



NEWTT 2

Update and Scores

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On behalf of the 'Deterioration of the Newborn' Working Group

National Patient Safety
Improvement Programmes



Maternity
and Neonatal



BAPM

Newborn Early Warning Trigger and Track (NEWTT)		Patient label	
Action	1 in amber	Continue observations as planned	Signed
	2 in amber	Escalate concern to senior midwife and review 30 mins	
	1 in red	Immediate escalation to ANNP / Doctor	
Reason for Observations			
Frequency and Duration of Observations			
Date			
Time			
Temperature	38		
	37		
	36		
Heart Rate	180		
	170		
	160		
	150		
	140		
	130		
	120		
	110		
	100		
	90		
Respirations	80		
	70		
	60		
	50		
	40		
Grunting			
SpO ₂ colour	Fair or blue or SAO ₂ < 90%		
	SAO ₂ 91 - 94%		
	Pink >94%		
Behaviour	Floppy/ not feeding		
	Jittery/ irritable/ poor feeding		
Active/ feeding well			
Blood Glucose			
Bilirubin			
Initials			



Newborn Early Warning Track and Trigger (NEWTT 2)

NEWTT2 score 0 1 2

A score for each vital sign is required at each entry

Name: _____
 Date of Birth: _____
 Time of Birth: _____
 Hospital Number: _____
 NHS Number: _____



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ANY critical (PURPLE) observation = immediate escalation. Consider 2222			
Reason for observations	Signed		Print name & GMC/NMC number
Frequency & duration			
Date			
Time			
Temperature °C	39.0		
	38.0		
	37.0		
	36.0		
Temperature alert: Implement thermal control measures and re-check temperature within 1 hour			
Respirations Breaths/min	80		
	70		
	60		
	50		
	40		
Grunting present?			
Heart rate Beats/min	180		
	170		
	160		
	150		
	140		
	130		
	120		
	110		
	100		
	90		
Colour	SpO ₂ <90% (or very pale / Blue)		
	SpO ₂ 90-94%		
	SpO ₂ >95% (or Pink / Normal)		
Resp	Unroutable / Floppy / Tics/tone		
	Lethargy / Irritable / Poor tone		
Feeding	Responsive / Good tone		
	Not feeding		
Gut	Feeding reluctantly		
	Feeding well		
	High parental concern		
Glucose	< 1.0 mmol/l		
	1.0 - 1.9 mmol/l		
	> 2.5 mmol/l		
Glucose when measured - Should be considered in any baby feeding reluctantly/poorly or other observations suggest unwell			
NEWTT2 TOTAL			TOTAL
Monitoring frequency			Monitoring escalation
Escalation of Care YES/NO			Escalation
Initials			Initials
Refer to back page for thresholds and triggers			

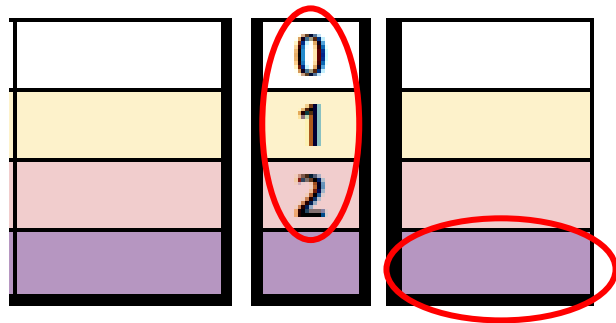
The old

'Evolution' not 'Revolution'

The new

Identification: Plot and score the observations

- White box scores 0
- Yellow box scores 1
- Pink box scores 2



- Purple box for a **critical observation** - baby needs IMMEDIATE review. Consider 2222 call.

Newborn Early Warning Track and Trigger (NEWTT 2)

Name: _____
 Date of Birth: _____
 Time of Birth: _____
 Hospital Number: _____
 NHS Number: _____

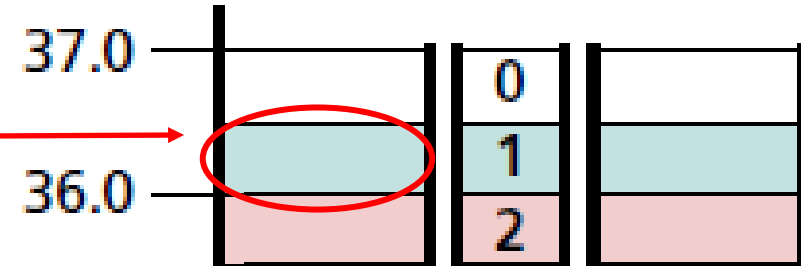


NEWTT2 score **0 1 2**
 A score for each vital sign is required at each entry

ANY critical (PURPLE) observation = immediate escalation. Consider 2222

Reason for observations	Signed	Print name & GMC/NMC number
Frequency & duration		
Date		
Time		
Temperature °C		
Respirations Breaths/min		
Grunting present?		
Heart rate Beats/min		
Other		
Resps		
Feeds		
Obs		
Glu		
NEWTT2 TOTAL		TOTAL
Monitoring frequency		Monitoring
Escalation of care YES/NO		Escalation
Initials		Initials

Refer to back page for thresholds and triggers



- Blue box - for **temperature only**, baby needs thermal care measures

Identification: NEWTT2

Refer to appendix 2
for guidance on chart
completion

Temperature
Respiration
Grunting
Heart Rate
Colour & Sat
Neurology
Feeds
Carer
Glucose

Guidance for health care professionals to assist with completion of the NEWTT 2 chart

NB Staff should be trained to use this chart before patient use

Please mark boxes on the chart with a tick, cross or shaded black dot, other than for oxygen saturations and blood glucose where the measured value should be written in the appropriate box

Temperature (axilla)

For a low temperature/hypothermia implement thermal control measures: ensure baby is dry, wrapped in warm dry towels/blankets or dressed in dry clothes, place a hat or cover the head sparing the face, use a hot-cot or incubator. Skin-to-skin with mother, covering the infant with warm dry towels/blankets including the head while continuing recommended observations should be considered unless mother is hypothermic.

For a high temperature/hyperthermia remove any excess clothing or towels/blankets and note whether mother is febrile.

Respiration

Count respiratory efforts for ≥ 60 seconds to assess breathing rate.

Grunting

Transitional grunting present at birth and without other signs of respiratory distress may be an isolated finding and reflects the infant's adaptive responses to clearing persistent lung fluid following delivery. It often resolves spontaneously.

New onset grunting at any age or **grunting in association with signs of respiratory distress** such as tachypnoea, nasal flaring, intercostal and subcostal recessions, is not consistent with adaptive transitional grunting and warrants escalation.

Heart rate

Count heart rate using a stethoscope for ≥ 60 seconds or by using pulse oximetry.

Colour and Saturation

Mild cyanosis is unreliably detected by visual inspection of colour and pulse oximetry is preferred. Ideally pulse oximetry should include paired pre (right-hand) and post (either foot) ductal saturation measurements but where only one value is available the post-ductal (either foot) measurement should be used. **When the baby is visibly blue escalation should be immediate.**

Pallor due to anaemia is often associated with normal saturations despite poor oxygen delivery because of poor oxygen carrying capacity (reduced red cells). If the infant is pale **always** escalate regardless of the pulse oximetry saturation readings.

Neurology

Infants with very poor tone either awake or asleep, who are unrousable or display possible seizures are likely to have poor airway control or serious illness and require immediate assistance.

Feeds

Signs of reluctant feeding include not waking for feeds, not latching at the breast, not sucking effectively, and appearing unsettled. Feeding support should be provided to reluctant feeders. **Blood glucose** should be measured if reluctant / non-effective feeding follows a period of effective feeding or if there are any abnormal clinical signs in addition to reluctant feeding.

Carer

Perceptions of high concern or some concern will likely vary between parents. Score for the level of actual parent(s)' concern. Use active enquiry e.g. "How is your baby different from when we last assessed them?"

Glucose

Follow the British Association of Perinatal Medicine Framework for Practice and if glucose testing is indicated document here. This includes in any baby feeding ineffectively, where excessively quiet/lethargic, irritable or other observations suggest illness.

Deterioration of the Newborn (NEWTT 2), Draft Framework for Practice, © BAPM 2022



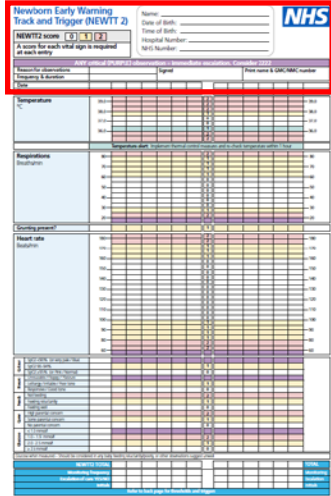
BAPM



Information



Newborn Early Warning Track and Trigger (NEWTT 2)



NEWTT2 score 0 1 2

A score for each vital sign is required at each entry

Name:

Date of Birth:

Time of Birth:

Hospital Number:

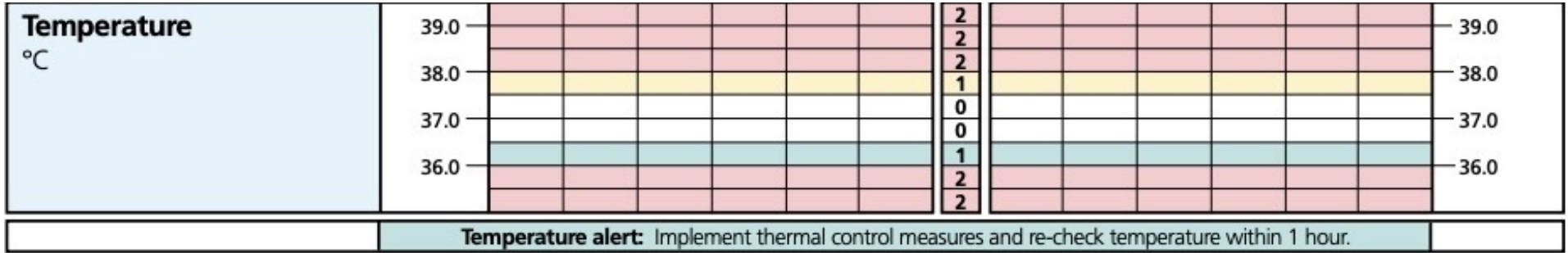
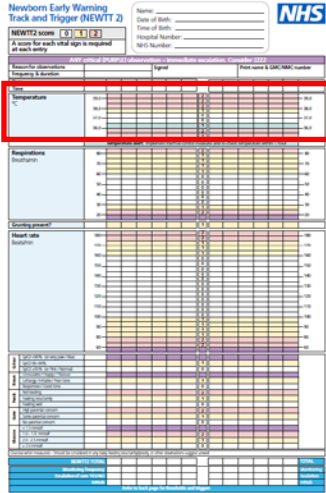
NHS Number:



ANY critical (PURPLE) observation = immediate escalation. Consider 2222														
Reason for observations						Signed	Print name & GMC/NMC number							
Frequency & duration														
Date														
Time														

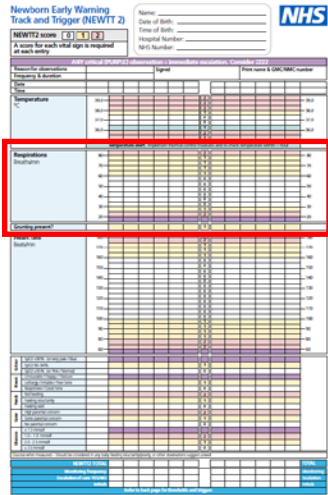
- Complete the reason & frequency of observations
- Sign, print your name & registration number to initiate NEWTT2.
- Date and time each set of observations.

Temperature



- Plot the baby's temperature in °C onto the NEWTT2 chart
- Note whether the temperature is in a white, yellow or pink box
- Note the score for the colour: white = 0, yellow = 1, pink = 2
- If the temperature plots in the **blue box** score 1 and take steps to warm the baby up - re-measure within 1 hour

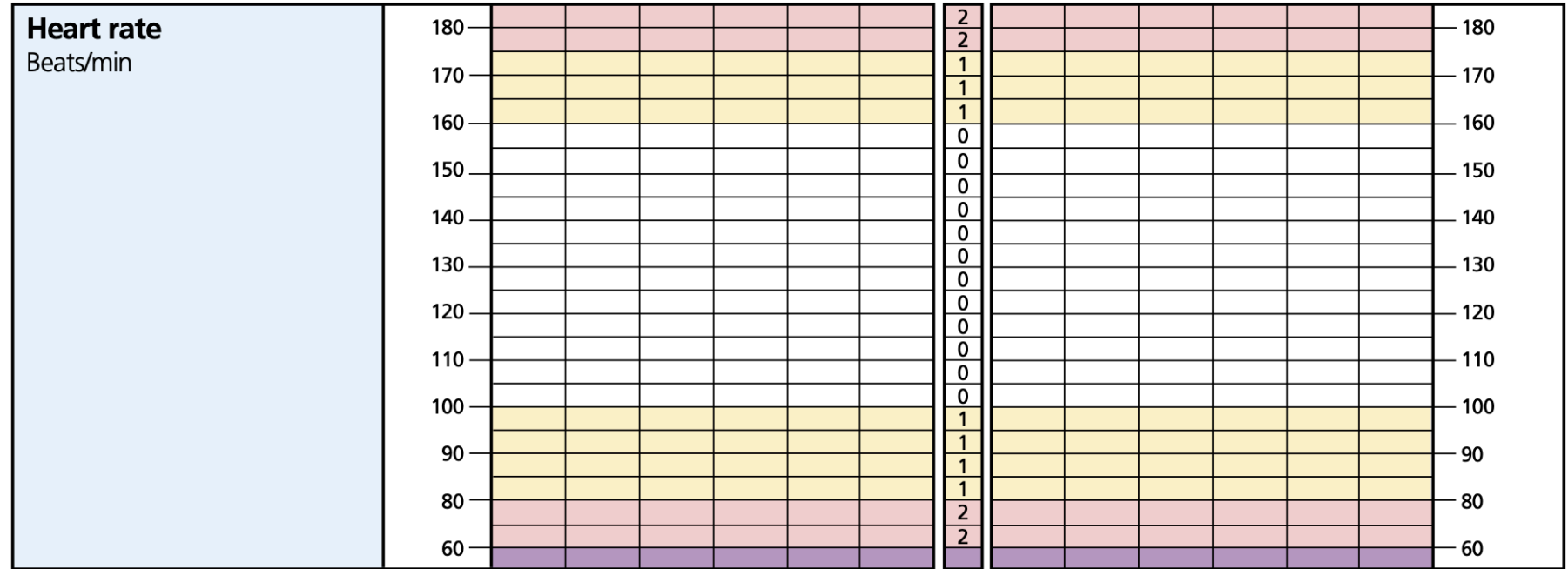
Respiration



Respirations Breaths/min	80								2									80
									1									
									1									
									1									
									1									
									0									
									0									
									0									
									0									
									0									
									0									
									0									
									1									
									2									
Grunting present?									1									

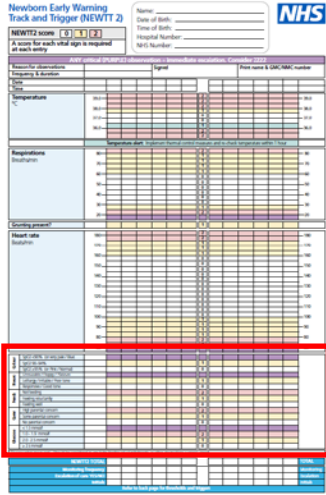
- Plot the respiratory rate (breaths/min) +/- 'grunting'
- Note whether the rate falls in a white, yellow or pink box
- Note the score for the colour: white = 0, yellow = 1, pink = 2
- Escalate to Tier 1 and 2 if ANY critical (purple) observation

Heart rate



- Plot the heart rate (beats/min)
- Note whether the heart rate falls in a white, yellow or pink box
- Note the score for the colour: white = 0, yellow = 1, pink = 2
- Escalate to Tier 1 and 2 if a critical (purple) observation

Other observations



Colour	SpO ₂ <90% (or very pale / Blue)																	
	SpO ₂ 90–94%									1								
	SpO ₂ ≥95% (or Pink / Normal)									0								
Neuro	Unroutable / Floppy / ?Seizure																	
	Lethargy / Irritable / Poor tone									1								
	Responsive / Good tone									0								
Feeds	Not feeding									2								
	Feeding reluctantly									1								
	Feeding well									0								
Carer	High parental concern									2								
	Some parental concern									1								
	No parental concern									0								
Glucose	< 1.0 mmol/l																	
	1.0 – 1.9 mmol/l									2								
	2.0 - 2.5 mmol/l									1								
	≥ 2.6 mmol/l									0								

Glucose when measured – Should be considered in any baby feeding reluctantly/poorly, or other observations suggest unwell.

- Plot the colour/SpO₂, neurology, feeding behaviour, parental concern and glucose (if indicated)
- Note whether these values plot into white, yellow or pink boxes
- Note the scores for the colour: white = 0, yellow = 1, pink = 2
- Escalate to Tier 1 and 2 if ANY critical (purple) observation

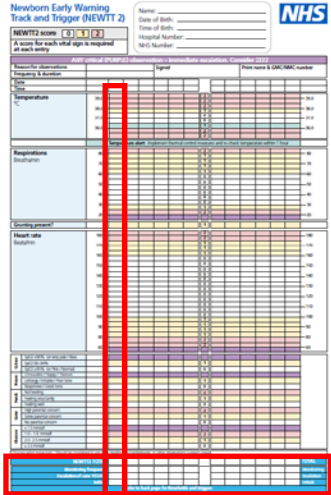
Parental concern

Category	Observation	Score	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Colour	SpO2 <90% (or very pale / Blue)	1																				
	SpO2 90–94%	0																				
	SpO2 ≥95% (or Pink / Normal)	0																				
Neuro	Unroutable / Floppy / ?Seizure	1																				
	Lethargy / Irritable / Poor tone	0																				
Feeds	Not feeding	2																				
	Feeding reluctantly	1																				
	Feeding well	0																				
Carer	High parental concern	2																				
	Some parental concern	1																				
	No parental concern	0																				
Glucose	< 1.0 mmol/l	2																				
	1.0 – 1.9 mmol/l	1																				
	2.0 - 2.5 mmol/l	1																				
	≥ 2.6 mmol/l	0																				

Glucose when measured – Should be considered in any baby feeding reluctantly/poorly, or other observations suggest unwell.

- *It is important that parents are asked if they have any worries about their baby and that their concerns are acknowledged*
- *Any parental concerns should be actively sought with each set of observations by asking questions such as:*
- *“Has your baby changed since I last saw you?”*
- *“How does your baby seem to you?”*

Scoring



NEWTT2 TOTAL																TOTAL
Monitoring frequency																Monitoring
Escalation of care YES/NO																Escalation
Initials																Initials
Refer to back page for thresholds and triggers																

- *Enter the total score for each set of observations*
- *Document :*
 - *The frequency of the next set of observations*
 - *whether escalation is indicated (see escalation tool)*
 - *Initial the entry*

Summary

- Temperature
- Respiration
- Grunting
- Heart Rate
- Colour & Sat
- Neurology
- Feeds
- Carer
- Glucose

	0	
	1	
	2	

37.0		0	
		1	
36.0		2	

Carer	High parental concern	2
	Some parental concern	1
	No parental concern	0

- The **total of all the scores** is used to determine the response to each set of observations

NEWTT2 TOTAL	
Monitoring frequency	
Escalation of care YES/NO	
Initials	

- Purple box for a **critical observation** - baby needs **IMMEDIATE** review. Consider 2222 call.
- Mild hypothermia** highlighted by blue box to prompt necessary measures
- Carer concern** now incorporated into the score

NEWTT2

An example

National Patient Safety
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Maternity
and Neonatal



Matthew

Matthew was born at 35+6 weeks gestation, birth weight 2.32kg (TC baby)
He had skin to skin and latched early at the breast
You note Matthew is now quiet and not waking for feeds at 2 hours

Matthew

Matthew's observations are shown in the table.

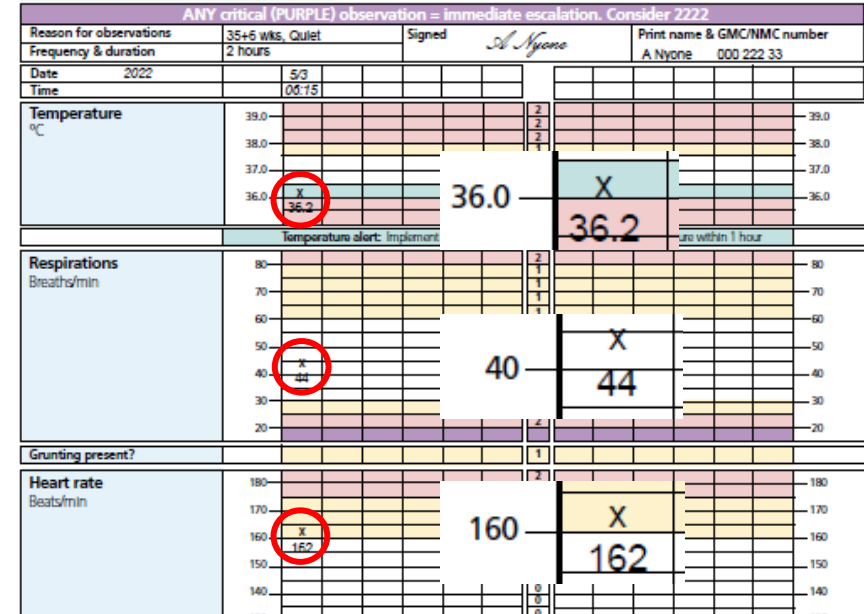
Observation	Value	Colour	Score
Temperature	36.2	Blue	1
Respiratory Rate	44/min	White	0
Grunting	Nil		0
Heart Rate	162/min	Yellow	1
SpO ₂ (%)	96	White	0
Neurology	Poor tone	Yellow	1
Feeding	Not feeding	Pink	2
Parental Concern	Some concern	Yellow	1
Glucose (mmol/l)	1.6	Pink	2
Total score			8

NEWTT2 TOTAL	8
Monitoring frequency	Imm
Escalation of care YES/NO	Y
Initials	AN

Newborn Early Warning Track and Trigger (NEWTT 2)

Name: Matthew NEWTT
 Date of Birth: 1-3-23
 Time of Birth: 10:55
 Hospital Number: H123456
 NHS Number: 123 456 789

NEWTT2 score 0 1 2
 A score for each vital sign is required at each entry



SpO ₂ <90% (or very pale / Blue)		
SpO ₂ 90-94%		
SpO ₂ ≥95% (or Pink / Normal)	96	
Unroutable / Floppy / ?Seizure		
Lethargy / Irritable / Poor tone		X
Responsive / Good tone		
Not feeding		X
Feeding reluctantly		
Feeding well		
High parental concern		
Some parental concern		X
No parental concern		
< 1.0 mmol/l		
1.0 - 1.9 mmol/l		
2.0 - 2.5 mmol/l	1.6	
≥ 2.6 mmol/l		

NEWTT2 TOTAL	8
Monitoring frequency	Imm
Escalation of care YES/NO	Y
Initials	AN

Thank you –
now over to
Oliver for
ESCALATION

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