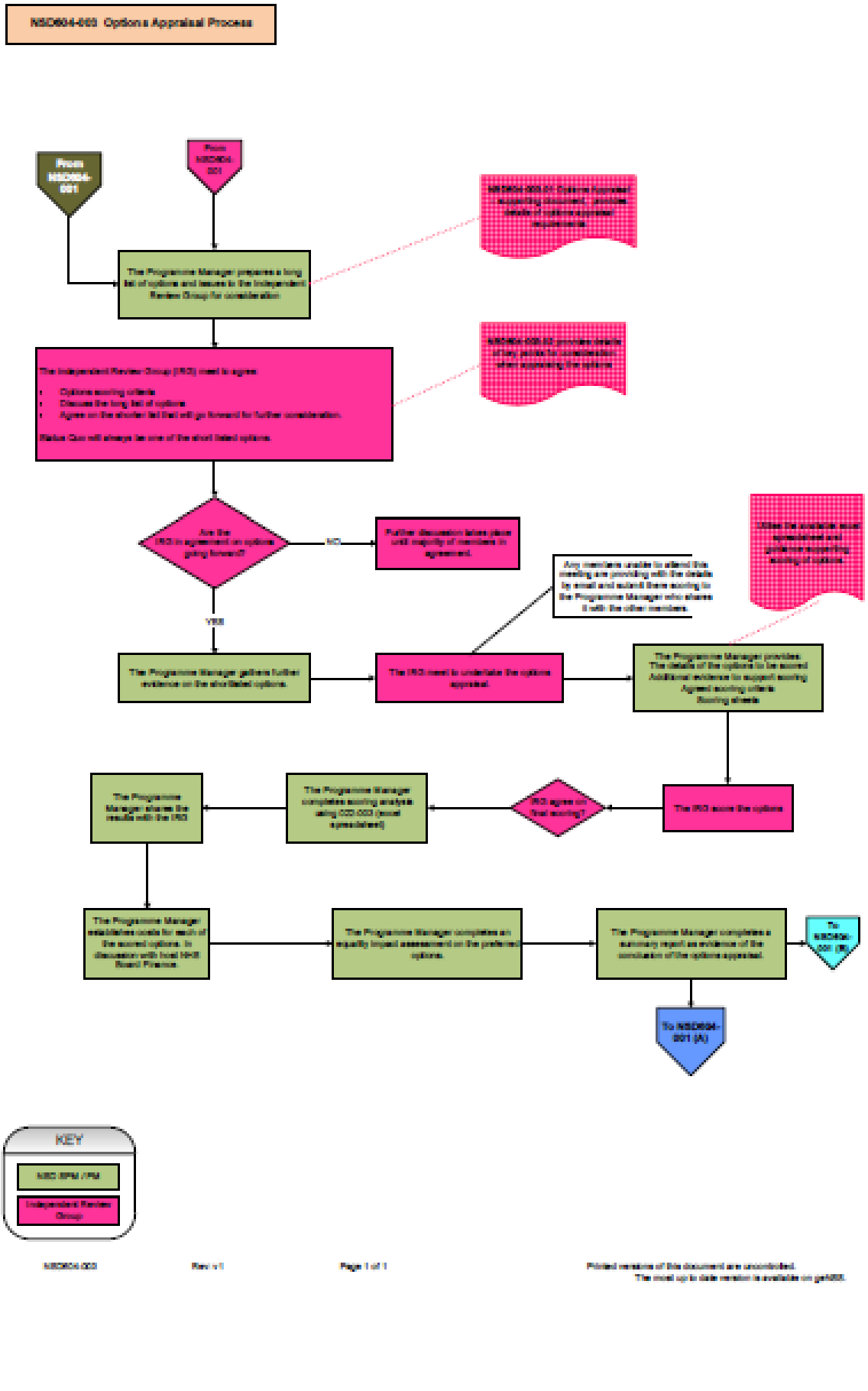
19. These consist of consultant-led obstetric units of approximately 1,000-3,000 deliveries per annum (but this may be significantly more) with neonatal intensive care facilities and comprehensive general, specialist medical and support services. These units, while providing all levels of lower risk care, will provide intrapartum care for most woman. Isolated

consultant obstetric units at a distance from general hospitals present difficulties in terms of medical staffing and access to specialist medical and surgical care, support care and intensive care should co-locate within DGH sites (CEMD 2001).

20. Mothers and infants should be transferred to a regional Level III facility if sub-specialist maternal-fetal or specialised medical care is required, particularly from units without adult intensive care. The exit examples for Level IIc care are shown in Annex E4.

Level III Care

21. These consist of consultant led specialist maternal fetal units of over 3,000 deliveries per annum and will provide care for women with complex maternities, but will also offer a range of intrapartum care options for women requesting low tech care. These units should have on-site adult intensive care, neonatal intensive care (Level IV neonatal facilities) and neonatal surgery, either on-site or close-by. The typical anaesthetic workload in a Level III consultant obstetric unit is identified on page [ ]. The four Level III maternity units in Scotland are capable of caring for the majority of maternal and neonatal morbidities, the one specific exception being the management of hypoplastic left heart syndrome in the neonate which necessitates transfer outwith Scotland. The criteria for transfer to a specialist facility should be at the discretion of the referring hospital following referral, consultation and agreement between the appropriate senior specialists in both units. A list of entry examples for Level III care, in which identified maternal and fetal morbidities are appropriately treated in a specialist centre, are identified in Annex E5.


NSD604-003 Options Appraisal Process
From NSD604-001
From NSD604-001
The Programme Manager prepares a long list of options and issues to the Independent Review Group for consideration
The Independent Review Group (IRG) need to agree:
Options scoring criteria
Discuss the long list of options
Agree on the shortlist list that will go forward for further consideration.
Status Quo will always be one of the short listed options
Are the IRG in agreement on options going forward?
NO
Further discussion takes place until majority of members in agreement.
YES
The Programme Manager gathers further evidence on the shortlisted options.
The IRG meet to undertake the options appraisal
Any members unable to attend this meeting are providing with the details by email and submit there scoring to the Programme Manager who shares it with the other members.
The Programme Manager provides: The details of the options to be scored Additional evidence to support scoring Agreed scoring criteria Scoring sheets
The IRG score the options
IRG agree on final scoring?
The Programme Manager completes scoring analysis using (CD 003 (excel spreadsheet)
The Programme Manager shares the results with the IRG
The Programme Manager establishes scale for each of the scored options. In discussion with local NHS Board Finance.
The Programme Manager completes an equality impact assessment on the preferred options.
The Programme Manager completes a summary report as evidence of the conclusion of the options appraisal.
To NSD604-001 (B)
To NSD604-001 (A)
KEY
NSD BPM / PM
Independent Review Group
NSD604-003
Rev: v1
Page 1 of 1
Printed versions of this document are uncontrolled.
The most up to date version is available on gef000.

PS05-01

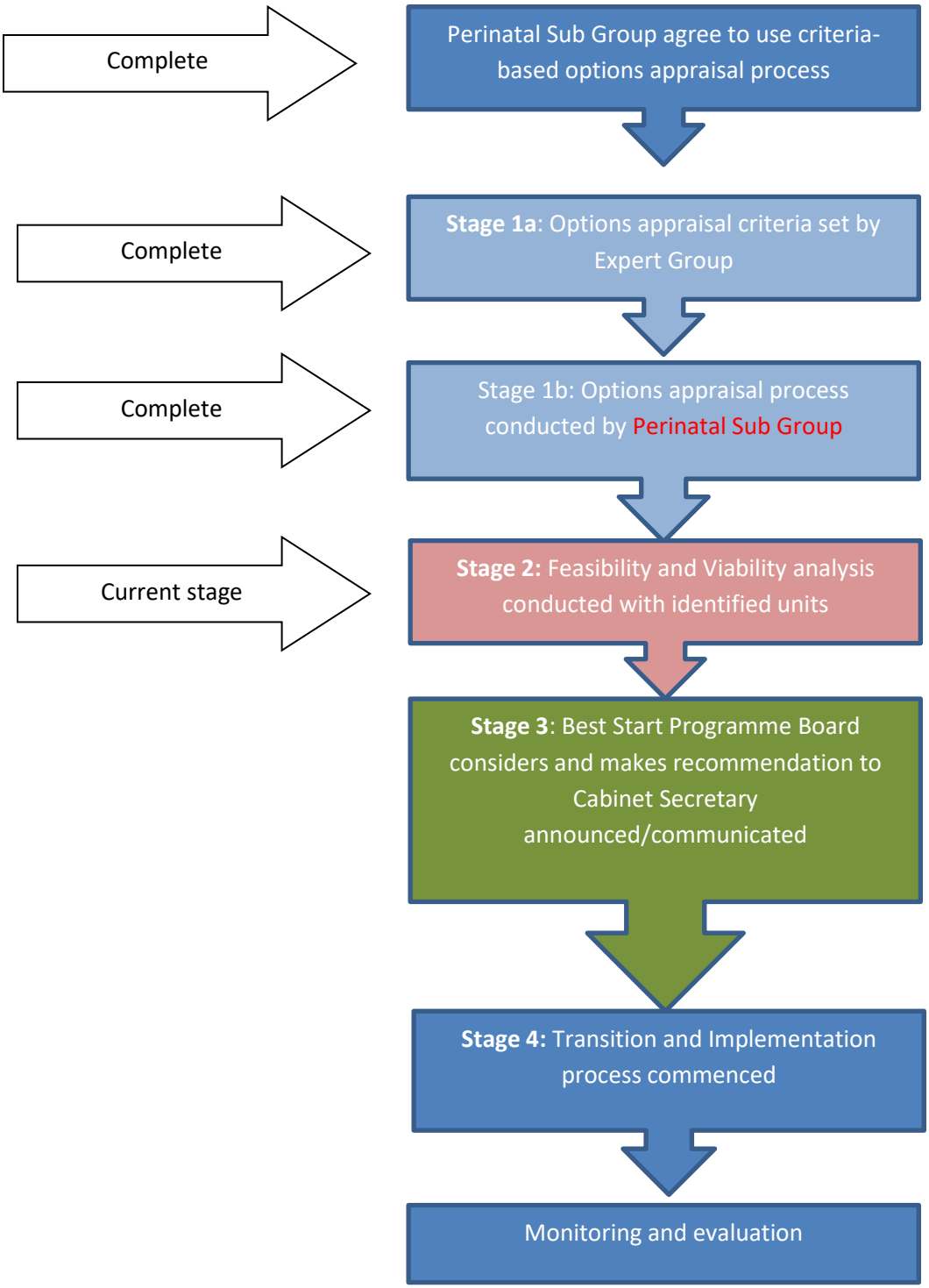
Purpose

- To invite the group to note the progress with the options appraisal process;
- To invite the group to consider a set of planning assumptions to inform stage 2.

IPB Secretariat
July 2018

SECTION 1

DECISION MAKING and IMPLEMENTATION PROCESS FLOW CHART



Progress with Options Appraisal Process

Options Appraisal Stage 1

Stage 1a of the Options Appraisal process where the Expert Group considered short list criteria for the neonatal intensive care units was concluded at the end of May
Stage 1b of the Options Appraisal process where the Perinatal Sub Group scored the current level 3 neonatal units against the short list criteria and discussed the outcome took place on 8 June.

The outcome of the scoring process ranked the existing level 3 neonatal units in the following order:

Queen Elizabeth University Hospital, Glasgow
Edinburgh Royal Infirmary
Aberdeen Maternity Hospital

Ninewells, Dundee
Princess Royal Maternity, Glasgow

Wishaw General
Victoria Hospital, Kirkcaldy
Crosshouse Hospital, Kilmarnock

The group discussed the results and agreed the following:

- The three long term NICU's are clearly identifiable from the table, however in order to identify whether these units would each be able to deliver care for more than 100 very low birth weight babies, more work is required with these Boards to properly understand the patient flows of inborn and outborn babies (existing data was not sufficiently clear to inform the group).
- The next two short/medium term units should be Ninewells and PRM. The group had an extensive discussion over the two units ranked 5th and 6th as their scores were close, however it was felt on balance of concentration of population and due to PRM's proximity to other critical services in GG&C that it should be the fifth unit in the short/medium term.
- The group agreed work should be undertaken to understand implications for the three longterm units only, as the fourth and fifth would remain in the short/medium term until such time as the three longterm units are operational.
- The group agreed that the next step should be a meeting in July with NHS GG&C, Lothian and Grampian to discuss the results, look at patient flows and staffing issues, and capacity and timing.
- The group wanted to meet again after the meeting with the three Boards to discuss the outcomes of those discussions, with a particular interest in the issue of the throughput. This is with a view to putting a recommendation to the IPB meeting in August.
- The group agreed that the outcome would be kept confidential and that if asked, the response would be that the options appraisal process is still in progress and no final conclusion has been reached

Options Appraisal Stage 2

The three prospective Boards with longterm (NHS GG&C, NHS Lothian and NHS Grampian) were invited to a meeting on 6 July to discuss the outcomes of stage 1 of the options appraisal and to discuss practical aspects to implementation of the change to five and then three neonatal intensive care units, including patient flows, staffing, capacity and timing. Ahead of that meeting Boards were asked to provide completed 2017 data on <27 week babies and under 1500g babies (not included in previous data gathering as unavailable at that time).

The initial discussion concluded the following:

- Modelling - further detailed work is needed to map exactly what is required with a focus on consistency of approach across Scotland.
- Agreement to bring a smaller group from the 3 Boards together again on 7 August with the aim of articulating the initial outline of a plan to enable capacity, including phasing if required. Key points to address:
    - Demand and capacity modelling
    - Workforce, skills and education
    - Bottlenecks and timelines
    - Collective working across the units
- To ensure neonatal inputs into local Best Start Boards.

We have also asked each Board to nominate a lead contact with whom we can liaise over the coming months.

To aid the discussion with Boards, we agreed that it would be helpful to articulate a set of principles or assumptions to guide planning. I have attached an initial draft for discussion at Annex A. This is based on some of the work presented at the meeting.

We have also agreed that we need a communications timeline that sets out the key decision and communication points over the next few months.

The additional data is included at Annex B.

Conclusion:

- The group is invited to note the progress with the options appraisal process
- The group is invited to comment on the planning assumptions outline at Annex A.

IPB Secretariat

July 2018

Annex A

PRINCIPLES/ASSUMPTIONS FOR NEONATAL INTENSIVE CARE UNITS IN SCOTLAND TO INFORM PLANNING: For discussion

Criteria

- All babies < 27 weeks gestation born outwith the 5 units designated as neonatal intensive care units in the short/medium term will be transferred, preferably in utero where possible, to one of the three long term neonatal intensive care units:
- Babies will be repatriated to their local unit as soon as is safe to do so.
- Babies will be moved within existing regions (regions as defined by Regional Delivery Plans) where possible.

Q: Should we define repatriation, e.g. at end of period of intensive care as they step down to HDU, subject to clinical discretion?

Average length of stay:

- Each baby <27 weeks requires an average of 33 days of neonatal intensive care [Ref. BAPM Categories of Neonatal Care 2001].
- Average length of stay for the mother in the admission leading up to delivery is 8 days [Ref. COTS study]

Q: are there other measures of length of stay baby/mother that should be considered, what about precautionary transfers, do all Boards have bedside testing for premature labour?

Capacity calculations

Calculation for additional number of cots required in long term:

$$\frac{\text{Additional babies admitted to 3 NICU's x 33 bed days}}{365}$$

Calculation for additional maternity beds:

$$\frac{\text{Additional babies admitted to 3 NICU's x 8 maternal bed days}}{365}$$

Q: Limitations/margins for error in above calculation?

Q: Considering throughput implications of whole model of neonatal care – will this free up cot space in NICUs?

Q: What proportion of additional women may need to be moved as a precaution who don't deliver before 27 weeks but who will need maternity beds?

Staffing

Unit should meet BAPM criteria for staffing a NICU.

1 Neonatal ITU Cot requires 6 Neonatal Nurses Qualified in Speciality.

Q: other staffing considerations?

Other BAPM standards

Unit should aspire to meet other BAPM standards, e.g cot footprint, adherence to Bliss Baby Charter Standards, provision of free accommodation on or near the unit and free car parking.

Q: Are there other criteria we should consider?

Annex B

NEONATAL UNITS: DATA 2015 – 2017

Unit/Level	Level	Deliveries 2016 (ISD)	Neonatal Admissions (2016)	<27 Weeks			<1500g			ITU cots*	HDU cots*	SC cots*	TC
				2015	2016	2017	2015	2016	2017				
Queen Elizabeth University Hospital, Glasgow	3	5728	593	14	9	18	51	64	75	16	14	20	0
Princess Royal Maternity, Glasgow	3	5964	466	21	18	21	63	62	70	4	6	18	0
Edinburgh Royal Infirmary	3	6241	815	24	22	16	85	87	93	9	8	22	0
Aberdeen Maternity Hospital	3	5134	886	14	6	8	54	56	63	10	7	19	0
Wishaw General	3	4669	787	12	15	18	42	64	76	8	10	11	6
Ninewells, Dundee	3	3975	566	10	7	5	51	47	25	4	3	14	4
Crosshouse Maternity, Kilmarnock	3	3549	480	6	8	9	42	45	29	5	4	11	4
Victoria Hospital, Kirkcaldy	3	3473	366	12	11	11	32	50	52	4	2	14	0
Forth Valley, Larbert	2	3118	362	0	6	10	17	21	11	5	2	13	0
Raigmore, Inverness	2	2035	263	1	3	1	8	10	10	2	1	8	0
St Johns, Livingstone	2	2629	269	2	1	0	7	10	3	0	2	8	0
Royal Alexandra Hospital, Paisley	2	3546	383	4	2	7	25	20	28	3	3	10	0
Cresswell, Dumfries	1/2	1211	199	0	1	1	18	13	13	2	0	9	0
Borders General, Melrose	1	991	112	0	1	1	0	4	3	0	2	6	0
Dr Grays, Elgin	1	1013	-	-	-					0	0	4	0
Total		53276	6547	120	110	126	495	553	551	72	64	187	14

*The cot numbers on this list are indicative figures, as there is flexibility built into the operation of levels of care. Data from 2016

Regional Split

Unit/Level	Level	Deliveries 2016 (ISD)	Neonatal Admissions (2016)	<27 Weeks			<1500g			ITU cots*	HDU cots*	SC cots*	TC
				2015	2016	2017	2015	2016	2017				
West													
Queen Elizabeth University Hospital, Glasgow	3	5728	593	14	9	18	**51**	**64**	**75**	16	14	20	0
Princess Royal Maternity, Glasgow	3	5964	466	21	18	21	63	62	70	4	6	18	0
Crosshouse Maternity, Kilmarnock	3	3549	480	6	8	9	42	45	29	5	4	11	4
Royal Alexandra Hospital, Paisley	2	3546	383	4	2	7	25	20	28	3	3	10	0
Cresswell, Dumfries	1/2	1211	199	0	1	1	18	13	13	2	0	9	0
Wishaw General	3	4669	787	12	15	18	42	64	76	8	10	11	6
Forth Valley, Larbert	2	3118	362	0	6	10	17	21	11	5	2	13	0
Regional Total :				**57**	**59**	**84**	**258**	**289**	**302**				
East													
Edinburgh Royal Infirmary	3	6241	815	24	22	16	**85**	**87**	**93**	9	8	22	0
Victoria Hospital, Kirkcaldy	3	3473	366	12	11	11	32	50	52	4	2	14	0
St Johns, Livingstone	2	2629	269	2	1	0	7	10	3	0	2	8	0
Borders General, Melrose	1	991	112	0	1	1	0	4	3	0	2	6	0
Regional Total:				**38**	**35**	**38**	**124**	**151**	**151**				
North													
Aberdeen Maternity Hospital	3	5134	886	14	6	8	**54**	**56**	**63**	10	7	19	0
Raigmore, Inverness	2	2035	263	1	3	1	8	10	10	2	1	8	0
Ninewells, Dundee	3	3975	566	10	7	5	51	47	46	4	3	14	4
Dr Grays, Elgin	1	1013	-	-	-					0	0	4	0
Regional Total :				**25**	**16**	**14**	**113**	**113**	**119**				
Scotland Total		**53276**	**6547**	**120**	**110**	**126**	**495**	**553**	**551**	**72**	**64**	**187**	**14**