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Avoiding Brain Injury in Childbirth Collaboration	Guideline	006	028	1.2.9 recommend adding: after a 'palpated' contraction	Thank you for your comment. This change has been made as you suggest.
Avoiding Brain Injury in Childbirth Collaboration	Guideline	General	General	Do not like birth 'companion' prefer 'birth partner'	Thank you for your comment. The committee used 'companion(s)' as there may be more than 1 person a woman would like to involve in discussions and using the word 'partner' implies this that there is only 1 person who can be involved.
Avoiding Brain Injury in Childbirth Collaboration	Guideline	General	General	If not defining meconium then need to remove 'significant' – the significance of the meconium will be considered in the wider review of risk factors/whole picture and should not be open to subjectivity between practitioners. Women should make their own choice as to monitoring depending on the whole clinical picture discussed with her and her birth partner	Thank you for your comment. The recommendations on meconium have now been placed in a section of their own, to advise that a full clinical assessment is carried out if any meconium is detected. The terminology 'significant meconium' is no longer used.
Avoiding Brain Injury in Childbirth Collaboration	Guideline	Removal of FBS		The majority of the ABC clinical team agree with the removal of FBS as there is some evidence that demonstrates that intervention could be delayed when practitioners become task focussed on achieving a result with	Thank you for your comment. As the committee are aware that evidence for fetal blood sampling is currently very limited but there is new research currently underway

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				difficult sampling issues or problems processing the sample. This delay can result in a poor outcome. The ABC intrapartum tool does not include FBS in its action grid.	they have amended their recommendation and accompanying rationale to state this.
Avoiding Brain Injury in Childbirth Collaboration	Guideline	005	018	1.2.3 Suggest change 'mother' to 'the woman' for consistency in guideline	Thank you for your comment. This change has been made.
Avoiding Brain Injury in Childbirth Collaboration	Guideline	007	001	1.2.9 suggest wording inline with the first stage (lpage 6 line 22) as otherwise it sounds as if maternal pulse is to be taken every 5 mins when assessing FHR: palpate and record on the partogram the maternal pulse every 15minutes, or more often if there are concerns, to ensure differentiation between maternal and fetal heart rates	Thank you for your comment. The committee agreed that differentiation of the maternal and fetal heart rate was very important in the second stage of labour and so did not change this recommendation.
Avoiding Brain Injury in Childbirth Collaboration	Guideline	011	004	1.3.5 Suggest define characteristics of contractions (length, strength, frequency, resting tone) especially the inclusion of a consideration of resting tone – this was feedback from ABC survey	Thank you for your comment. Suggested details about the nature of contractions (frequency, strength and duration) have been added here. However, resting tone has not been added as the committee agreed this was difficult to assess.
Avoiding Brain Injury in Childbirth Collaboration	Guideline	011	017	1.3.7 Suggest the addition of: resting tone less than 60 seconds	Thank you for your comment. The cut-off for CTG is based on the number and length of contractions, so resting tone has not been added here.

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Avoiding Brain Injury in Childbirth Collaboration	Guideline	011	019	1.3.7 Recommend remove word 'significant' – taking evidence into consideration, all meconium represents an independent risk of harm when compared to clear liquor and therefore should form part of the risk assessment/advice to the woman and her birth partner – whether it is significant or insignificant is open to subjectivity between practitioners. References used as part of ABC literature review: 1. Balchin I, Whittaker JC, Lamont RF, Steer PJ. Maternal and Fetal Characteristics Associated with Meconium-Stained Amniotic Fluid. Obstetrics & Gynecology. 2011 Apr;117(4):828–35. 2. Rodríguez Fernández V, Ramón y Cajal CNL, Ortiz EM, Naveira EC. Intrapartum and perinatal results associated with different degrees of staining of meconium-stained amniotic fluid. European Journal of Obstetrics & Gynecology and Reproductive Biology. 2018 May;224:192–7. 3. Mohammad N, Jamal T, Sohaila A, Ali SR. Meconium-stained liquor and its	Thank you for your comment. The recommendations on meconium have now been placed in a section of their own, to advise that a full clinical assessment is carried out if any meconium is detected. The terminology 'significant meconium' has been removed from the guideline. As this guideline update was an editorial update no new evidence review on meconium was carried out and so the references you have cited were not considered by the committee.

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				neonatal outcome. Pakistan Journal of Medical Sciences. 2018 Oct 25;34(6). 4. Frey HA, Tuuli MG, Shanks AL, Macones GA, Cahill AG. Interpreting category II fetal heart rate tracings: does meconium matter? *Am J Obstet Gynecol* 2014; 211(6):644-648.	
Avoiding Brain Injury in Childbirth Collaboration	Guideline	012	012	1.3.7 This needs to be a separate point/not in this box as it isn't an intrapartum risk factor as per the title of 1.3.7 Suggest a separate bullet point – new 1.3.8: Prior to insertion of regional analgesia a CTG must be commenced and reviewed to assess fetal wellbeing and therefore suitability of proceeding with chosen method of analgesia	Thank you for your comment. The committee agreed that any woman receiving an epidural should also be offered CTG monitoring and therefore the insertion of an epidural was an additional intrapartum risk factor and so should be included in this list. Further guidance on the monitoring of women being offered regional anaesthesia is already contained in the NICE guideline on Intrapartum care, so the committee have not added more detail here.
Avoiding Brain Injury in Childbirth Collaboration	Guideline	014	007	1.4.11 it mentions any new meconium - is this new significant meconium as listed as a risk factor or any new meconium whether thick or thin? Needs clarifying... needs spelling out for the reader to avoid ambiguity	Thank you for your comment. The examples of risk factors have been removed from this recommendation to simplify it, as other stakeholders commented that it was an incomplete list, so meconium is no longer mentioned.
Avoiding Brain Injury in	Guideline	015	015	1.4.17 Suggest remove as no evidence that this is a lesser risk factor	Thank you for your comment. The committee did not change the categorisation of a

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Childbirth Collaboration					baseline rate of 100 to 109 beats per minute from amber as they agreed this did indicate that caution was required.
Avoiding Brain Injury in Childbirth Collaboration	Guideline	015	016	1.4.17 Suggest remove as no evidence that this is a lesser risk factor	Thank you for your comment. The committee did not change the categorisation of a baseline rate of 100 to 109 beats per minute from amber as they agreed this did indicate that caution was required.
Avoiding Brain Injury in Childbirth Collaboration	Guideline	015	018	1.4.17 Below 110bpm, or	Thank you for your comment. The committee did not change the categorisation of a baseline rate of 100 beats per minute as red to 'below 110 bpm' as they agreed 100 to 109 bpm was an amber feature.
Avoiding Brain Injury in Childbirth Collaboration	Guideline	015	019	1.4.17 Above 160bpm An additional bullet point should be added here for instability of baseline or unable to determine baseline rate	Thank you for your comment. The committee discussed that an unstable baseline usually meant that the true baseline rate could not be determined and so added 'unable to determine baseline' as an amber feature to this recommendation.
Avoiding Brain Injury in Childbirth Collaboration	Guideline	015	030	1.4.18 Change amber to red – sentence will still apply with this change	The committee agreed that a baseline of 100 to 109 bpm should remain amber and below 100 bpm should remain red, but caveats surrounding a lower baseline rate (if all else is normal) are already discussed in this recommendation and so the committee have not made any further changes.

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Avoiding Brain Injury in Childbirth Collaboration	Guideline	016	003	In this section there is no mention of cycling – we feel this should be included in this section	Thank you for your comment. The committee agreed not to introduce additional terminology based on physiological interpretation such as cycling into the guideline as this may cause confusion.
Avoiding Brain Injury in Childbirth Collaboration	Guideline	016	017 - 019	1.4.21 Not consistent with ABC intrapartum tool – there is no amber just white/red	Thank you for your comment. The committee agreed that reduced or increased variability for a short period of time should raise a concern but did not need immediate action, but that for a longer period of time it was a more worrying feature and so agreed that it was necessary to maintain the distinction using amber and red.
Avoiding Brain Injury in Childbirth Collaboration	Guideline	018	024	1.4.28 Suggest remove as if CTG deteriorating and repetitive late decelerations are occurring this should trigger red on CTG. Thus just one bullet point	Thank you for your comment. The whole section of the guideline on categorisation of decelerations has been revised to make the descriptions clearer and to remove the combination with and without antenatal and intrapartum risk factors.
Avoiding Brain Injury in Childbirth Collaboration	Guideline	018	020 - 021	1.4.28 CTG classification should sit separately from AN and intrapartum risk factors and then the classification is used as part the overall review that is AN, Intrapartum risk factors and the CTG classification. To work with ABC tool we just need to be clear re CTG classification and then look at the	Thank you for your comment. The whole section of the guideline on categorisation of decelerations has been revised to make the descriptions clearer and to remove the combination with and without antenatal and intrapartum risk factors.

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				overall risk picture – therefore suggest remove these lines – 1.4.36 agrees with this suggested change	
Avoiding Brain Injury in Childbirth Collaboration	Guideline	018	026 - 027	1.4.28 CTG classification should sit separately from AN and intrapartum risk factors and then the classification is used as part the overall review that is AN, Intrapartum risk factors and the CTG classification. To work with ABC tool we just need to be clear re CTG classification and then look at the overall risk picture – therefore suggest remove these lines - 1.4.36 agrees with this suggested change	Thank you for your comment. The whole section of the guideline on categorisation of decelerations has been revised to make the descriptions clearer and to remove the combination with and without antenatal and intrapartum risk factors.
Avoiding Brain Injury in Childbirth Collaboration	Guideline	019	001 - 007	1.4.28 Delete these as no longer required as points made in previous section. From the feedback in our project it needs to be more simplistic or we lose the focus of the review/risk identification This classification system is still way too complicated. All that is needed is a simple statement 'in the presence of AN or intrapartum risk factors, do not wait to act on changes in fetal heart rate features...' then there only needs to be one box of definitions...	Thank you for your comment. The whole section of the guideline on categorisation of decelerations has been revised to make the descriptions clearer and to remove the combination with and without antenatal and intrapartum risk factors.

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Avoiding Brain Injury in Childbirth Collaboration	Guideline	021	001	1.4.37 Using the ABC intrapartum tool there isn't the capacity to score red when amber features identified in this cumulative capacity – however the only two triggers for amber would be raised baseline rate and repetitive decelerations more than 50% contractions. This would trigger an MDT review and a fuller assessment of AN and intrapartum risk factors so there would still be escalation.	Thank you for your comment. The committee agreed that it was important to highlight that while 1 feature could be amber, the presence of 2 amber features required urgent escalation and so did not amend this categorisation of the CTG.
Avoiding Brain Injury in Childbirth Collaboration	Guideline	021	019 - 020	1.4.43 We feel this should be added earlier too, in 1.4.17, as otherwise the significance of this feature could get lost	Thank you for your comment. The committee have defined that an increase in the second stage of 20 beats a minute or more should be defined as red in the second stage, but have left this in the section of the guideline relating to considerations in the second stage, and have not included it in the earlier recommendation as you suggest.
British Intrapartum Care Society	Guideline	010	014 - 015	There seems to be an inconsistency in the tweaked wording regarding breech birth. Here it says non-cephalic presentation (including breech, transverse, oblique and 15 cord), including while a decision is made about mode of birth	Thank you for your comment. The word 'including' has been added to table 2, the summary of changes.

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				the second including [in red for ease of identification] is missing in table 2	
British Intrapartum Care Society	Guideline	011	019	The committee is asked to clarify the wording of 'the presence of new or significant meconium' included in pg 11 of the guideline line 19 as this is relevant to the NICE guideline CG190 which this will replace. Guideline CG190 makes a distinction on the type of fetal monitoring advised if there is significant meconium vs insignificant meconium. BICS is in support that women are also offered continuous electronic fetal monitoring if there is insignificant meconium and not only if significant meconium present. BICS would support changing the wording to 'the presence of any meconium'.	Thank you for your comment. The recommendations on meconium have now been placed in a section of their own, to advise that a full clinical assessment is carried out if any meconium is detected. The committee is also currently updating CG190 and will ensure that the same terminology is used consistently across both guidelines.
British Intrapartum Care Society	Guideline	013	013 - 019	BICS is very aware that the practise for checking and recording maternal heart rate in labour needs to be clearer to remove the doubt if maternal or fetal heart rate is being heard. Could the guideline make the distinction how this should be done with intermittent	Thank you for your comment. The recommendation on differentiating between the maternal heart rate and the fetal heart rate relates to the use of CTG, but if the fetal heart rate is being monitored with intermittent auscultation, similar techniques could be used - simultaneously palpating the woman's pulse while listening to the fetal heart rate. The recommendation has been revised to

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				auscultation vs continuous electronic fetal monitoring? BICS supports the use of continuous maternal pulse recording throughout labour for women needing continuous electronic fetal monitoring in the first and second stage of labour. The maternal pulse is differentiated and can be clearly seen over the trend over time. The recording is then transposed onto the partogram. In the second stage maternal pulse is easily identified as it remains continuously monitored. BICS is not aware of women feeling that the attachment of the pulse oximeter for the duration of the labour is a problem when the rationale is explained. With intermittent auscultation in the second stage how to monitor and record the maternal pulse needs clarification. This is not addressed here.	include more detail on the method for monitoring continuous maternal heart rate using a pulse oximeter (as you suggest), the use of the fetal scalp electrode, and simultaneous palpation of the woman's pulse while listening to the fetal heart rate. The methods of monitoring and recording the maternal pulse in the second stage of labour would be the same.

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British Intrapartum Care Society	Guideline	014	007 - 009	Can you clarify the time scale for 'urgent' obstetric review?	Thank you for your comment. The committee agreed that it was not possible to specify in the guideline the precise details of escalation action and timescales, as different units would have different staffing arrangements and different procedures for calling in staff. This detail has therefore not been added.
British Intrapartum Care Society	Guideline	014	014 - 020	BICS would like the guideline to recognise the frequency of less or more than 5 contractions in 10 does not fit all babies. If a mother is contracting less than 5 in 10 and the fetal heart rate is not normal that is a problem.	Thank you for your comment. The categorisation takes into account different features of the CTG – contractions, baseline fetal heart rate, variability and decelerations - with each one assigned a 'colour score' so contractions may be 'white' but fetal heart rate can be classified as 'amber' or 'red' separately.
British Intrapartum Care Society	Guideline	017	008	Can you clarify the time scale for 'urgent' obstetric review?	Thank you for your comment. The committee agreed that it was not possible to specify in the guideline the precise details of escalation timescales as different units would have different staffing arrangements and different procedures for calling in staff. This addition has therefore not been made.
British Intrapartum Care Society	Guideline	017	010 - 013	Please can you clarify 'isolated reduction in variability?	Thank you for your comment. The reduced variability is described as 'fewer than 5 bpm', not 'by 5 bpm' so this is clear that it does not mean a reduction from 10 bpm.

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				This could be interpreted as an isolated reduction in variability; if the variability was previously 10bpm and is now 5bpm (5bpm still being within the normal range)? Or do you mean the variability is not normal so meaning less than 5bpm.?	
British Intrapartum Care Society	Guideline	019	014	Can you clarify the time scale for 'urgent' obstetric review?	Thank you for your comment. The committee agreed that it was not possible to specify in the guideline the precise details of escalation timescales as different units would have different staffing arrangements and different procedures for calling in staff. This addition has therefore not been made.
British Intrapartum Care Society	Guideline	020	016	BICS would like the guideline to recognise that trusts/boards adopt a CTG categorisation of their choice. The evidence base for all CTG categorisations is variable and none robustly tested; BICS notes that many trusts/boards are using CTG categorisations that have a physiological emphasis.	Thank you for your comment. NICE guidelines aim to encourage optimal and consistent care across the NHS and therefore the committee agreed that all trusts should be encouraged to adopt the same method of CTG interpretation and terminology. The NICE recommended interpretation of CTG is also in accordance with the international methods advocated by FIGO, and the Avoiding Brain Injury in Childbirth Collaboration work. Using consistent methods of interpretation also reduces

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					confusion amongst staff and facilitates safer care when staff move between different units in the NHS.
British Intrapartum Care Society	Guideline	021	014	How does the guideline propose to support this for women having IA in a midwifery led centre or at home when staff will not have a CTG machine and the need to make sure the maternal pulse is differentiated from the fetal heart rate is just as important?	Thank you for your comment. In women being monitored using intermittent auscultation, the heart rates would be differentiated by palpating the maternal pulse while listening to the fetal heart rate. This is explained in an earlier recommendation which has now been cross-referenced from this section of the guideline.
British Intrapartum Care Society	Guideline	025	012	BICS members are generally in support of not offering fetal blood sampling.	Thank you for your comment and your support of the removal of the recommendations on fetal blood sampling. The committee has now amended this recommendation to highlight the lack of evidence to support fetal blood sampling. The committee were aware that there was ongoing research into the benefits of fetal blood sampling compared to fetal scalp stimulation so have included this in their rationale for this recommendation.
British Intrapartum Care Society	Guideline	026	018 - 026	BICS would like the guideline to recognise that trusts/boards should use the terminology of decelerations that are aligned with the CTG categorisation tool they are using.	Thank you for your comment. NICE guidelines aim to encourage optimal and consistent care across the NHS and therefore the committee agreed that all trusts should be

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					encouraged to adopt the same method of CTG interpretation and terminology. The NICE recommended interpretation of CTG is also in accordance with the international methods advocated by FIGO, and the Avoiding Brain Injury in Childbirth Collaboration work. Using consistent methods of interpretation also reduces confusion amongst staff and facilitates safer care when staff move between different units in the NHS.
British Intrapartum Care Society	Guideline Table 2	039	Middle of middle column	Here it says non-cephalic presentation (including breech, transverse, oblique and cord), while a decision is made about mode of birth the second including is missing from table 2 BICS considers the second 'including' is needed in table 2	Thank you for your comment. The second 'including' has been added to this table.
British Psychological Society	Guideline	general	general	The guideline is understandably focussed on the 'body' because this is a medical process and procedure. However, BPS would recommend the inclusion of psychological and mental health considerations in	Thank you for your comment. The guideline includes a new section at the beginning on 'Information and supported decision-making' that includes advice on discussing options with women and making decisions with them

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				addressing a mother's experience of monitoring. During monitoring, pre-existing psychological vulnerabilities can be exacerbated or, depending on how it is carried out and the communication involved the process, it may be a trigger for perinatal mental health or psychological difficulties postnatally (Slade, 2006; Vogel et al 2020). We note that this may be assumed to be addressed in their mention of the antenatal 'individualised care plan' but this is not explicitly stated. Intrapartum experience of the care received can be a trigger for birth trauma and secondary tokophobia (fear of pregnancy). More could be said about ensuring women's understanding of the process and procedure to include all the areas covered by diversity ie cultural, language, neurodiversity, religious etc as these are also very important contexts for the process and procedure to be carried out. *Slade, Pauline "Towards a conceptual framework for understanding post-traumatic stress symptoms following childbirth and*	about the method of monitoring to be used, and this would include consideration of any psychological concerns they had about monitoring. To increase the emphasis on the right of women to make their own decisions the phrase 'shared decision-making' has been amended to 'support the woman's decision. The committee agreed that considering cultural, language, neurodiversity and religious contexts was important but this applied to all aspects of healthcare and so is covered in the NICE guideline on patient experience. This has therefore been included in the guideline as a cross-reference.

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				implications for further research" J Psychosom Obstet Gynaecol 2006 *Vogel et al "Antepartum and intrapartum risk factors and the impact of PTSD on mother and child" BJA Education 2020*	
British Psychological Society	Guideline	004	011	For the reasons stated above, BPS recommends the addition of psychological and mental health context. This will provide a more holistic, integrated and trauma informed care and reduce risks of birth trauma or secondary tokophobia.	Thank you for your comment. The guideline includes a new section at the beginning on 'Information and supported decision-making' that includes advice on discussing options with women and making decisions with them about the method of monitoring to be used, and this would include consideration of any psychological concerns they had about monitoring. To increase the emphasis on the right of women to make their own decisions the phrase 'shared decision-making' has been amended to 'support the woman's decision'.
British Psychological Society	Guideline	004	014	BPS recommends the addition of an explicit acknowledgement of diversity and how this impacts on communication and shared decision making so that adjustments are made in terms of communication and shared decision making as needed with regards to this.	Thank you for your comment. The committee agreed that considering cultural, language, neurodiversity and religious contexts was important but this applied to all aspects of healthcare and so is covered in the NICE guideline on patient experience. This has

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					therefore been included as a cross-reference at the very beginning of the guideline.
Chelsea & Westminster NHS Foundation Trust	Guideline	006 - 007	022 - 024	With regards intermittent auscultation, the team feels that it is as important in the first stage as in the second stage to differentiate FHR from maternal pulse so suggest that maternal pulse should be palpated and recorded on the partogram every time fetal heart is auscultated i.e. every 15 min	Thank you for your comment. The recommendation already states that the maternal pulse should be felt hourly 'or more often if there are any concerns' so allows for escalation to more frequent monitoring if differentiation is a concern.
Chelsea & Westminster NHS Foundation Trust	Guideline	018 - 019	019 - 030 001 - 007	The whole section on decelerations is rather confusing and would be very difficult for staff to remember when providing clinical care. It is also confusing to the team that while there is a distinction for WIHOUT and WITH antenatal or developing intrapartum risk factors for fetal compromise, there is no such distinction in the Amber section where there is only WITHOUT antenatal or developing intrapartum risk factors The team would also like to see emphasis on the importance of looking at the baseline in between decelerations – ensuring there is a stable baseline, no rise in baseline and normal variability	Thank you for your comment. The whole section of the guideline on categorisation of decelerations has been revised to make the descriptions clearer and to remove the combination with and without antenatal and intrapartum risk factors.
Chelsea & Westminster	Guideline	010	010 - 011	The team are concerned that CTG is only being recommended for women with	Thank you for your comment. The committee recognised that even women with gestational

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NHS Foundation Trust				gestational diabetes on medication. Even women with GDM on diet have underlying metabolic disturbances that could affect fetal well-being and EFM should be offered to these women too. With the current recommendation of the guideline, it would appear that these women would be safe to deliver on the birth centre?	diabetes may have metabolic disturbances and agreed that the decision on the method of monitoring would be individualised, but did not agree that all women with diabetes controlled by diet alone should be advised to have CTG, thereby reducing their birth options.
Chelsea & Westminster NHS Foundation Trust	Guideline	010	017 - 019	Meaning SGA fetuses without these risk factors would not be offered EFM and so could deliver safely on birth centre? We have concerns about this too and feel that all SGA fetuses (EFW below 10th centile) should be offered EFM	Thank you for your comment. The committee discussed this but agreed that fetuses between the 3rd and 10th centile may be constitutionally small and therefore not need continuous CTG monitoring, unless there are other risks as specified in the recommendation
Chelsea & Westminster NHS Foundation Trust	Guideline	011	004	Elaboration on 'characteristics of contractions' would be helpful – what would be the concerning features	Thank you for your comment. Suggested details about the nature of contractions have been added here.
Chelsea & Westminster NHS Foundation Trust	Guideline	013	013 - 019	We are very aware that the practise for checking and recording maternal heart rate in labour needs to be clearer to remove the doubt if maternal or fetal heart rate is being heard. Could the guideline make the distinction how this should be done with	Thank you for your comment. The recommendation on differentiating between the maternal heart rate and the fetal heart rate relates to the use of CTG, but if the fetal heart rate is being monitored with intermittent auscultation, similar techniques could be

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				Intermittent auscultation vs continuous electronic fetal monitoring? We support the use of continuous maternal pulse recording throughout labour for women needing continuous electronic fetal monitoring in the first and second stage of labour. The maternal pulse is differentiated and can be clearly seen over the trend over time. The recording is then transposed onto the partogram. In the second stage maternal pulse is easily identified as it remains continuously monitored. We have not had women complain that the attachment of the pulse oximeter for the duration of the labour is a problem when the rationale is explained. With intermittent auscultation in the second stage how to monitor and record the maternal pulse needs clarification. This is not addressed here. We would also like you to bear in mind and include that any method being used may waste time – such as attaching an FSE or finding and switching on the USS so that if there are concerns we support in our unit to escalate and call for help after 3 minutes. This is our suggestion as you have not given	used – simultaneously palpating the woman's pulse while listening to the fetal heart rate. The recommendation has been revised to include more detail on the method for monitoring continuous maternal heart rate using a pulse oximeter (as you suggest), the use of the fetal scalp electrode, and simultaneous palpation of the woman's pulse while listening to the fetal heart rate. The methods of monitoring and recording the maternal pulse in the second stage of labour would be the same. In response to your concerns about the time this may take, additional advice has been added to the recommendation about what to do if concerns remain, but a specific timeframe hasn't been added as this will depend on the overall clinical picture.

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				any time frame to support clinicians in escalating their concerns.	
Chelsea & Westminster NHS Foundation Trust	Guideline	014	007	Can you clarify the time scale for 'urgent' obstetric review	Thank you for your comment. The committee agreed that it was not possible to specify in the guideline the precise details of escalation action and timescales, as different units would have different staffing arrangements and different procedures for calling in staff. This detail has therefore not been added.
Chelsea & Westminster NHS Foundation Trust	Guideline	014	014 - 020	We would like you to recognise these frequency of less or more than 5 contractions in 10 do not fit all babies. If a mother is contracting less than 5 in 10 but each lasting 90 seconds or more and the fetal heart rate is not normal that is a problem while conversely there may be contractions of 5 in 10 but mild and short lasting with no fetal compromise. We are concerned that the focus is too much on the frequency of contractions and not on their duration/strength and also no acknowledgement of the importance of resting time in between contractions.	Thank you for your comment. The committee agreed to base the classification of contractions on their frequency and length, which would therefore include resting time. However, they did not think resting tone could be easily assessed and may be confusing for users of the guideline. However, they did add hypertonus as an amber feature.
Chelsea & Westminster NHS	Guideline	015	010 - 019	The team are pleased to see that a rise in baseline of 20bpm or more being acknowledges but are concerned that while a 'stable' baseline is considered a 'white'	Thank you for your comment. The committee discussed that an unstable baseline usually meant that the true baseline rate could not be determined and so added 'unable to

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Foundation Trust				feature; there is no mention of an 'unstable' baseline or when baseline is difficult to establish – we feel both of these should be classed as a red feature	determine baseline' as an amber feature to this recommendation.
Chelsea & Westminster NHS Foundation Trust	Guideline	016	003	The team are concerned that there is no mention in the section on variability of the feature of 'cycling' that is a hallmark of a healthy/intact fetal brain/nervous system. This should be included and elaborated upon	Thank you for your comment. The committee agreed not to introduce additional terminology based on physiological interpretation such as cycling into the guideline as this may cause confusion.
Chelsea & Westminster NHS Foundation Trust	Guideline	017	008	Can you clarify the time scale for 'urgent' obstetric review	Thank you for your comment. The committee agreed that it was not possible to specify in the guideline the precise details of escalation timescales as different units would have different staffing arrangements and different procedures for calling in staff. This addition has therefore not been made.
Chelsea & Westminster NHS Foundation Trust	Guideline	017	010 - 013	Please can you clarify 'isolated reduction in variability? This could be interpreted as isolated reduction in variability if the variability was previously 10 and now 5, but 5 is still within normal. Or do you mean the variability is not normal so meaning less than 5. Also why the cut-off of 30min?	Thank you for your comment. The reduced variability is described as 'fewer than 5 bpm', not 'by 5 bpm' so this is clear that it does not mean a reduction from 10 bpm. More than 30 minutes is set as the lower limit of concern for reduced variability to fewer than 5 beats per minute, as described in the earlier recommendation which classifies this as an amber feature.

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Chelsea & Westminster NHS Foundation Trust	Guideline	018	009	Could you clarify what would be classed as slow return to baseline – over what length of time to avoid subjective interpretations	Thank you for your comment. The committee agreed that it would be difficult to define exactly the time period for a slow return to baseline.
Chelsea & Westminster NHS Foundation Trust	Guideline	018	014	Can you clarify the time scale for 'urgent' obstetric review	Thank you for your comment. The committee agreed that it was not possible to specify in the guideline the precise details of escalation timescales as different units would have different staffing arrangements and different procedures for calling in staff. This addition has therefore not been made.
Chelsea & Westminster NHS Foundation Trust	Guideline	018	017 - 018	We find the statement of 'variable decelerations that are not evolving to have concerning characteristics' very vague and amenable to subjective interpretation – needs more clarity	Thank you for your comment. The addition of the word 'evolving' is to emphasise that it is important to consider changes to the CTG over time. The definition of concerning characteristics is provided clearly in the previous recommendation.
Chelsea & Westminster NHS Foundation Trust	Guideline	018	025 - 030	Would it not be better to say 'either' repetitive or persistent instead of both repetitive and persistent?	Thank you for your comment. The whole section of the guideline on categorisation of decelerations has been revised to make the descriptions clearer and to remove the combination with and without antenatal and intrapartum risk factors
Chelsea & Westminster	Guideline	020	016	We would like the guideline to recognise that Trusts may adopt a CTG categorisation of	Thank you for your comment. NICE guidelines aim to encourage optimal and

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NHS Foundation Trust				their choice. The evidence base for all CTG categorisations are variable and none robustly tested but the majority of Trusts are using CTG categorisations that have a physiological emphasis.	consistent care across the NHS and therefore the committee agreed that all trusts should be encouraged to adopt the same method of CTG interpretation and terminology. The NICE recommended interpretation of CTG is also in accordance with the international methods advocated by FIGO, and the Avoiding Brain Injury in Childbirth Collaboration work. Using consistent methods of interpretation also reduces confusion amongst staff and facilitates safer care when staff move between different units in the NHS.
Chelsea & Westminster NHS Foundation Trust	Guideline	021	006 - 023	The team feels that there needs to be more comprehensive explanation of the challenges of CTG interpretation in the second stage of labour with details of which particular features should one be concerned about and how long can these be observed for before intervention is warranted? 'CTG Concerns' is a very broad term and open to individual interpretation so more specifics will be welcomed.	Thank you for your comment. The committee agreed that the guideline provided advice on the challenges of CTG interpretation in the second stage of labour, and that 'CTG concerns' was deliberately open to encourage evaluation of the whole clinical picture, for example how near to birth the woman was.
Chelsea & Westminster NHS	Guideline	021	014	How does the guideline propose to support this for women have IA on the midwifery led centre or at home when they do not have a machine but the need to make sure the	Thank you for your comment. In women being monitored using intermittent auscultation, the heart rates would be differentiated by palpating the maternal pulse

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Foundation Trust				maternal pulse is differentiated from the fetal heart rate is just as important?	while listening to the fetal heart rate. This is explained in an earlier recommendation which has now been cross-referenced from this section of the guideline.
Chelsea & Westminster NHS Foundation Trust	Guideline	023	012	We are in support of not offering fetal blood sampling as it has limited value in assessing fetal wellbeing.	Thank you for your comment and your support of the removal of the recommendations on fetal blood sampling. The committee has now amended this recommendation to highlight the lack of evidence to support fetal blood sampling. The committee were aware that there was ongoing research into the benefits of fetal blood sampling compared to fetal scalp stimulation so have included this in their rationale for this recommendation.
Chelsea & Westminster NHS Foundation Trust	Guideline	025	003 - 004	The team do not think that fetal scalp stimulation would be of much value in the context of a pathological trace and would potentially delay intervention. This could be a useful adjunct in the context of a suspicious CTG	Thank you for your comment. This has now been amended to state that fetal scalp stimulation should be considered if the CTG is suspicious and there are additional risk factors.
Chelsea & Westminster NHS Foundation Trust	Guideline	026	018 - 026	We would like the guideline to recognise that Trusts should use the terminology of decelerations that are aligned with the CTG categorisation tool they are using.	Thank you for your comment. NICE guidelines aim to encourage optimal and consistent care across the NHS and therefore the committee agreed that all trusts should be encouraged to adopt the same method of

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					CTG interpretation and terminology. The NICE recommended interpretation of CTG is also in accordance with the international methods advocated by FIGO, and the Avoiding Brain Injury in Childbirth Collaboration work. Using consistent methods of interpretation also reduces confusion amongst staff and facilitates safer care when staff move between different units in the NHS.
Chelsea & Westminster NHS Foundation Trust	Guideline	027	028	The committee are asked to clarify the wording of 'the presence of new or significant meconium' included in pg 11 of the guideline line 19 as this is relevant to the NICE guideline CG190 which this will replace. Guideline CG190 makes a distinction on the type of fetal monitoring advised if there is significant meconium vs insignificant meconium. We are in support that women are also offered continuous electronic fetal monitoring if there is insignificant meconium and not only if significant meconium present. We would support changing the wording to 'the presence of any meconium'	Thank you for your comment. The recommendations on meconium have now been placed in a section of their own, to advise that a full clinical assessment is carried out if any meconium is detected. The use of the terminology 'significant meconium' has been removed from the guideline. The rationale has been amended to reflect this change. The committee is also currently updating CG190 and will ensure that the same terminology is used consistently across both guidelines.
Cwm Taf Morgannwg	Guideline	004	004	Rec 1.1.2 - second line - we would like recommend to be used instead of advised	Thank you for your comment. The healthcare professionals will advise women about

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University Health Board					methods of fetal monitoring, so women can make a decision, so 'advised' has not been changed to 'recommend'.
Cwm Taf Morgannwg University Health Board	Guideline	005	022	Rec 1.2.4 – to use recommended not offered	Thank you for your comment. Offer is standard NICE terminology for a strong recommendation, so this has not been changed.
Cwm Taf Morgannwg University Health Board	Guideline	006	002	Rec 1.2.5 – to use recommended not advised	Thank you for your comment. The healthcare professionals will advise women about methods of fetal monitoring, so women can make a decision, so 'advised' has been used throughout the guideline, which means the same as recommended.
Cwm Taf Morgannwg University Health Board	Guideline	006	014	Rec 1.2.8 – instead of low risk of complications use experiencing an uncomplicated pregnancy	Thank you for your comment. This recommendation follows on from the recommendations about initial risk assessment, and so is about women with a low risk, which is not the same as an uncomplicated pregnancy.
Cwm Taf Morgannwg University Health Board	Guideline	007	002	Rec 1.2.9 – need to be explicit in what method changing to	Thank you for your comment. Further details on alternative methods of monitoring fetal heart rate are included in a later recommendation 1.4.6 and so this has been cross-referenced from this recommendation.
Cwm Taf Morgannwg	Guideline	007	008	Rec 1.2.10 – evidence suggests 10% rise is more significant	Thank you for your comment. The rise in fetal heart rate suggested here was based on the

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University Health Board					recommendations from the previous version of the guideline, and as no new evidence review has been caried out in this area, this recommendation as not been changed,
Cwm Taf Morgannwg University Health Board	Guideline	007	019	Rec 1.2.11 – include transfer regarding physical environment	Thank you for your comment. This recommendation has been expanded to include details of the impact of this on her care, including transfer.
Cwm Taf Morgannwg University Health Board	Guideline	007	026	Rec 1.2.12 – evidence base in relation to 20 min duration	Thank you for your comment. The 20 minute period suggested here was based on the recommendations from the previous version of the guideline, and as no new evidence review has been caried out in this area, this recommendation as not been changed,
Cwm Taf Morgannwg University Health Board	Guideline	008	010	Rec 1.2.16 - subjective	Thank you for your comment. In a risk assessment based on a clinical review there will always be a degree of subjectivity, so although the committee has tried to be specific as possible, this cannot be eliminated altogether.
Cwm Taf Morgannwg University Health Board	Guideline	008	014	Rec 1.2.17 – this should apply to women choosing fetal monitoring regardless of method	Thank you for your comment. Yes, this would apply to all women so has been moved to the section of the guideline on initial assessment.

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Cwm Taf Morgannwg University Health Board	Guideline	008	028	Rec 1.2.20 – possibly restrict – option to use water as birthing option (with wireless telemetry)	Thank you for your comment. This has been added as a possible restriction.
Cwm Taf Morgannwg University Health Board	Guideline	010	023	Rec 1.3.3 – should oligohydramnios be included?	Thank you for your comment. The committee agreed that oligohydramnios is non-specific and rarely occurs in isolation so they did not add this to the recommendation.
Cwm Taf Morgannwg University Health Board	Guideline	013	010	Rec 1.4.4 – physiology - is baseline rate appropriate for gestational age	Thank you for your comment. Details of the potential change in baseline fetal rate depending on gestational age is covered in a later recommendation.
Cwm Taf Morgannwg University Health Board	Guideline	013	027	Rec 1.4.7 – ensure consent is given as applying FSE is an invasive procedure	Thank you for your comment. Details about the information to be given to women about FSE has been expanded. Women will need to consent for all interventions covered in this guideline, not just FSE, so the need for consent hasn't been added separately to this recommendation.
Cwm Taf Morgannwg University Health Board	Guideline	015	006	Rec 1.4.16 – stable baseline rate could still be elevated and inappropriate for gestational age suggesting possible sepsis or chronic hypoxia	Thank you for your comment. Details of the potential change in baseline fetal rate depending on gestational age is covered in a later recommendation.
Cwm Taf Morgannwg	Guideline	015	027	Rec 1.4.18 – other conditions may be related – dehydration, certain medications and fetal somatic activity	Thank you for your comment. The committee agreed that they had named the two most likely causes of hypoxia, and agreed that

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University Health Board					although there were other possible causes this was not intended to be an exhaustive list.
Cwm Taf Morgannwg University Health Board	Guideline	016	001	Rec 1.4.18 – normal baseline variability with cycling	Thank you for your comment. The committee agreed not to introduce additional terminology based on physiological interpretation such as cycling into the guideline as this may cause confusion.
Cwm Taf Morgannwg University Health Board	Guideline	016	019	Rec 1.4.21 – 30 min in the first stage, 10 min in the second stage. Red if present with the decelerations at any stage	Thank you for your comment. This section of the guideline does not specify a reduced duration for changes in variability in the second stage, but does add additional detail about interpreting the CTG in the second stage in a later section. The combination of reduced variability and decelerations would be categorised as part of the overall CTG.
Cwm Taf Morgannwg University Health Board	Guideline	016	022	Rec 1.4.21 - > 30 min in the first stage, >10 min in the second stage. If present within the decelerations at any stage	Thank you for your comment. This section of the guideline does not specify a reduced duration for changes in variability in the second stage, but does add additional detail about interpreting the CTG in the second stage in a later section. The combination of reduced variability and decelerations would be categorised as part of the overall CTG.
Cwm Taf Morgannwg	Guideline	017	008	Rec 1.4.23 – begin IU resuscitation	Thank you for your comment. The actions to be taken if there are concerns about fetal wellbeing are described in the later section

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University Health Board					on conservative measures and so consideration of intrauterine resuscitation has not been added to this recommendation.
Cwm Taf Morgannwg University Health Board	Guideline	017	010	Rec 1.4.23 – 30 to 50 minutes	Thank you for your comment. More than 30 minutes is set as the lower limit of concern for reduced variability to fewer than 5 beats per minute, and so it would not be necessary to wait until 50 minutes if there are additional risk factors. Based on this the recommendation has not been amended as you suggest.
Cwm Taf Morgannwg University Health Board	Guideline	017	020	Rec 1.4.24 – amplitude and duration may be reduced to 10bpm and 10 sec respectively in a pre term fetus	Thank you for your comment. This guideline is applicable to babies born at term so details of variation in parameters seen with preterm babies is not included.
Cwm Taf Morgannwg University Health Board	Guideline	017	030	Rec 1.4.25 – try to identify the reason behind the decelerations (normal response to stress, hypoxia, cord compression etc) and evaluate associated fetomaternal conditions (Diabetes, Hypertension, prematurity, meconium etc)	Thank you for your comment. The committee agreed that the focus of the CTG interpretation should be based on the categorisation of the 5 features and agreed not to include details of the physiological interpretation of the CTG.
Cwm Taf Morgannwg University Health Board	Guideline	018	001	Ref1.4.25 – reduced or increased variability	Thank you for your comment. This has been amended to 'reduced or increased variability' as you are correct that increased or reduced variability should be taken into consideration.

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Cwm Taf Morgannwg University Health Board	Guideline	018	002	Ref 1.4.25 – define whether the decelerations are baroreceptor or chemoreceptor decelerations	Thank you for your comment. The terminology relating to physiological interpretation of CTG has not been included in this guideline, so these terms have not been added.
Cwm Taf Morgannwg University Health Board	Guideline	018	007 - 010	Ref 1.4.27 – add in overshoots, biphasic and late	Thank you for your comment. Details of overshoots (when the heart rate does not return to its previous baseline but rises above it) is covered in an earlier recommendation and the significance of late decelerations is covered in the categorisation of decelerations in a subsequent recommendation. Biphasic decelerations are a combination of early and late decelerations so have been removed as a separate category.
Cwm Taf Morgannwg University Health Board	Guideline	019	012	Ref 1.4.29 – or increased variability	Thank you for your comment. Increased variability has been added to this recommendation.
Cwm Taf Morgannwg University Health Board	Guideline	019	018	Ref 1.4.30 – always start IU resuscitation in the presence of decelerations	Thank you for your comment. This recommendation has been amended to include advice to start conservative measures, and details of intrauterine resuscitation are included in the section on conservative measures.

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Cwm Taf Morgannwg University Health Board	Guideline	020	004	Ref 1.4.33 – They usually occur in second stage	Thank you for your comment. Early decelerations can occur in first or second stage so this recommendation has not been amended.
Cwm Taf Morgannwg University Health Board	Guideline	020	008	Ref 1.4.34 – 10 and 10 if preterm	Thank you for your comment. This guideline is applicable to babies born at term so specific details of variation in parameters seen with preterm babies is not included.
Cwm Taf Morgannwg University Health Board	Guideline	020	026	Ref 1.4.37 – Instead of normal suspicious and pathological we should understand the reason behind the CTG abnormality and give a diagnosis	Thank you for your comment. The terminology relating to physiological interpretation of CTG has not been included in this guideline, so the terms normal, suspicious and pathological have been retained.
Cwm Taf Morgannwg University Health Board	Guideline	021	023	Ref 1.4.37 – The word imminent is not clear enough. Some situations might look imminent to some clinicians but not to others. In our health board we recommend stopping the pushing and contractions regardless how imminent the birth is. If the fetus ius low enough it is usually difficult for the woman to stop pushing anyway.	Thank you for your comment. The committee agreed that imminent was subjective but agreed that the decision would need to be made on an individual clinical basis depending on the nature of the CTG concerns. The recommendation has been amended to state that women should be 'discouraged' from pushing rather than 'stopping pushing' as it was recognised that stopping pushing may not always be possible.

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Cwm Taf Morgannwg University Health Board	Guideline	024	022	Ref 1.5.9 – or dehydrated and oral fluids are not enough	Thank you for your comment. The committee agreed that dehydration would not lead to fetal heart rate abnormalities so did not add it to this recommendation.
Cwm Taf Morgannwg University Health Board	Guideline Terms used	026	026	Unclear definition	Thank you for your comment. The definition of variable decelerations has been clarified to state that they occur at variable times in relation to the contraction
Elizabeth Bryan Multiple Births Centre	Guideline	General	General	There should be a statement on the scope of the guidance and whether it applies to singleton only or multiple pregnancy. As NICE Guideline NG137 Twin and Triplet pregnancy (2019) provides specific guidance on fetal monitoring in labour for twins and triplets in section 1.11 and should be cross-referenced and clarified this guidance is for singleton fetal monitoring only.	Thank you for your comment. You are correct that the guideline primarily relates to the singleton pregnancies, and that there are some recommendations in the twin and triplets guideline on fetal monitoring, but these also cross-refer to the fetal monitoring recommendations for healthy women and babies for classification of CTG, so both guidelines are linked to each other. We have therefore, as you suggest, included a link to the twins and triplets guideline.
Elizabeth Bryan Multiple Births Centre	Guideline	005	026	Section 1.2.4 'Initial assessment' signposts to NG121 for women with existing medical conditions or obstetric complications. A link to NG 137 Twin and Triplet should be included here also and would help to clarify that intrapartum monitoring of a twin or triplet	Thank you for your comment. A link to the NICE guideline on twin and triplet pregnancy has been included here.

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				pregnancy is outside the scope of this guidance.	
Elizabeth Bryan Multiple Births Centre	Guideline	010	012 - 024	Section 1.3.3 on antenatal fetal risk factors does not mention multiple pregnancy as a reason to offer continuous fetal monitoring. NICE Guideline NG137 Twin and Triplet pregnancy (2019) recommends offering *continuous cardiotocography to women with a twin pregnancy who are in established labour and are more than 26 weeks pregnant*.	Thank you for your comment. As suggested by your organisation, the link to the NICE guideline on twin and triplet pregnancy has already been added earlier in the guideline to flag the need to consider the method of monitoring in women with multiple pregnancies, so it has not been added again here.
Healthcare Safety Investigation Branch	General	010	029	HSIB investigations have recommended that "fresh eyes" assessments support on going risk assessment. This is further advocated in Ockenden (2022). HSIB suggests inclusion of this in the guidance is required to support embedding of this practise consistently.	Thank you for your comment. The committee agreed that it was important to reinforce the practice of 'fresh eyes' and so have added a new recommendation to state this in the section of the guideline relating to ongoing risk assessment.
Healthcare Safety Investigation Branch	Guideline	004	004	The decision is the mother's to make: can this be changed to supported decision making	Thank you for your comment. The over-arching recommendations at the beginning of the guideline have been amended to emphasise that the choice of monitoring method rests ultimately with the woman, and the wording has been changed to supported decision-making.
Healthcare Safety	Guideline	004	009	The wording is not clear: can the implications of the advised method along with the	Thank you for your comment. The committee agreed that the phrase 'implications….' was not clear and so have amended this

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Investigation Branch				implications for alternative methods be included.	recommendation to clarify that it is the reasons for the method being recommended that are important.
Healthcare Safety Investigation Branch	Guideline	004	011	The wording here does not make it clear that decisions about fetal monitoring remain the woman's decision.	Thank you for your comment. This recommendation has been amended to clarify that the choice of monitoring method is ultimately the woman's decision.
Healthcare Safety Investigation Branch	Guideline	004	013	Use of the word appropriate is not helpful without parameters. Inclusion of "if the woman wants" is sufficient.	Thank you for your comment. The committee agreed that in some instances (for example, suspicion of coercion or domestic abuse) it might be necessary for the healthcare professional to make a decision about who was included in discussions, so this recommendation has not been amended.
Healthcare Safety Investigation Branch	Guideline	005	General	We note there is no inclusion here of confirming the fetal heart is present using either Doppler or Pinard before commencing a CTG, and that in the existing guidance this is part of the initial assessment section: is there an opportunity for including it here too?	Thank you for your comment. Confirming the fetal heart using either Pinard or Doppler is still included in recommendation 1.2.9.
Healthcare Safety Investigation Branch	Guideline	007	008	We suggest including review against previously completed CTGs as well as changes in the current CTG recording.	Thank you for your comment. The line you refer to related to intermittent auscultation so there is no reference to the current CTG record.
Healthcare Safety	Guideline	009	016	It would be helpful to include: and record the outcome of the discussion	Thank you for your comment. The need to document discussions and decisions has

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Investigation Branch					been added to the over-arching recommendations at the beginning of the guideline
Healthcare Safety Investigation Branch	Guideline	009	022	HSIB investigations have found time can be wasted when staff believe equipment failure is an issue and do not consider potential compromise: we suggest including confirm fetal well-being by another method without delay.	Thank you for your comment. The recommendation has been amended to include advice on solving the loss of signal by repositioning the woman and the need to check that the loss of signal is not a clinical problem has also been added.
Healthcare Safety Investigation Branch	Guideline	012	027	HSIB investigations have found that where a trace fits "normal parameters" changes from previously completed CTGs may not be recognised, particularly where there has been a change in the location of care. We suggest including "review previous CTG recordings and /or previous baseline heart rates" here if available.	Thank you for your comment. Review of and comparison with previous CTG traces has been added to the first recommendation in this section.
Healthcare Safety Investigation Branch	Guideline	014	004	As previous comment: the inclusion of "review previous CTG recordings and /or previous baseline heart rates" is suggested.	Thank you for your comment. As this section of the guideline all relates to the use of CTG, the committee agreed that 'evaluate changes on CTG traces over time' was the same as 'review previous CTG recordings' and that the review should involve more than just the baseline heart rate, so did not amend this recommendation.

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Healthcare Safety Investigation Branch	Guideline	014	006	We suggest amending to existing and new risk factors. This is particularly important when a CTG review is undertaken by a clinician not previously involved in the woman's care.	Thank you for your comment. 'Existing' has been added to the recommendation as you suggest.
Healthcare Safety Investigation Branch	Guideline	014	009	HSIB investigations have found that escalating to clinicians able to act in response supports timely actions when required. We suggest changing this to: ask for urgent senior obstetric review (as per 1.4.23).	Thank you for your comment. The terminology throughout the guideline has been standardised as much as possible to refer to 'urgent obstetric review' or 'urgent review by an obstetrician or senior midwife'. The committee did not agree to differentiate 'obstetric review' and 'senior obstetric review' as this would often depend on the local circumstances, staffing and may lead to delays if 'senior' was interpreted as consultant-level, when an experienced senior registrar was available.
Healthcare Safety Investigation Branch	Guideline	015	010	Noting the change in terminology from reassuring, non-reassuring and abnormal, we are interested to understand the rationale for changing this to white, amber & red. HSIB further questions the use of "white" as "good" and the connotations of this from an equality perspective. We suggest the use of "green" as is apparent in other healthcare ratings, for example early waning scores.	Thank you for your comment. The colours white, amber and red have been chosen to align with the national charts (similar to MEWS charts) that have been developed by the Avoiding Brain Injury in Childbirth Collaboration work, which is currently being piloted before being rolled out across the UK, and so the guideline will reflect the new ABC tool.

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Healthcare Safety Investigation Branch	Guideline	016	004	A simpler explanation is required	Thank you for your comment. The words 'peak' and 'trough' have been replaced by 'highest heart rate' and 'lowest heart rate' to clarify this explanation.
Healthcare Safety Investigation Branch	Guideline	017	017	Should this state "define decelerations" or be a statement that says: a deceleration is defined as..? This would be consistent with the discussion around accelerations further on in guidance on page 20 row 7	Thank you for your comment. This has been changed to 'define decelerations' to make it consistent with the section on accelerations.
Healthcare Safety Investigation Branch	Guideline	018	017	There is no timeframe for the duration that having variable decelerations is acceptable for: noting that previously these could continue for less than 90 minutes before becoming non-reassuring	Thank you for your comment. The section on classification of deceleration has been reworded and simplified and for variable decelerations that are not evolving to have concerning characteristics there is no time limit, but there is a time limit of 30 minutes for variable decelerations with concerning characteristics.
Healthcare Safety Investigation Branch	Guideline	019	016	The addition of existing antenatal risk factors to be taken into account would be helpful here.	Thank you for your comment. 'Antenatal risk factors' has been added to this recommendation as you suggest. The committee did not think it was necessary to specify that these were 'existing' as this is implied for a woman now in labour.
Healthcare Safety	Guideline	021	004	HSIB investigations have found women may not have understood that there was concern	Thank you for your comment. A new over-arching recommendation has been added to

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Investigation Branch				about a baby's wellbeing when there are concerns relating to CTG changes. We suggest including: support the woman to understand the concerns about fetal well being and alternative management options available to enable her to make an informed decision about her care. Ensure the discussion is documented.	the beginning of the guideline about keeping women informed if urgent review is sought, as this is mentioned in a number of places in the guideline. These over-arching recommendations already advise that alternative options are discussed with the woman and that her choice is supported.
Healthcare Safety Investigation Branch	Guideline	021	008	HSIB investigations have found that perception of the passage of time can be altered, particularly during the second stage of labour when staff have many competing additional tasks, alongside CTG interpretation. We suggest this be referenced in this point.	Thank you for your comment. The committee agreed that the second stage of labour can be a busy period when time can pass quickly but could not define any actions that would alleviate this and so did not amend this recommendation.
Healthcare Safety Investigation Branch	Guideline	021	014	HSIB investigations have found that time has been spent seeking equipment, and applying FSEs when fetal well being cannot been assured by abdominal monitoring, when urgent action to deliver the baby was required. We suggest highlighting this is required here. HSIB investigations have found that recording the maternal pulse on the CTG is a reliable method to differentiate maternal and	Thank you for your comment. This recommendation has now been amended to state that if differentiation of the maternal and fetal heart rates cannot be achieved in a reasonable time period then birth should be expedited. The details about differentiation of the maternal and fetal heart rate, including the use of pulse oximeters or CTG monitors with that facility, are already covered in an earlier recommendation which has now been

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				fetal heart rates: has there been consideration of making this a recommendation for all women to support Trusts in updating equipment. Where this is not possible due to equipment could the guidance include using a separate pulse oximeter to support continuous maternal pulse monitoring.	cross-referenced from this section of the guideline.
Healthcare Safety Investigation Branch	Guideline	021	021	HSIB notes that the intrapartum care guidance says elsewhere to inform the woman that in the 2nd stage she should be guided by her own urge to push. HSIB is concerned this statement is inconsistent with that approach. HSIB further suggests including consideration of tocolysis is required unless birth is imminent or whilst arranging to expedite birth.	Thank you for your comment. The recommendation has been amended to state that women should be 'discouraged' from pushing rather than 'stopping pushing'. The use of tocolysis is covered in the section on conservative measures further down in the guideline.
Lewisham and Greenwich NHS Trust	guideline	057 - 058		Good conservative measures.	Thank you for your comment and support of these changes.
Lewisham and Greenwich NHS Trust	Guideline	006	014	1.2.8 Record FHR on the partogram and in the notes for the exact FHR number recorded every 15 minutes in 1st stage and at least every 5 minutes in the 2nd stage	Thank you for your comment. The committee agreed it was always necessary to record this on the partogram, and that it should also be documented in the notes as well, particularly

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				If decelerations are heard and auscultation is performed throughout 3 subsequent contractions, there is not enough space in the partogram to plot these 2 additional auscultations, hence why recommending to document in the body of the notes contemporaneously.	if the healthcare professional wished to add other comments or context.
Lewisham and Greenwich NHS Trust	guideline	007	006	1.2.10 IT is of note that when performing intermittent auscultation every 15 minutes you are more likely to detect a tachycardia rather than a rise in baseline. The baseline is general only going to be obvious when using CTG.	Thank you for your comment. The committee agreed that when compared to the start of monitoring a rise in the baseline can be detected and would be apparent on an appropriately filled in partogram, whether using intermittent auscultation or CTG.
Lewisham and Greenwich NHS Trust	Guideline	007	027	1.2.9 If you are recommending only to document FHR on the partogram only, you are then requiring each trust to have a 2nd stage partogram in order to document the FHR every 5 minutes in 2nd stage? Is this what is being suggested as not all trust have implemented a 2nd stage partogram, for those trust whom are still documenting on paper.	Thank you for your comment. The committee agreed it was always necessary to record this on the partogram, and that it should also be documented in the notes as well, particularly if the healthcare professional wished to add other comments or context.
Lewisham and Greenwich NHS Trust	guideline	010	012	1.3.3 LGT agree with all points however in the presence of a cord (presentation or prolapse)	Thank you for your comment. Cord presentation, which is the risk factor referred to in this recommendation, is not necessarily

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				is there actually time to commence a CTG as this is usually classified as an obstetric emergency.	an acute emergency, and monitoring would be advisable even if an urgent caesarean were being organised.
Lewisham and Greenwich NHS Trust	guideline	014	017	1.4.13 *What does white for categorising contractions mean < 5 in 10 minutes, amber > 5: 10 minutes this is incredibly confusing, if you are going to use colours surly a traffic light system or green, amber and red would be more logical?* Would it not make more sense to assess if this is tachysystole or hyperstimulation, and focus how the fetus is coping with the pattern of contractions (Some foetuses decompensate with less than 5 contractions in 10 minutes)?	Thank you for your comment. The colours white, amber and red have been chosen to align with the national charts (similar to MEWS charts) that have been developed by the Avoiding Brain Injury in Childbirth Collaboration work, which is currently being piloted before being rolled out across the UK. The subsequent features of the CTG (fetal heart rate, variability, decelerations) provide more information on how the fetus is coping. The use of physiological interpretation terminology has not been included in this guideline.
Lewisham and Greenwich NHS Trust	guideline	015	011	1.4.17 Stable baseline between 110 bpm and 160 bpm, there is no consideration into what is gestationally appropriate for the individual baby based on a holistic assessment and physiology. A rate of 161 to 180 bpm is not physiologically normal for a term baby and	Thank you for your comment. The guideline relates to term babies, but the advice to be aware that the baseline fetal heart decreases as pregnancy duration increases is included in the subsequent recommendation to help interpretation of fetal heart rates.

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				really should be considered red rather than amber as this would classify as suspicious, what does suspicious mean? German observational studies of 78,852 babies demonstrated at 37 weeks gestation 95% of foetus's had a heart rate of 145bpm (Pildner von Steinbury et al, 2013). Evidence to support this: *Pildver von Steinburg, S., Boulesteix, A.L., Lederer, C., Grunow, S., Schiermeier, S., Hatzmann, W., Scheider, K.T., Damumer, M. (2013). What is the "normal" fetal heart rate?Peer J. June 4:1:e82. Doi:107717/peerj.82.PMID: 23761161;PMICD:PMC3678114.* As above white, red and amber are very confusing forms of classification, has this been proposed as it is similar to a MEOW's chart?	A fetal heart rate above 160 bpm has now been amended and is classified as a red feature. The classification of white, amber and red are, as you suggest, to match the resources being created by the Avoiding Brain Injury in Childbirth Collaboration.
Lewisham and Greenwich NHS Trust	guideline	016	012	1.4.21 Variability >25 is rapidly evolving hypoxia, urgent intervention is required before 10 minutes, this should be classified as red if ongoing, not amber. This exaggerated response can be seen on a CTG as the	Thank you for your comment. The committee agreed that increased variability for short periods of time should raise a concern but did not need immediate action, but that for a longer period of time it was a more worrying feature and so agreed that it was necessary

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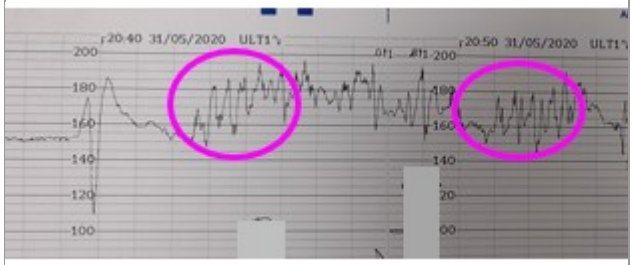
				"ZigZag pattern" with variability>25bpm lasting for 1 minute or more mean autonomic instability (Gracia-Perez- Bonfils etal, 2019).  *Outcomes:* • *More likely to have Apgar scores at 1 min of ≤7* • *More likely to have Apgar scores at 5 min of ≤7* • *Moderate acidosis (pH 7.0-7.10) was more common* *More likely to be admitted to NNU (8.7-11.4-fold higher neonatal admission rate) (Gracia-Perez- Bonfils etal, 2019).*	to maintain the distinction using amber and red. The committee agreed not to introduce additional terminology such as 'zigzag' into the guideline as this may cause confusion.

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				Evidence to support this: *Gracia-Perez-Bonfils et al (2019) Does the salutatory pattern on cardiotocograph (CTG) trace really exist? The ZigZag pattern as an alternative definition and its correlation with perinatal outcomes. The Journal of Maternal-Fetal&Neonatal Medicine.*	
Lewisham and Greenwich NHS Trust	guideline	016	024	1.4.22 Is it possible to include a list of medications commonly used in maternity that influence the variability? - Pethidine - Labetalol - Quetiapine - Methyldopa - Magnesium Sulphate	Thank you for your comment. The committee agreed that opioids were the most commonly recognised cause of reduced variability and that it was not possible to produce an exhaustive list and so they did not include other examples.
Lewisham and Greenwich NHS Trust	guideline	017	021	1.4.25 Definition of "persistent" and "repetitive" they are very similar words with incredibly close definitions, is it not clearer to simply say < 50 % or greater than 50%.	Thank you for your comment. To simplify the terminology, the use of repetitive has been retained, but the use of persistent has been removed and instead the duration of the decelerations is described.
Lewisham and Greenwich NHS Trust	guideline	018	011	1.4.28 As previously stated, white, amber and red are confusing, there is little consideration of the coping strategies of each individual baby.	Thank you for your comment. The colours white, amber and red have been chosen to align with the national charts (similar to MEWS charts) that have been developed by

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					the Avoiding Brain Injury in Childbirth Collaboration work, which is currently being piloted before being rolled out across the UK. The subsequent features of the CTG (fetal heart rate, variability, decelerations) provide more information on how the fetus is coping.
Lewisham and Greenwich NHS Trust	guideline	026	003 005	1.8.3 and 1.8.4 CTGs to be stored indefinitely (not to be left as an option). Need central monitoring everywhere and for everyone to upload their details so they can be stored. As evidenced by Ockenden (2020) and Okenden (2022) key report immediate actions for all units providing maternity care. Report references: • Independent Maternity Review. (2022). *Ockenden report – Final: Findings, conclusions, and essential actions from the independent review of maternity services at the Shrewsbury and Telford Hospital NHS Trust* (HC 1219). Crown. https://assets.publishing.service.gov.uk/government/uploads/	Thank you for your comment. The committee were not aware that the 25 year requirement had changed, nor could they find in Ockenden the advice that CTG traces should be stored indefinitely and so this recommendation has not been changed.

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				system/uploads/attachment_data/file/1064302/Final-Ockenden-Report-web-accessible.pdf • Ockenden, D. (2020). *Emerging findings and recommendations from the independent review of maternity services at the Shrewsbury and Telford Hospital NHS Trust*. Retrieved from https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/943011/Independent_review_of_maternity_services_at_Shrewsbury_and_Telford_Hospital_NHS_Trust.pdf	
Lewisham and Greenwich NHS Trust	guideline	026	025	The definition of variable decelerations is rather a vague description of these decelerations, if they are defined by physiology this provides clearer definition. • *A drop of 15 beats or more below the baseline for >15 seconds* • *Sharp drop and quick recovery during a contraction, FH rapidly returns to baseline* • *Mechanical cause – cord compression*	Thank you for your comment. Terminology relating to the physiological interpretation of CTG has not been included in the guideline, but the definition of variable decelerations has been clarified to state that they occur at variable times in relation to the contraction.

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				• *Baro – receptor mediated.* *Baro-receptors* • *Are located in carotid sinus and aortic arch* • *Stimulation of these leads to activation of parasympathetic nervous system, causing fall in heart rate* • *Usually short lasting and Fetus is NOT exposed to hypoxia during these decelerations as they are due to mechanical compression* • *Late decelerations/Chemoreceptive* *A gradual decrease and return to baseline of the FHR associated with a uterine contraction.* *The onset, nadir, and/or recovery occur after the onset, peak, and termination of a contraction.* *May start with the contraction but is late to return to the baseline* *They are chemo-receptor mediated (Gracia-Perez-Bonfils & Chandraharan, 2017)* Evidence to support this: *Gracia-Perez-Bonfils, A., & Chandraharan, E. (2017).*	

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				Physiology of Fetal Heart Rate Control and Types of Intrapartum Hypoxia. In E. Chandraharan (Ed.), Handbook of CTG Interpretation: From Patterns to Physiology (pp. 13-25). Cambridge: Cambridge University Press. doi:10.1017/9781316161715.005	
Lewisham and Greenwich NHS Trust	guideline	050 051		This reads as though NICE are contradicting themselves on page 50 and 51, regarding variability: *o less than 5 beats a minute for between 30 and 50 minutes, or more than 25 beats a minute for up to 10 minutes* • *red* *o less than 5 beats a minute for more than 50 minutes, or o more than 25 beats a minute for more than 10 minutes, or o sinusoidal. [2017, amended 2022* So it is implied that the episode must be more than 10 minutes, NICE then go on to state on page 51: "increased variability refers to oscillations around the baseline fetal heart rate of more than 25 beats a minute, and shorter episodes lasting a few minutes may	Thank you for your comment. This comment relates to the changes table which summarises the change made to the recommendations. However, the recommendation this refers to provides further detail of things that should be taken into account when assessing variability and explains that short periods (up to 10 mins) are concerning (and therefore categorised amber). This does not therefore contradict the recommendation. As the committee did not review this evidence they are unable to change this to 'more than 1 minute'.

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				represent worsening fetal condition. [2017, amended 2022]". By saying short episodes without defining the time frame it become unclear if you mean for 10 minutes or less, yet it has been demonstrated that short periods of more than 1 minute, caused by a rapidly evolving hypoxia (Gracia-Perez-Bonfils, 2019) Evidence to support this: *Gracia-Perez-Bonfils et al (2019) discuss that short period of up to a minute need to be actioned swiftly as they're indicative if autonomic instability see point 5 above.*	
Lewisham and Greenwich NHS Trust	guideline	052		Amber and red decelerations are incredibly confusing, is there are reason why physiological CTG is not used as this has been used by LGT for the past 8 years and LGT have some of the lowest HIE rates in SE London based on the Each baby count criteria from 2016 to 2021. Neonatal brain injury –London 2021	Thank you for your comment. NICE guidelines aim to encourage optimal and consistent care across the NHS and therefore the committee agreed that all trusts should be encouraged to adopt the same method of CTG interpretation and terminology. The NICE recommended interpretation of CTG is also in accordance with the international methods advocated by FIGO, and the Avoiding Brain Injury in Childbirth Collaboration work. Using consistent

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				Trust level data –Lewisham& Greenwich NHS Trust (University Hospital Lewisham site) Term birth injury rates / 1000 live births •L&G NHS Trust (U Lewisham Hospital site) = 0.29 ● •London LNU sites = 1.14 •London LNU unit mean= 1.17 (95% CI 0.89-1.44) ●>15% lower than mean ●5-15% lower than mean ●<5% higher or <5% lower than mean ●>5% higher than mean Data from: *London Neonatal Operation Delivery Network June 2022*	methods of interpretation also reduces confusion amongst staff and facilitates safer care when staff move between different units in the NHS.
Manchester University NHS Foundation Trust	Guideline	012	023, 024, 025	There is concern that this recommendation is too vague and open to interpretation. We feel that use of fetal monitoring and its interpretation in context of different risk factors for hypoxia compared to a situation of maternal infection are different and should be considered separately within the guideline.	Thank you for your comment. This recommendation has been amended to remove maternal infection as the committee agreed that the review of antenatal and maternal risk factors was specific to the condition of the baby, and the early detection of fetal hypoxia.

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Manchester University NHS Foundation Trust	guideline	014	001, 002, 003	There is concern that this recommendation is too vague and open to interpretation. We feel that use of fetal monitoring and its interpretation in context of different risk factors for hypoxia compared to a situation of maternal infection are different and should be considered separately within the guideline.	Thank you for your comment. The committee agreed that this recommendation was too open to interpretation and in an inappropriate place in the guideline and so have deleted it. Detailed advice on categorisation of traces is already included in the next section of the guideline.
Manchester University NHS Foundation Trust	guideline	014	023	Consideration should also be given to other features of contractions (strength, length and resting tone) in addition to the frequency of contractions.	Thank you for your comment. More detail on the resting time and hypertonus have been added to the recommendation, but resting tone has not been added as the committee agreed this was difficult to assess.
Manchester University NHS Foundation Trust	guideline	015	006	We would suggest also include review and comparison to CTGs from admission to maternity triage or the antenatal ward when available. Regarding comparison of CTG, importance baby being its own benchmark of baseline should also be taken into account as there is evidence to suggest that baseline reduces with advancing gestation. For example, should CTGs for the same patient be available at 34 weeks' gestation the baseline at >39 weeks' gestation should not significantly exceed the previous baseline of the CTG at 34 weeks.	Thank you for your comment. The advice to compare the current CTG trace with any previous traces has been strengthened in the recommendations at the start of the section on use of CTG, so has not been repeated here.

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Manchester University NHS Foundation Trust	guideline	017	020	We suggest that a definition should be provided for a 'shallow' deceleration. Alternatively choose to define a deceleration as the fetal heart rate slowing below baseline level without a set reduction in beats a minute or duration of deceleration. We feel that a link to physiology, associated features and cause of any deceleration is more clinically relevant.	Thank you for your comment. The committee agreed that shallow could not be defined in terms of size (as you agree in your comment) but it was important to highlight them so they were not ignored even though they appeared shallow. The committee agreed not to include details of the physiological interpretation of CTG, and the related terminology, and to focus the classification of the CTG using the 5 features.
Manchester University NHS Foundation Trust	guideline	019	017	Effects of oxytocin on all features of contractions (not just frequency) should be acknowledged. We suggest further elaboration in the guideline that acknowledges variable effects on different women's contractions and also that oxytocin effects such as raising of the basal resting tone may be difficult to quantify but may still cause hyperstimulation depending on the clinical situation of certain pregnancies e.g. growth restriction /placental dysfunction or prematurity	Thank you for your comment. The committee recognised that oxytocin leads to a variety of effects in labour but did not agree that it was necessary to specify all these effects in the guideline.
Manchester University NHS	guideline	021	012, 013	There is evidence that fetal scalp electrode does not always differentiate between fetal and maternal heart rate. We suggest also including the consideration of ultrasound to	Thank you for your comment. More details on differentiating between the fetal heart rate and the maternal rate are included in an earlier recommendation which has now been

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Foundation Trust				locate and confirm fetal heart activity prior to application of fetal scalp electrode where clinically relevant.	cross-referenced from this recommendation, and this includes the use of ultrasound where necessary.
National Childbirth Trust	General	General	General	The word 'risk' occurs 177 times in the guideline. While on many occasions this is entirely reasonable, it is repeated so often that it loses any desired impact of drawing attention to a dangerous situation. When applied, for example, to the examination of and conversation with a woman with no recognised complications or conditions, why not refer to a 'wellbeing assessment'? 'Risk' should be used correctly when a specific and pertinent diagnosis, event or factor is referred to but not when the woman is in fact healthy and well.	Thank you for your comment. The committee discussed that a key focus of the updated fetal monitoring guidelines is to ensure there is adequate assessment of risk, this term was well understood and therefore agreed not to amend this to 'wellbeing assessment' in any of the times this word was used in the guideline.
National Childbirth Trust	Guideline	004	011	The words 'Take the woman's preferences into account, and support shared decision-making' suggest that the woman herself should not or cannot make a decision. This is not the case and has an unethical implication. You might consider saying instead 'Support the women's process of decision-making with relevant information and by answering her questions, and then follow her expressed	Thank you for your comment. To increase the emphasis on the right of women to make their own decisions the phrase 'shared decision-making' has been amended to 'support the woman's decision'.

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				preferences'. 'Taking preferences into account' is not sufficient.	
National Childbirth Trust	Guideline	013	020	The words 'Discuss with the woman what her preference is, and take this into account' are similar to above and the same comment applies.	Thank you for your comment. More detail has been added to this recommendation about the information to be discussed with the woman, and the wording has been changed to 'support her to make a decision'.
National Childbirth Trust	Guideline	022	009 - 011	The words 'Discuss with the woman and her birth companion(s) what is happening, taking into account her individual circumstances and preferences, and support her decisions'. This wording is more appropriate than the examples cited above: this or a similar approach should be used throughout.	Thank you for your comment. The wording in other sections of the guideline has been amended to be similar to this wording, as you suggest.
National Fetal Monitoring Lead Network	Guideline	General	General	The term 'hypoxia' is referred to throughout the main body. A section relating to the various types of hypoxia and their key features could be beneficial	Thank you for your comment. The committee did not consider the different types of hypoxia for inclusion in the guideline so have not been able to add this detail.
National Fetal Monitoring Lead Network	Guideline	General	General	Support the inclusion of considerations for CTG traces in second stage of labour	Thank you for your comment and support for these recommendations.
National Fetal Monitoring Lead Network	Guideline	General	General	The ctg interpretation elements are very wordy and not user friendly for quick reference in the clinical area. Removal of the standardised reference table of the parameters and classifications may	Thank you for your comment. The work to revise this guideline was carried out in parallel with the Avoiding Brain Injury in Childbirth Collaboration at the Royal College of Obstetricians and Gynaecologists (RCOG).

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				encourage individual units to develop their own tabular versions as a quick reference guide to support staff. This may lead to a variance that could impact on appropriate classification or management.	The RCOG colleagues are developing tools to aid implementation and so these have not been duplicated by NICE.
National Fetal Monitoring Lead Network	Guideline	General	General	There are several drastic changes within this draft that will need to be cascaded to all staff within a relatively short period of time once the guideline is formerly updated and launched. Are there any provisions in place to support units with implementation on a wide scale?	Thank you for your comment. The work to revise this guideline was carried out in parallel with the Avoiding Brain Injury in Childbirth Collaboration at the Royal College of Obstetricians and Gynaecologists (RCOG). The RCOG colleagues are developing tools to aid implementation and so these have not been duplicated by NICE.
National Fetal Monitoring Lead Network	Guideline	General	General	Will there be a transition period whereby a dual approach may be acceptable until all staff have been updated and launch training complete? Clear guidance on implementation is required.	Thank you for your comment. NICE is aware that NHS organisations need to plan the implementation of new or updated guidelines but does not set a deadline or timetable for this to occur. The work to revise this guideline was carried out in parallel with the Avoiding Brain Injury in Childbirth Collaboration at the Royal College of Obstetricians and Gynaecologists (RCOG). The RCOG colleagues are developing tools to aid implementation and so these have not been duplicated by NICE.

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National Fetal Monitoring Lead Network	Guideline	General		Have digital platform suppliers been considered? Many units use digital systems which require months to make changes, especially those that correlate with guidelines. It will be extremely challenging in practice to be expected to incorporate and follow a guideline that is not aligned with a system used to document.	Thank you for your comment. Digital system suppliers undertake to update their systems in response to changes in national guidelines and it is anticipated this will occur by the final publication of this guideline.
National Fetal Monitoring Lead Network	Guideline	009	021	1.2.22 This sentence may imply that signal loss with wireless transducers is due to an equipment fault. Suggesting switching to wireless specifically may potentially lead to a delay in identifying or acting upon an acute situation – consider rephrasing	Thank you for your comment. The recommendation has been amended to clarify that the cause of loss of signal should be checked to confirm whether or not it is a clinical problem.
National Fetal Monitoring Lead Network	Guideline	011	019	1.3.7 Presence of 'new' meconium – clarity needed for low risk women requiring amniotomy for delay in progress. If liquor at point of amniotomy is insignificant stained meconium, should this be classed as "new"?	Thank you for your comment. The recommendations on meconium have now been placed in a section of their own, to advise that a full clinical assessment is carried out if any meconium is detected, at any stage of labour, and this would include after natural rupture of the membranes or after an amniotomy.
National Fetal Monitoring Lead Network	Guideline	011	019	1.3.7 Support removal of the term 'insignificant' in relation to meconium, but there's still	Thank you for your comment. The recommendations on meconium have now been placed in a section of their own, to

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				reference to significant meconium – may cause confusion. Suggest that All Meconium is treated the same	advise that a full clinical assessment is carried out if any meconium is detected.
National Fetal Monitoring Lead Network	Guideline	011	029	1.3.7 The addition of continuous CTG for blood stained liquor may cause confusion due to the subjectivity of what is deemed as blood stained liquor. If this must remain within the guideline, there needs to be some supporting text with a definitive description to ensure standardisation of practice	Thank you for your comment. The presence of blood-stained liquor has been moved into a separate bullet point and it has been clarified that this is present when a vaginal examination has not just been conducted, and is a risk factor when suggestive of antepartum haemorrhage.
National Fetal Monitoring Lead Network	Guideline	014	012	1.4.12 Addition of the importance of resting tone and resting time would be appropriate to acknowledge	Thank you for your comment. The committee agreed to base the classification of contractions on their frequency and length, which would therefore include resting time. However, they did not think resting tone could be easily assessed and may be confusing for users of the guideline. However, they did add hypertonus as an amber feature.
National Fetal Monitoring Lead Network	Guideline	014	014	1.4.13 Section 1.3.7 makes reference to hypertonus. Could this feature also be reflected within this section?	Thank you for your comment. Hypertonus has been added as an amber feature.
National Fetal Monitoring Lead Network	Guideline	015	007	1.4.17 Support inclusion of stable baseline added as a white feature (reassuring)	Thank you for your comment and support for this recommendation

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National Fetal Monitoring Lead Network	Guideline	015	007	1.4.17 rationale suggests including an 'unstable' baseline or 'difficult to interpret' baseline as a red feature	Thank you for your comment. The committee discussed that an unstable baseline usually meant that the true baseline rate could not be determined and so added 'unable to determine baseline' as an amber feature to this recommendation. As this is a recommendation that has been carried forward from the 2017 guideline there is no rationale for this recommendation.
National Fetal Monitoring Lead Network	Guideline	015	007	1.4.17 There is evidence supporting fetal heart rate above 160bpm associated with poor outcomes. Consideration should be made to reassign fhr above 160bpm as a red feature further supported by highlighted comments within the main body in section 1.4.18 referring to a lower baseline fhr with post term babies. This guideline appears to be aimed at term babies in labour	Thank you for your comment. A fetal heart rate above 160 bpm has now been amended and is classified as a red feature. The guideline does relate to term babies, but the advice to be aware that the baseline fetal heart decreases as pregnancy duration increases was added to help interpretation of fetal heart rates.
National Fetal Monitoring Lead Network	Guideline	016	024	1.4.22 Reference to cycling made within the main body but only in relation to periods of reduced variability (quiescence). There is evidence to suggest that variability can remain/appear within normal parameters in a compromised	Thank you for your comment. The committee agreed not to introduce additional terminology based on physiological interpretation such as 'cycling' into the guideline as this may cause confusion, and to use only the categorisation of the five features of the CTG.

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				fetus in relation to infection but lack of cycling a cause for concern	
National Fetal Monitoring Lead Network	Guideline	016	024	1.4.22 Support inclusion of lower threshold for increased variability of more than 25 bpm and sinusoidal patterns	Thank you for your comment and support for this recommendation.
National Fetal Monitoring Lead Network	Guideline	017	011	1.4.28 Support the removal of the 90 minute time frame. The new description stating 'variable decelerations that are not evolving to have concerning characteristics' appear very vague and non-specific. We feel that this may cause confusion and misinterpretation. The terminology either needs to remain as it was previously 'with no concerning characteristics' or specifically discuss presence of shouldering as a reassuring feature – furthermore supported by the mention of shouldering in 1.4.25	Thank you for your comment. The addition of the word 'evolving' is to emphasise that it is important to consider changes to the CTG over time. The committee agreed that the presence of absence of shouldering as part of decelerations was not the important consideration, but it was the loss of previously present shouldering that was important to note. The definition of concerning characteristics is provided clearly in the previous recommendation.
National Fetal Monitoring Lead Network	Guideline	017	017	1.4.24 Support the acknowledgement of shallow decelerations. However, there is no explanation of their significance	Thank you for your comment. The committee agreed that shallow decelerations should be considered as all other decelerations and that was why they had been included in the definition, so it was not necessary to explain that that they were more or less significant.

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National Fetal Monitoring Lead Network	Guideline	017	021	1.4.25 Support the inclusion of specifying definitions of 'persistent' and 'repetitive' decelerations	Thank you for your comment. Based on other stakeholder comments, and to simplify the terminology, the use of repetitive has been retained, but the use of persistent has been removed and instead the duration of the decelerations is described.
National Fetal Monitoring Lead Network	Guideline	018	011	1.4.28 Support the inclusion of specific antenatal and developing intrapartum risk factors for fetal compromise. The reference to these should be outlined in this section such as 'outlined in 1.3.3/1.3.7'	Thank you for your comment. The antenatal and intrapartum risk factors are mentioned numerous times throughout the guideline and so they are not referenced back on all occasions.
National Fetal Monitoring Lead Network	Guideline	019	010	1.4.29 No inclusion of overshoots. In view of the addition of the term 'shouldering', we feel it is important to add definition of overshoots to reduce the risk of mistaking one for the other	Thank you for your comment. Overshoots are encompassed in the description of decelerations that do not return to baseline. Shouldering is only a concern when it disappears, so the committee did not agree that a definition was required.
National Fetal Monitoring Lead Network	Guideline	019	029	1.4.33 In the main body, early decelerations are described as rare, therefore should inclusion of further detail surrounding presence of early decelerations and stage of labour be documented	Thank you for your comment. The terminology has been standardised to use the word 'uncommon' throughout the guideline. The committee agreed that further detail was not required about early decelerations, as they are uncommon.

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National Fetal Monitoring Lead Network	Guideline	021	018	1.4.43 Support inclusion that hypoxia is more common and more rapid in second stage of labour. However, suggesting a rise in baseline fetal heart rate to be interpreted as a red feature can be slightly subjective. Inclusion of second stage interpretation parameters may be of benefit to support the lower thresholds required in second stage of labour. In addition to this, ensuring a baseline of 160bpm as a red feature as outlined in comment number 8, will furthermore support timely escalation in second stage	Thank you for your comment. The committee have defined that an increase in the second stage of 20 beats a minute or more should be defined as red in the second stage. A fetal heart rate above 160 bpm has now been amended and is classified as a red feature.
National Fetal Monitoring Lead Network	Guideline	021	021	1.4.44 Support inclusion of 'allowing the baby to recover' in the presence of CTG concerns in second stage. Could use of tocolytic also be identified as a consideration in this section?	Thank you for your comment and support for this recommendation. The use of tocolytics is covered in the recommendations on conservative measures so has not been repeated here.
National Fetal Monitoring Lead Network	Guideline	023	012	1.5.7 Recommendation for fetal scalp stimulation in this section appears contradictory to when to perform fetal scalp stimulation in section 1.6.1. – consider removing this sentence completely and just referring to section 1.6 when a ctg has been classified as pathological	Thank you for your comment. The committee agreed it was useful to retain the mention of fetal scalp stimulation (FSS) here and the cross-reference to the more detailed recommendations on FSS, but in both places FSS is to be considered if there is a suspicious CTG with other intrapartum risk

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					factors and this has been standardised in both places FSS is mentioned.
National Fetal Monitoring Lead Network	Guideline	024	010	1.5.9 Support the inclusion of specifying not to use IV fluids to treat fetal heart rate abnormalities	Thank you for your comment and support for this recommendation.
National Fetal Monitoring Lead Network	Guideline	025	002	1.6 This section risks being completely overlooked due to mention of using fetal scalp stimulation as a conservative measure in section 1.5.7	Thank you for your comment. These recommendations on fetal scalp stimulation are cross-referenced from recommendation 1.5.6 so the committee did not agree that they would be overlooked.
National Fetal Monitoring Lead Network	Guideline	025	012	1.7.1 Support the removal of fetal blood sampling however, in view of the ongoing research study and the possibility that FBS may be re-implemented, complete removal may appear drastic	Thank you for your comment and your support of the removal of the recommendations on fetal blood sampling. The committee has now amended this recommendation to highlight the lack of evidence to support fetal blood sampling. The committee were aware that there was ongoing research into the benefits of fetal blood sampling compared to fetal scalp stimulation so have included this in the rationale for their recommendation.
NHS England	Guideline	General	General	Important to stress 'documentation' of decision making with woman throughout	Thank you for your comment. The need to document discussions and decisions has been added to the over-arching recommendations at the beginning of the guideline

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NHS England	Guideline	General	General	To raise awareness of the incoming ABC programme (Avoiding Brain Injury in Childbirth) which will be pilot tested in the coming year ahead of national roll out. It will be important to keep working closely as the ABC work is tested to ensure that ultimately there is alignment between guidelines and policies.	Thank you for your comment. The work to revise this guideline was carried out in parallel with the Avoiding Brain Injury in Childbirth Collaboration at the Royal College of Obstetricians and Gynaecologists (RCOG), and RCOG colleagues have commented on the draft. Now the draft NICE guideline is in the public domain we will continue to work with them to ensure the work is aligned.
NHS England	Guideline	004	005	Rec 1.1.1 – we agree, and this should be included in the new NICE AN guideline	Thank you for your comment. The NICE guideline on antenatal care has been recently updated and includes advice to inform women about 'common events in labour and birth', which may include different types of monitoring.

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NHS England	Guideline	004 005 008	005 020 021	1.1 1.2.4 1.2.20 We recommend strengthening the sections on adjusted communication, reasonable adjustments and accessibility. Specifically: - Include mention of the sensory issues that autistic women may have about foetal monitoring. - Ensure that women and their birth companions are given information in a format accessible for them (verbal, written, pictorial, different language, signing etc) - Consider cultural issues that might affect whether women feel comfortable with intrapartum fetal monitoring, e.g. it does reduce mobility during labour, and reduces positions you can give birth in	Thank you for your comment. The committee agreed that considering cultural, language, neurodiversity and religious contexts was important but this applied to all aspects of healthcare and so is covered in the NICE guideline on patient experience. This has therefore been included in the guideline as a cross-reference.
NHS England	Guideline	006	006	Rec 1.2.7. – we agree – suggest adding 'explain and document 'or reference importance of documentation of discussions throughout	Thank you for your comment. A recommendation has been added to the beginning of the guideline about documenting

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					discussions and decisions so this has not been repeated here.
NHS England	Guideline	008	004	Rec. 1.2.14 – would be helpful to link to appropriate guideline to categorise AN CTG traces	Thank you for your comment. There are currently no NICE guidelines that include categorisation of antenatal CTG traces. This suggestion has been passed to the NICE surveillance team who monitor guidelines to ensure they are up to date.
NHS England	Guideline	010	022	Rec 1.3.3 – consider adding 'new' or significant meconium	Thank you for your comment. The recommendations on meconium have now been placed in a section of their own, to advise that a full clinical assessment is carried out if any meconium is detected.
NHS England	Guideline	011	007	Rec 1.3.5 – agree, consider including 'such as timing, frequency and strength'	Thank you for your comment. Suggested details about the nature of contractions have been added here.
NHS England	Guideline	014	007 - 008	Rec 1.4.11- consider adding 'blood stained liquor', meconium or sepsis	Thank you for your comment. The examples of risk factors have been removed from this recommendation to simplify it, and so blood-stained liquor has not been added.
NHS England	Guideline	015	007 - 023	Rec 1.4.17- agree new white amber red categorisation but needs to fully reflect new ABC tool	Thank you for your comment. The colours white, amber and red have been chosen to align with the national charts (similar to MEWS charts) that have been developed by the Avoiding Brain Injury in Childbirth Collaboration work, which is currently being

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					piloted before being rolled out across the UK, and so the guideline will reflect the new ABC tool.
NHS England	Guideline	025	002	Rec 1.6 – suggest to include 'inform obstetrician or senior midwife '	The advice to inform the obstetrician or senior midwife is already included in the earlier recommendations about a suspicious CTG trace with additional risk factors so this has not been repeated here.
NHS England	Guideline	025	018	Rec 1.8.1 – agree and suggest to add 'ensure adequate CTG trace paper available'	Thank you for your comment. Ensuring adequate paper has been added to the recommendation.
NHS England National Patient Safety Team	Guideline	General	General	The updated NICE guidance does not reflect or mention the increasing use of fetal physiology based CTG interpretation by Maternity Units. Baby Lifeline, probably the largest provider of CTG training only teaches 'evidence-based training on CTG interpretation based on fetal physiology' which has differing criteria for the interpretation of fetal compromise. This has already resulted in Maternity Units not utilising NICE guidance. Please consider including fetal physiology based CTG interpretation into the new guidance.	Thank you for your comment. The committee were aware that physiological interpretation of CTG is an alternative method of interpretation but did not review the evidence for this method of interpretation. The aim of this NICE guideline on fetal monitoring is to guide standard practice and provide advice to healthcare professionals on what action to take and when, and the committee agreed that the method of CTG interpretation presented in this guideline was the internationally recognised method of achieving this. In addition, the committee worked with the Avoiding Brain Injury in

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					Childbirth Collaboration to ensure consistency between the 2 pieces of work.
Royal College of Obstetricians and Gynaecologists	Guideline	009	023	It is not clear what section 1.3 refers to. It is entitled assessing risk and indications for continuous cardotocography monitoring. However, section 1.2 preceding this relates to fetal monitoring and assessment during labour. It is not clear whether section 1.3 relates to women in labour or those (for example) admitted for induction or in the antenatal period. It should be made clear when continous CTG should be offered in this section.	Thank you for your comment. Section 1.3 has been retitled 'Indications for CTG in labour' to clarify what the section covers and to differentiate it from section 1.2 which has been renamed 'Assessment during labour and methods for fetal monitoring'.
Royal College of Obstetricians and Gynaecologists	Guideline	025	011	The new guidelines state that fetal blood sampling should not be offered to assess fetal wellbeing. The explanation is very short and does not give any detailed evidence of why this decision was made. Nor does it give any high quality data. Unfortunately the link for the description of the evidence and committees decision was not working. I would strongly advise this decision should not be taken, particularly when not supported by quality evidence. I would strongly advise this decision should not be taken, particularly when not supported by quality evidence. The	Thank you for your comment. The committee has not reinstated the recommendations on fetal blood sampling as they did not think there was evidence to demonstrate any benefits. The committee has now amended this recommendation to highlight the lack of evidence to support fetal blood sampling. The committee were aware that there was ongoing research into the benefits of fetal blood sampling compared to fetal scalp stimulation so have included this in the rationale.

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				guideline acknowledges there is a study underway but yet does not await the results of the study before changing the guidelines. There is little doubt that used appropriately fetal blood sampling is helpful scalp sampling can prevent difficult operative deliveries which may pose a significant risk for mother and or the neonate. I accept that used inappropriately they may delay delivery but this should not prevent their appropriate use. In my view it is crucial that NICE do not remove a useful obstetric tool without adequate research justification.	
Resuscitation Council UK	Guideline	General	General	There is nothing in this guideline about when to proactively call for paediatric / neonatal help. Whilst they may not have reviewed evidence for this a good practice statement along the lines of "Where the CTG is considered pathological and birth needs to be expediated, consider calling for paediatric or neonatal support in a timely way and sharing the concerns with that team."	Thank you for your comment. An additional 'good practice' recommendation has been added as you suggest.
Resuscitation Council UK	Guideline	General	General	In complex pregnancies that have had input from a fetal medicine team or where advanced planning arrangements have been	Thank you for your comment. The guideline already advises that antenatal information and plans are factored into intrapartum care in numerous places (for example,

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				agreed this antenatal information should be factored into intrapartum care.	recommendations 1.1.1, 1.2.2, 1.2.5, 1.2.19, 1.3.1, 1.3.2, 1.3.3, 1.3.5, 1.4.1 and 1.4.2) so no further additions have been made relating to antenatal risk factors.
Royal College of Nursing	General	General	General	We do not have any comments to add on this occasion. Thank you for the opportunity to contribute.	Thank you for your comment and support for this draft guideline.
Royal College of Paediatrics and Child Health	General	General	General	We are happy with this draft document on fetal monitoring	Thank you for your comment and support for this draft guideline.
The Pelvic Partnership	Guideline	General	General	Importance of securing safe positions for women with PGP with fetal monitoring in labour We have heard many stories of women and birthing people with pregnancy-related pelvic girdle pain (PGP) who had challenging labour and birth experiences, some of which were exacerbated by current practices related to fetal monitoring. In particular, the specific positions women and birthing people have to labour in with fetal monitoring may be very uncomfortable due to their PGP, such as lying flat on a hard bed, or having their legs raised or moved for them into painful	Thank you for your comment. The guideline already recommends that women should be helped and encouraged to be as mobile as possible and the committee has expanded this recommendation to state that women should also be assisted to find positions that are comfortable for them.

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				positions. Even getting off and on a high bed can prove difficult for women with PGP, who may have very limited mobility as a result of their PGP. We would suggest steps be taken to facilitate fetal monitoring in more active birthing positions, such as on all fours, on a birthing ball or when standing. These positions enable women with PGP to have more control over the position of their pelvis and legs during labour. Also, we would suggest that adjustments made for people with disabilities are also made available for women and birthing people with PGP. For example, there must be extra support for women and birthing people with disabilities to help them get in and out of high beds so we recommend that similar adjustments are made available for women and birthing people with PGP.	
The Pelvic Partnership	Guideline	004	005 - 014	We welcome efforts to have early and regular discussions with women and birthing people about fetal monitoring.	Thank you for your comment. There is a wide range of pre-existing conditions that may need consideration when choosing the method of fetal monitoring, because they

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				When discussing fetal monitoring with women before and during labour, ask if they have any conditions that may be affected by fetal monitoring, such as pregnancy-related pelvic girdle pain (PGP). By doing this, healthcare practitioners can ensure that the woman is included in all decision-making, all relevant information can be included in the women's notes and adjustments could be made if needed, such as extra help to get in and out of bed or regular breaks from the bed on a birthing ball or in more active birthing positions.	impact on the woman or increase her risk, and it would not be possible to list them all, so we have not added pelvic girdle pain as a specific example.
The Pelvic Partnership	Guideline	008	015 - 016	We welcome efforts to ensure the woman or birthing person can be as mobile as possible despite the fetal monitoring. We would strongly encourage this be emphasised to ensure that it becomes widespread practice and that the woman is fully aware that she can ask for help to stay mobile or change position during labour.	Thank you for your comment and support for this recommendation. This recommendation has been carried forward from the 2017 guideline so it is hoped this is already widespread practice.
UK Network of Professors in Midwifery and	Guideline	004	008	Recommendation 1.1.2 Change text by deleting 'Throughout labour' and adding	Thank you for your comment. The committee agreed that 'throughout labour' was a more succinct way of describing the ongoing

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Maternal and Infant Health				'Following the initial labour assessment or if the recommended method of fetal monitoring changes during labour, provide women …	assessment that is necessary and so have not made this change.
UK Network of Professors in Midwifery and Maternal and Infant Health	Guideline	006	003	Recommendation 1.2.6 Does this recommendation apply to all women or just those initially recommended IA?	Thank you for your comment, This applies to all women, as it is part of initial assessment to determine the method of fetal monitoring.
UK Network of Professors in Midwifery and Maternal and Infant Health	Guideline	007	001	Recommendation 1.2.9 Although this recommendation is in grey and we have been requested not to comment as the evidence has not been reviewed, it contains a recommendation for a change in practice which we consider requires further consideration prior to being recommended by NICE. We strongly object to this recommendation in its current wording. We appreciate that on occasions, both on CTG monitoring and with IA, the maternal rather than fetal heart rate can be inadvertently heard and recorded, and that improvements in this aspect of care have the potential to improve the safety of fetal	Thank you for your comment. As the committee did not undertake a review of the effectiveness of different methods of differentiating between the maternal and fetal heart rate, it is not known whether there is already available evidence on this topic, and as a result a research recommendation has not been made. The committee agreed that differentiation of the maternal and fetal heart rate was very important in the second stage of labour and so did not change this recommendation or suggest it could be carried out less frequently. The guideline advises to use intermittent auscultation and palpate the woman's pulse and this is possible for a single midwife to do. The guideline now advises that it should be carried out after, not

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				monitoring. We would welcome a research recommendation on this aspect of care, particularly around the development and evaluation of more advanced hand-held devices for use with IA. The feasibility, acceptability and effectiveness of a midwife simultaneously monitoring the fetal heart rate, and palpating the maternal pulse every 5 minutes in the second stage of labour during intermittent auscultation, are yet to be established. It is important that any recommendation made by NICE is deliverable within the context of NHS services and has some suggestion of potential effectiveness. The current recommendation does not meet either of these criteria. Many midwives are required to care for women in the second stage of labour without a second support person. When using a doppler, particularly with a woman in the pool, both hands are already required to hold the two sections of the device. Whilst on	during a contraction, to limit the effects of the contraction on the maternal heart rate. The committee agreed that the details of where this should be recorded is not something that is advised by NICE guidelines as it will depend on local equipment and circumstances.

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				occasions it is possible to palpate the woman's pulse whilst listening to the fetal heart rate, we are concerned that this is not feasible in the context of NHS services to expect this to be performed on every occasion the fetal heart rate is auscultated during the second stage of labour. Making this a recommendation may have little impact on safety, but could increase workload associated stress for midwives, who may find themselves unable to meet the expected standards; and accused of negligence, as they could not provide the required care. Apart from feasibility, attempting to differentiate the maternal and fetal heart rates immediately following a contraction may not be to correct time to do this. The maternal heart rate accelerates during contractions due to an increase in the maternal circulating blood volume, pain and effort of pushing. The rate of the maternal and fetal heart rates may be very similar immediately following a	

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				contraction leading to potential difficulty differentiating the two. The third concern is that the requirements for documentation are not stipulated. As the feasibility and effectiveness of this practice are not determined and / or requirements for documentation are not yet established the recommendation should not be included. If it is considered important to improve the distinction of the maternal and fetal heart rate during IA in the second stage of labour, how this can best be achieved should be a research recommendation.	
UK Network of Professors in Midwifery and Maternal and Infant Health	Guideline	008	012	Recommendation 1.2.17 After if the midwife need to … Add 'leave the room' or needs to change,	Thank you for your comment. This change has been made as you suggest.
UK Network of Professors in Midwifery and	Guideline	008	017	Recommendation 1.2.19 Change 'Offer' to 'Recommend'	Thank you for your comment. Offer is standard NICE terminology for a strong recommendation, so this has not been changed.

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Maternal and Infant Health					
UK Network of Professors in Midwifery and Maternal and Infant Health	Guideline	009	018	Recommendation 1.2.21 It is striking that this recommendation is felt to be required.	Thank you for your comment. This recommendation was made in response to safety concerns over charging and maintenance not occurring.
UK Network of Professors in Midwifery and Maternal and Infant Health	Guideline	009	021	Recommendation 1.2.22 After 'if there is signal loss … Add 'which is not resolved by reducing the distance between base unit and the woman'.	Thank you for your comment. The recommendation has been amended as you suggest and the need to check that the loss of signal is not a clinical problem has also been added.
UK Network of Professors in Midwifery and Maternal and Infant Health	Guideline	009	026	Recommendation 1.3.1 Change 'Offer' to 'Recommend'	Thank you for your comment. Offer is standard NICE terminology for a strong recommendation, so this has not been changed.
UK Network of Professors in Midwifery and Maternal and Infant Health	Guideline	010	025	Recommendation 1.3.4 Change 'Consider' to 'Recommend'	Thank you for your comment. Consider is standard NICE terminology for a less strong recommendation, so this has not been changed.
UK Network of Professors in Midwifery and	Guideline	011	012	Recommendation 1.3.7 After 'the presence of' …. Add 'meconium, where liquor was previously clear', or significant meconium.	Thank you for your comment. The recommendations on meconium have now been placed in a section of their own, to advise that a full clinical assessment is

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Maternal and Infant Health					carried out if any meconium is detected at any stage in labour.
UK Network of Professors in Midwifery and Maternal and Infant Health	Guideline	012	014	Recommendation 1.3.8 Change 'Offer' to 'Recommend'	Thank you for your comment. This recommnedation is a 'consider' not an 'offer' recommendation. Consider is standard NICE terminology for a less strong recommendation, so this has not been changed.
UK Network of Professors in Midwifery and Maternal and Infant Health	Guideline	013	013	Recommendation 1.4.6 Add to the list Simultaneously palpate the woman's pulse and listen to the fetal heart rate	Thank you for your comment. This has been added to the recommendation, as you suggest.
UK Network of Professors in Midwifery and Maternal and Infant Health	Guideline	014	007	Recommendation 1.4.11 Please include guidance for midwives when urgent obstetric review is indicated but is not available. Add: If urgent obstetric review is requested but cannot be provided, record 'urgent review requested but currently unavailable'. If a consultant obstetrician is on call but not in the unit, they should be requested to attend.	Thank you for your comment. The committee agreed that it was not possible to specify in the guideline the precise details of escalation action to be taken, as different units would have different staffing arrangements and different procedures for calling in staff. This addition has therefore not been made.
UK Network of Professors in	Guideline	014	012	Recommendation 1.4.12	Thank you for your comment. The committee discussed that for women being monitored

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Midwifery and Maternal and Infant Health				Not all electronic CTGs have the capability for marking contractions if they are not detected by the toco. The inability to mark contractions manually is an unintended consequence of moving away from paper CTGs. For some women contraction monitoring with a tocodynameter is ineffective. It is not feasible to request midwives to mark contractions for the whole duration of labour. The midwife has many roles and marking contractions continuously will distract from other important roles including providing emotional and physical support to the woman in labour. Please specify when this is required and acknowledge that a second support person will be required for this to be performed continuously.	with CTG, the tocodynameter recorded contractions, but the woman's contractions could also be palpated manually and then could be added to the trace using a button on the CTG machine. The committee agreed that monitoring contractions was a key part of monitoring in labour and using the techniques above, did not require a second person.
UK Network of Professors in Midwifery and Maternal and Infant Health	Guideline	014	014	Recommendation 1.4.13 Please provide examples of the coloured charts being recommended.	Thank you for your comment. The colours white, amber and red have been chosen to align with the national charts (similar to MEWS charts) that have been developed by the Avoiding Brain Injury in Childbirth Collaboration work, which is currently being piloted and will be rolled out across the UK.

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UK Network of Professors in Midwifery and Maternal and Infant Health	Guideline	017	008	Recommendation 1.4.23 Add: If urgent obstetric review is requested but cannot be provided, note 'urgent review requested but currently unavailable'. If an on call consultant obstetrician is not in the unit, they should be requested to attend.	Thank you for your comment. The committee agreed that it was not possible to specify in the guideline the precise details of escalation action to be taken, as different units would have different staffing arrangements and different procedures for calling in staff. This addition has therefore not been made.
UK Network of Professors in Midwifery and Maternal and Infant Health	Guideline	019	014	Recommendation 1.4.30 Add: If urgent obstetric review is requested but cannot be provided, note 'urgent obstetric review requested but currently unavailable'. If an on call consultant obstetrician is not in the unit, they should be requested to attend.	Thank you for your comment. The committee agreed that it was not possible to specify in the guideline the precise details of escalation action to be taken as different units would have different staffing arrangements and different procedures for calling in staff. This addition has therefore not been made.
UK Network of Professors in Midwifery and Maternal and Infant Health	Guideline	021	014	Recommendation 1.4.41 As the feasibility of recording the maternal pulse every 5 minutes in the second stage of labour without a facility on the CTG machine, requirements for documentation, nor any unintended impacts on other aspects of care are yet been determined, the recommendation should not be included. If the GDG decide to include this recommendation despite not knowing if it can	Thank you for your comment. The committee, which includes a number of experienced midwives, agreed that it was necessary and feasible to carry out checks of the maternal and fetal heart rate every 5 minutes in the second stage of labour for women being monitored with CTG. Details about differentiation of the maternal and fetal heart rate, including the use of pulse oximeters or CTG monitors with that facility, are already covered in an earlier

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				be delivered in practice, or knowledge of unintended consequences … Before 'Monitor' add 'Offer to' And add: 'If the facility to monitor and record the maternal heart rate is not available on the CTG machine an additional support person will be required to support the midwife'.	recommendation which has now been cross-referenced from this section of the guideline. The recommendation that begins 'Monitor…' has been combined into the recommendations about differentiation of maternal and fetal heart rates so that part of your comment is no longer applicable. The committee agreed that it is very important that healthcare professionals ensure that they are monitoring the fetal heart in the second stage of labour, even if they are unable to have additional support with them the whole time.
UK Network of Professors in Midwifery and Maternal and Infant Health	Guideline	021	021	Recommendation 1.4.44 After 'stage of labour' … add 'and effective regional analgesia is being used which suppresses the woman's desire to push' consider stopping pushing	Thank you for your comment. The committee have changed the recommendation to 'discouraging pushing' rather than stopping pushing so did not feel it was necessary to differentiate between women with and without an epidural, nor would recommend the insertion of an epidural at this stage in labour just to facilitate the cessation of pushing.
University Hospital Plymouth NHS Trust	Guideline	010	010 & 011	Rec 1.3.2 Continuous fetal monitoring for gestational diabetes requiring medication. Although we are aware of the current recommendation to induce these patient's we must consider personalised care & continue	Thank you for your comment. The committee agreed that women with diabetes requiring medication should be offered CTG monitoring due to increased likelihood of complications during labour. The decision to have CTG

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				to assess patients on an individual basis. The clinical picture should be reviewed without the blanket statement that all these patients require continuous fetal monitoring. The important factor is that these patient's have a thorough review by a senior obstetrician before a decision is made regarding their mode of fetal monitoring. This would not be challenging to implement however with the focus on personalised care we do not feel this should be the standard recommendation for fetal monitoring.	monitoring or not would ultimately be the woman's decision, and some women may prefer and opt to proceed without CTG monitoring.
University Hospital Plymouth NHS Trust	Guideline	014	017	Rec 1.4.13 Categorisation of white, amber & red. We expect staff to have deep understanding of the complex physiology but then want them to describe fetal wellbeing as white, amber or red. We have worked so hard in trying to make staff categorise and describe CTGs in words and define as normal, suspicious or pathological. This is oversimplification that serves no purpose It would be challenging to implement these changes when staff have taken so long to understand the current practice whilst incorporating aspects of physiology. The	Thank you for your comment. The categorisation takes into account different features of the CTG – contractions, baseline fetal heart rate, variability and decelerations - with each one assigned a 'colour score' of white, amber or red. The replaces the previous terminology of 'reassuring', 'non-reassuring' or 'abnormal' which was used in the previous guideline. The colours white, amber and red have been chosen to align with the national charts (similar to MEWS charts) that have been developed by the Avoiding Brain Injury in Childbirth Collaboration work, which is currently being

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				increased inclusion of physiology is a welcome addition & will only help to embedded knowledge & understanding of fetal physiology & management.	piloted before being rolled out across the UK. The overall classification of the CTG remains as you describe it – and is classified 'normal', ''suspicious' or 'pathological' so there will not be new terminology for staff to use for overall classification.
University Hospital Plymouth NHS Trust	Guideline	017	028	Rec 1.4.25 We are concerned that this recommendation that introducing new terminology such as persistent, will again be confusing to midwives & doctors. The previous introduction of atypical or typical was very confusing & it has taken a long time for midwives & doctors to become confident assessing & understanding the concerning characteristics of fetal monitoring. This would be a very challenging to implement. Incorporating this into current practice & terminology would work better instead of changing the current practice that is well embedded into practice. The key is that staff have a clear understanding when to escalate concerns & what constitutes as concerning features.	Thank you for your comment. To simplify the terminology, the use of repetitive has been retained, but the use of persistent has been removed and instead the duration of the decelerations is described. However, the focus of the guideline has been changed to clarify when escalation is required, based on the whole clinical picture, as you describe.
University Hospital	Guideline	017	029	Rec 1.4.25 We are concerned with the recommendation to introduce new terminology such as repetitive, will again be	Thank you for your comment. To simplify the terminology, the use of repetitive has been retained, but the use of persistent has been

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Plymouth NHS Trust				confusing to midwives & doctors. The previous introduction of atypical or typical was very confusing which had a negative impact on practice, effecting understanding. The current description of over 50% of contractions is understood by staff & embedded in practice. New terminology will only confuse. This would be a very challenging to implement. Incorporating this into current practice & terminology would work better instead of changing the current practice that is well embedded into practice. The key is that staff have a clear understanding when to escalate concerns & what constitutes as concerning features.	removed and instead the duration of the decelerations is described. However, the focus of the guideline has been changed to clarify when escalation is required, based on the whole clinical picture, as you describe.
University Hospital Plymouth NHS Trust	Guideline	025	003	Rec 1.6.1 Digital scalp stimulation. This is already embedded practice & we agree that if an acceleration is present this is clearly a representation of fetal wellbeing. It is our opinion that these cases should be carefully monitored & risk assessed, prompting further intervention depending on the overall individual risks.	Thank you for your comment. The recommendation already states that monitoring the fetal heart rate and the clinical picture should continue, even if fetal scalp stimulation leads to an acceleration.
University Hospitals	Evidence Review A	General	General	We are concerned that the recommendation for fetal blood sampling in labour has been	Thank you for your comment. The committee has not reinstated the recommendations on

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Bristol and Weston NHS Foundation Trust				removed from the guidance. We recognise that the recommendations regarding scalp stimulation and the guidance around good use of FBS in the 2014 and 2017 guidance has rightly reduced the use of fetal blood sampling in practice. However fetal blood sampling remains a useful part of intrapartum care. To remove all use of FBS based on two studies with very limited number of women in each, one of which is a feasibility pilot study seems premature. We would strongly recommend continuing the availability of FBS in intrapartum care until the review planned in 2024 when the full RCT from Dublin is published.	fetal blood sampling as they did not think there was evidence to demonstrate any benefits, but they have amended their recommendation to highlight the lack of evidence for fetal blood sampling. The committee were aware that there was ongoing research into the benefits of fetal blood sampling compared to fetal scalp stimulation so have included this in their rationale for the revised fetal blood sampling recommendation.
University Hospitals Southampton NHS Foundation Trust	Guideline	General comment	General	As the committee will be aware, NICE guidance is increasingly interpreted very literally from a medico-legal perspective. Important the committee are as specific as possible about choice of wording and should consider adding grade of evidence to the recommendations to make it explicit to the lawyers what is 'consensus' vs grade A evidence. RCOG do this nicely in their Green-tops.	Thank you for your comment. The quality of the evidence, or the use of consensus, is explained in the evidence review that accompanies the guideline. It is not NICE methodology to refer to the grade of evidence alongside each recommendation.

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University Hospitals Southampton NHS Foundation Trust	Guideline	005	003 - 005	1.2.1 Perform and document a systematic assessment of the condition of the woman and unborn baby every hour, or more frequently if there are concerns The recommendation for hourly systematic assessment is currently attached to interpretation of CTG traces in the current CG190 guideline (see Table 10 following section 1.10.10). Is 1.2.1 now suggesting we should perform hourly systematic assessment for CTG and IA? The recommendation doesn't currently describe how this assessment should take place, who should conduct this assessment and which aspects of maternal and fetal condition should be considered. Is the intention of this recommendation to implement fresh eyes (and fresh ears/buddy review for intermittent auscultation)? While it has been recommended by Saving Babies 2[1] is there evidence to support this? Making this	Thank you for your comment. The committee agreed that all women in labour, however they were being monitored, should be assessed hourly. More details of this assessment are contained in the NICE guideline on intrapartum care for healthy women and babies which has now been cross-referenced from then recommendation (and which is also currently being updated). The use of 'fresh eyes' is now recommended in the section of the guideline on ongoing risk assessment for women on CTG, so it has not been included here. It has not been included for all women being monitored by intermittent auscultation because, as you mention, this may not be possible for women being cared for by a single midwife. The need for escalation is covered throughout the guideline where appropriate.

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				a generic recommendation for both CTG and IA will be difficult to achieve in midwife-led settings or at home birth where a single midwife may be in attendance for much of the labour. [1] SBLCB2 recommendation 4.3: Regular (at least hourly) review of fetal wellbeing to include: CTG (or intermittent auscultation (IA)), reassessment of fetal risk factors, use of a Buddy system to help provide objective review for example 'Fresh Eyes', a clear guideline for escalation if concerns are raised through the use of a structured process. All staff to be trained in the review system and escalation protocol.	
University Hospitals Southampton NHS Foundation Trust	Guideline	005	020 - 027	1.2.4 Take into account the recommendations for fetal monitoring for women who are considered to be at higher risk because of existing medical conditions or obstetric complication (see the NICE guideline on intrapartum care for women with existing medical conditions or obstetric complications and their babies) The wording that women with existing medical conditions or obstetric complications	Thank you for your comment. The recommendation has been clarified to state that this is a higher risk of complications – this could affect either the mother or the fetus, but would be an indication that closer monitoring may be needed compared to women who do not have these medical conditions or obstetric complications. As you state, some medical complications may not necessitate CTG but this is a decision that would need to be made for individual women

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				are at 'higher risk' – but higher risk of what? Not all medical conditions or obstetric complications put the fetus at more risk of becoming compromised in labour. Could lead to over medicalisation through unnecessary use of CTG monitoring. Recommendations for fetal monitoring method are unclear in the linked document, for example there is a section for woman with asthma – it does not state which method (IA or CTG) is considered more appropriate and therefore can lead to unclear direction for clinicians.	based on an assessment of the whole clinical picture and the number, nature and severity of the antenatal and intrapartum risk factors.
University Hospitals Southampton NHS Foundation Trust	Guideline	006	001 - 002	1.2.5 Discuss with the woman whether continuous CTG monitoring has already been advised as part of a personalised care plan. Why is the default continuous CTG monitoring? Could reword to… 'Discuss with the woman which method of fetal monitoring has already been advised as part of a personalised care plan?'	Thank you for your comment. This change has been made.
University Hospitals Southampton	Guideline	006	010 - 012	1.2.7 it is important to take into account the whole clinical picture when agreeing on the method of fetal heart rate monitoring.	Thank you for your comment. 'Agreeing' has been changed to 'advising', as this recommendation is aimed directly at

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NHS Foundation Trust				The use of 'agreeing' implies there could be a disagreement. Would 'deciding' or 'choosing' be a more inclusive term? Is it worth describing in more detail what is meant by 'whole clinical picture'?	healthcare professionals. The committee agreed that 'whole clinical picture' was a well-used and understood phrase that encompassed the risk assessment described in detail in the guideline.
University Hospitals Southampton NHS Foundation Trust	Guideline	007	001 - 002	1.2.9 palpate the woman's pulse simultaneously to differentiate between the maternal and fetal heart rates This recommendation implies the woman's pulse and FHR are performed at each auscultation which is every 5 minutes in 2nd stage of labour. This may practically be difficult to perform but also may be disruptive to the woman to have done so frequently.	Thank you for your comment. The committee agreed that differentiation of the maternal and fetal heart rate was very important in the second stage of labour and so did not change this recommendation.
University Hospitals Southampton NHS Foundation Trust	Guideline	007	003 - 005	1.2.9 if there are concerns about differentiating between the 2 heart rates, seek help and consider changing the method of fetal heart rate monitoring. This implies that if you cannot differentiate using IA you should consider changing to CTG monitoring. CTG machines are not a superior method of detecting FHRs. Therefore, this recommendation may lead to	Thank you for your comment. Further details on alternative methods of monitoring fetal heart rate are included in a later recommendation 1.4.6 and so this has been cross-referenced from this recommendation.

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				the inappropriate use of equipment and potentially even a delay in ascertaining fetal wellbeing. If you cannot differentiate, then performing an urgent USS would be more appropriate.	
University Hospitals Southampton NHS Foundation Trust	Guideline	007	011 - 014	1.2.10 carry out a full review, taking into account the whole clinical picture including antenatal and intrapartum risk factors, new intrapartum risk factors, maternal observations, contraction frequency and the progress of labour. What about contraction length/hypertonus?	Thank you for your comment. This recommendation has been updated to include consideration of hypertonus, as this will trigger consideration of contraction length.
University Hospitals Southampton NHS Foundation Trust	Guideline	008		1.2.18 Encourage and help the woman to be as mobile as possible and to change position as often as she wishes' These recommendations are within CTG section but applies to IA section as well.	Thank you for your comment. This recommendation is included specifically in the CTG section as women with CTG monitoring are more likely to be asked to lie semi-recumbent on a bed, and to think they cannot move around.
University Hospitals Southampton NHS Foundation Trust	Guideline	008	010 - 011	1.2.16 Consider a lower threshold for intervention when there are any antenatal or intrapartum risk factors that could lead to fetal compromise. This is under continuous CTG section – this is a very broad recommendation, particularly	Thank you for your comment. This recommendation highlights that risk factors that could lead to fetal compromise are particularly concerning (for example, having an epidural is an intrapartum risk factor but may not increase the risks of fetal compromise) and so advises healthcare

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				when linked to the generic catch-all recommendation made in 1.3.4. Medico-legal implications and also likely to lead to increase in medicalisation.	professionals to take this into consideration when deciding whether or not to escalate care. Intervention has been changed to 'escalation' to clarify this.
University Hospitals Southampton NHS Foundation Trust	Guideline	008	012 - 016	1.2.17 Ensure one-to-one support is maintained by having a midwife remain with the woman throughout labour. If the midwife needs to change, ensure the woman knows this is happening.	Thank you for your comment, which repeats the recommendation as it is currently in the guideline, so no change has been made.
University Hospitals Southampton NHS Foundation Trust	Guideline	009	026 - 027	1.3.1 Offer continuous CTG monitoring to women when it has been recommended as part of their personalised care plan. Very similar to that of recommendation on pg 6, line 1-2 which is to 'discuss' and this is to 'offer'. Could the points be combined?	Thank you for your comment. Based on feedback from stakeholders, the recommendation on page 6 has been amended to refer to a discussion on which method of fetal monitoring has been advised, so these 2 recommendations are no longer as similar.
University Hospitals Southampton NHS Foundation Trust	Guideline	010	003	1.3.2 previous caesarean birth or full thickness uterine scar Can the committee describe what is meant by 'full thickness' uterine scar – perhaps provide example e.g., myomectomy?	Thank you for your comment. The committee agreed that as not all myomectomies give rise to a full thickness uterine scar, it would be misleading to state this as an example and that obstetricians understand the term 'full thickness uterine scar'.
University Hospitals Southampton	Guideline	010	016 - 019	1.3.3 fetal growth restriction (estimated fetal weight below 3rd centile)	Thank you for your comment. The committee discussed this but agreed that fetuses between the 3rd and 10th centile may be

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NHS Foundation Trust				small for gestational age (estimated fetal weight below 10th centile) with other high-risk features such as abnormal doppler scan results, reduced liquor or reduced growth velocity What about the babies that have reduced growth velocity but EFW is above 10th?	constitutionally small and therefore not need continuous CTG monitoring, unless there are other risks as specified in the recommendation. Similarly, fetuses above the 10th centile but with a dip in growth velocity would not always need continuous CTG monitoring.
University Hospitals Southampton NHS Foundation Trust	Guideline	010	024	1.3.3 Reduced fetal movements in the last 24 hours Potential risk of over-medicalisation. Studies using USS in the intrapartum period have demonstrated that fetal movements are present in labour yet women may sometimes have difficulty in distinguishing them from contractions (Linde et al 2016). Similarly, in a study of women's descriptions of fetal movements before the confirmation of fetal demise, some interpreted contractions as fetal movements (Linde et al 2015). For this reason, suggest asking women how fetal movements have been prior to the onset of contractions.	Thank you for your comment. This has been amended to state 'prior to the onset of contractions'
University Hospitals	Guideline	011	029	1.3.7 fresh vaginal bleeding or blood-stained liquor that develops in labour	Thank you for your comment. The presence of blood-stained liquor has been moved into a

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Southampton NHS Foundation Trust				We do not feel NICE has adequately considered the evidence and ramifications of this amendment in clinical practice - please see HSIB annual report (page 32-35) where we shared evidence or lack of with HSIB to develop a recommendation. Any liquor that is stained with blood should be recognised as blood stained but in the majority of cases this will be a normal finding due to the vascularity of the cervix in labour e.g., following a vaginal examination as recognised by RCOG (2020). It is important to recognise in a small number of cases this may be due to an abnormality if it is uterine in origin such as abruption, praevia or uterine rupture and a holistic review with another clinician is necessary to consider wider causes. The depth of blood staining may have no correlation to the cause in the case of abnormality particularly if the staining is light as could still be abnormal. We chose another clinician rather than an obstetrician as the woman may be in a midwifery led environment and not to promote unnecessary transfers of care for the vast majority of women. This is an important	separate bullet point and it has been clarified that this is present when a vaginal examination has not just been conducted, and is a risk factor when suggestive of antepartum haemorrhage.

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				clinical practice area that HSIB have appropriately highlighted that we need to address but this does not mean it is abnormal for all- there is a real risk of over medicalisation and unintended harm should this be the recommendation for blood-stained liquor and we urge the committee to reconsider. Please refer to https://www.ejog.org/article/S0301-2115(19)30038-7/fulltext Summary: blood-stained liquor not associated with composite adverse neonatal outcome, nor with placental abruption. BAF was associated with higher rates of labor induction, assisted vaginal deliveries, cesarean deliveries, and lower birth weights.	
University Hospitals Southampton NHS Foundation Trust	Guideline	012	012	1.3.7 Updated guidance says 'insertion of regional analgesia (for example, an epidural) Could we ask the committee to clarify as existing recommendation states: Perform continuous cardiotocography for at least 30 minutes during establishment of regional analgesia and after administration of each further bolus of 10 ml or more	Thank you for your comment. The committee agreed that any woman receiving an epidural should also be offered CTG monitoring and therefore the insertion of an epidural was an additional intrapartum risk factor and so should be included in this list. Further guidance on the monitoring of women being offered regional anaesthesia is already contained in the NICE guideline on

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					Intrapartum care, so the committee have not added more detail here.
University Hospitals Southampton NHS Foundation Trust	Guideline	013	018 - 019	1.4.6 a fetal scalp electrode (but be aware this may detect maternal heart rate if there is no fetal heartbeat). This recommendation contradicts itself and may lead to the misuse of equipment, and delay identifying whether a fetus is alive.	Thank you for your comment. Additional information about the need to carry out simultaneous maternal heart rate monitoring has been added to this recommendation, as well as additional advice to escalate concerns in a timely fashion.
University Hospitals Southampton NHS Foundation Trust	Guideline	014	014 - 020	1.4.13 Use of the colour 'white' for 'normal' may be offensive to people from ethnic groups that are not 'white'. Could green not be used as that does fit more with the traffic light system of the other colours used – amber and red?	Thank you for your comment. The colours white, amber and red have been chosen to align with the national charts (similar to MEWS charts) that have been developed by the Avoiding Brain Injury in Childbirth Collaboration work, which is currently being piloted and will be rolled out across the UK.
University Hospitals Southampton NHS Foundation Trust	Guideline	014	014 - 020	1.4.13 What about contraction length of 2 minutes or more should that not be included as an amber?	Thank you for your comment. Hypertonus has been added as an amber feature.
University Hospitals Southampton NHS	Guideline	015	010	1.4.17 Use of the colour 'white' for 'normal' may be offensive to people from ethnic groups that are not 'white'.	Thank you for your comment. The colours white, amber and red have been chosen to align with the national charts (similar to MEWS charts) that have been developed by

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Foundation Trust				Could green not be used as that does fit more with the traffic light system of the other colours used – amber and red?	the Avoiding Brain Injury in Childbirth Collaboration work, which is currently being piloted before being rolled out across the UK, and so the guideline will reflect the new ABC tool.
University Hospitals Southampton NHS Foundation Trust	Guideline	016	004 - 008	1.4.19 Determine variability by looking at the minor oscillations in the fetal heart 5 rate, which usually occur at 3 to 5 cycles a minute. Measure it by estimating the difference in beats per minute between the highest peak and the lowest trough in a 1-minute segment of the trace between contractions. Excluding decelerations and accelerations should be included in the description of determining variability.	Thank you for your comment. Excluding decelerations and accelerations has been added to this recommendation as you suggest.
University Hospitals Southampton NHS Foundation Trust	Guideline	016	009 - 011	1.4.20 Carry out a review of the complete clinical picture with a low threshold for expedited birth if there is an absence of variability, as this is a very concerning feature. Define 'absence of variability' and 'complete clinical picture' for clarity and consistency.	Thank you for your comment. The term 'complete clinical picture' has been replaced with the term 'whole clinical picture' as this is widely used throughout the rest of the guideline and is described in section 1.2 of the guideline. An absence of variability is when no variability can be detected and the committee agreed this was usual use of English.

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University Hospitals Southampton NHS Foundation Trust	Guideline	017	004 - 006	1.4.22 increased variability refers to oscillations around the baseline fetal heart rate of more than 25 beats a minute, and shorter episodes lasting a few minutes may represent worsening fetal condition This contradicts the categorisation that periods of up to 10mins is 'amber' and periods lasting longer 10mins or over is a 'red' feature. Variability – amber if <25bpm for up to 10 minutes – sensitivity of this is weak and we will potentially 'over classify' some CTG's as suspicious/pathological	Thank you for your comment. This recommendation provides further detail of things that should be taken into account when assessing variability and explains that short periods (up to 10 mins) are concerning. This does not therefore contradict the earlier recommendation. There may be an error in your comment as the variability is amber if > (not <) 25 bpm.
University Hospitals Southampton NHS Foundation Trust	Guideline	017	004 - 012	1.4.23 Obtain an urgent review by a senior obstetrician or senior midwife and consider expediting birth if: • there is an isolated reduction in variability of more than 30 minutes when combined with antenatal or intrapartum risk factors, as this is associated with an increased risk of adverse neonatal outcomes, or.. This recommendation is ambiguous as the majority of woman having CTG monitoring	Thank you for your comment. The focus of the guideline is on reviewing the whole clinical picture in conjunction with the CTG and although you are correct that women on CTG will, by definition, have antenatal or intrapartum risk factors, the nature and number of these risk factors will need to be taken into consideration. More than 30 minutes is set as the lower limit of concern for reduced variability to fewer than 5 beats per minute, and so it would not be necessary to

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				have an antenatal or/and intrapartum risk factor. Reduced variability or 30-50 mins is considered an amber feature and if all other features are 'white' then this would classify the CTG as suspicious which prompts informing a senior obstetrician or senior midwife as opposed to this recommendation which is to obtain an urgent review. Concerns that this will lead to both defensive medicine and medico-legal challenge. Please be more specific about definition of 'reduction in variability'. This could be interpreted as a reduction from 20bpm to 10bpm for example when the committee probably means reduced variability i.e., <5bpm.	wait until 50 minutes if there are additional risk factors. The reduced variability is described as 'fewer than 5 bpm', not 'by 5 bpm' so this is clear that it does not mean a reduction from 20 bpm.
University Hospitals Southampton NHS Foundation Trust	Guideline	017	013 - 015	1.4.23 there is a reduction in variability combined with other CTG changes, particularly a rise in the baseline fetal heart rate, as this is a strong 15 indicator for fetal compromise. As above, it would be better to state if 'there is reduced variability' rather than a reduction.	Thank you for your comment. This bullet point in the recommendation has been amended to clarify that the reduction is to fewer than 5 bpm combined with other CTG changes.

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University Hospitals Southampton NHS Foundation Trust	Guideline	017	027 - 029	1.4.25 The addition of the terms 'persistent' and 'repetitive' on describing decelerations may cause confusion to clinicians. The have already made several changes to the terminology on deceleration descriptions over recent years, e.g., atypical/typical.	Thank you for your comment. To simplify the terminology, the use of repetitive has been retained, but the use of persistent has been removed and instead the duration of the decelerations is described.
University Hospitals Southampton NHS Foundation Trust	Guideline	018	010	1.4.25 loss of previously present shouldering. What if shouldering was never present?	Thank you for your comment. The absence of shouldering is not considered to be an issue, it is only when shouldering was present then disappears that raises concerns, so the recommendation has not been amended.
University Hospitals Southampton NHS Foundation Trust	Guideline	018	019 - 030	1.4.28 without antenatal or developing intrapartum risk factors for fetal compromise Very broad statement as surely the use of CTG monitoring is not recommended to women without antenatal or developing intrapartum risk factors? The use of with and without antenatal risk factors for intrapartum care makes this section incredibly confusing especially given that the vast majority of continuous monitoring will be due to these factors rather	Thank you for your comment. The whole section of the guideline on categorisation of decelerations has been revised to make the descriptions clearer and to remove the combination with and without antenatal and intrapartum risk factors. The use of the term 'persistent' has been removed and the duration of the decelerations has been included in the recommendation instead.

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				than maternal choice. This section is too confusing and over complicated. The interchangebiltiy of timings 'less than 30 minutes' and persistent is unhelpful- why do we need further changes in terminology over complicating the language around CTG interpretation when this has been recognised as problematic previously e.g. typical/ atypical. It is not changing the definition as still follows the >50%/<50%, >30 mins/< 30 mins.	
University Hospitals Southampton NHS Foundation Trust	Guideline	019	001 - 007	1.4.28 with antenatal or developing intrapartum risk factors for fetal compromise That implies the majority of women having CTG monitoring as those without risk factors for fetal compromise would be recommended IA as the method of fetal monitoring.	Thank you for your comment. The whole section of the guideline on categorisation of decelerations has been revised to make the descriptions clearer and to remove the combination with and without antenatal and intrapartum risk factors.
University Hospitals Southampton NHS Foundation Trust	Guideline	019	014 - 018	1.4.30 Start an urgent obstetric review if there are persistent decelerations in the presence of either a rise in the baseline heart rate or reducing variability. Take into account intrapartum risk factors, such as suspected sepsis, the presence of meconium, slow progress of labour or the use of oxytocin, to	Thank you for your comment. The word 'start' has been changed to 'carry out' and 'reducing' has been changed to 'reduced'.

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				determine whether there is a need for urgent birth. Further clarity needed to ascertain what is meant by 'reducing variability'. What is meant by 'start' – implies it may not need to be finished?	
University Hospitals Southampton NHS Foundation Trust	Guideline	019	027 - 028	1.4.32 Be aware that if variable decelerations persist and other CTG changes are present, there is a risk of fetal compromise and acidosis. 'Be aware' – appreciate this is 'NICE talk' but also feels defensive. Can we avoid a 'be aware' recommendation by rewording?	Thank you for your comment. This recommendation has been reworded to state what action is required if variable decelerations persist and other CTG changes are present.
University Hospitals Southampton NHS Foundation Trust	Guideline	021	011 - 013	1.4.40 Ensure the fetal heart rate is differentiated from the maternal heart rate every 5 minutes or less. Consider monitoring the baby with a fetal scalp electrode if there is concern about confusing the heart rates. Unfeasible to perform MHR every 5 mins and not consistent with IPC guideline recommendation to palpate MHR every 15 mins in 2nd stage. Also likely to be disruptive to the woman to have done so frequently.	Thank you for your comment. The recommendations in the intrapartum care guideline relate to women who are being monitored with intermittent auscultation, and so by definition are at lower risk. The committee, which includes a number of experienced midwives, agreed that it was necessary and feasible to carry out checks of the maternal and fetal heart rate every 5 minutes in the second stage of labour for women being monitored with CTG. More

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				Pulse oximetry may elevate the practical element of doing MHR so frequently but that too may be very disruptive to the woman and her birthing efforts. Unsure of the clinical significance underpinning this reduction from 15 to 5 minutes given the adverse impacts of this recommendation. The cost implication of ensuring there were enough available pulse oximeters would also need to be factored in. This may trigger a higher use of FSEs which again has a cost implication and carries a risk of infection, and needle stick injury for clinicians.	details on differentiating between the fetal heart rate and the maternal rate are included in an earlier recommendation which has now been cross-referenced from this recommendation, and this includes different methods to monitor the maternal heart rate continuously. As with all methods of monitoring, women have the choice to decline the use of a pulse oximeter if they wish, and the recommendations on differentiating between the fetal heart rate and the maternal rate, specify that fetal scalp electrodes can be offered when other methods to differentiate have failed. The committee noted that obstetric units would usually have access to enough pulse oximeters for women being monitored using CTG and therefore this was unlikely to have resources implications or lead to increased use of fetal sclap electrodes.
University Hospitals Southampton NHS Foundation Trust	Guideline	021	014 - 015	1.4.41 Monitor and record the maternal heart rate on the CTG trace if the facility 15 is available on the machine being used. This also suggests a strong preference for maternal pulse oximetry as most machines	Thank you for your comment. The recommendation that begins 'Monitor…' has been combined into the recommendations about the differentiation of maternal and fetal heart rates which are now cross-referenced from this section of the guideline, and which

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				have this facility but why can this not be recorded on a MEOWs and reviewed accordingly or documented on the CTG or reviewed without the need for 'monitoring' it on the CTG. It will be left on as the inconvenience of taking on and off and the alarm. Unnecessary human factors distraction so frequently. Suggest if there are concerns with maternal and fetal heart rate similarities to ensure simultaneous recording on CTG?	also provide more guidance on the use of pulse oximetry or CTG-recorded maternal heart rates.
University Hospitals Southampton NHS Foundation Trust	Guideline	021	021 - 023	1.4.44 If CTG concerns arise in the active second stage of labour, consider stopping pushing and pausing or stopping any oxytocin infusion to allow the baby to recover, unless birth is imminent 'if CTG concerns arise' does that mean if they have 1 amber we would encourage the woman to stop pushing? Also for women without an epidural the concern would be encouraging her not to push despite this being involuntary- should we then be recommending terbutaline?	Thank you for your comment. The committee left 'CTG concerns' open as it would require interpretation in light of the whole clinical picture, for example how close the woman was to giving birth. The committee have changed the recommendation to 'discouraging pushing' rather than stopping pushing so did not feel it was necessary to differentiate between women with and without an epidural, nor would they recommend the insertion of an epidural at this stage in labour just to facilitate the cessation of pushing. The use of tocolytics is covered in the later recommendations on conservative measures so has not been added here.

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University Hospitals Southampton NHS Foundation Trust	Guideline	022	026 - 029	1.5.5 if a CTG trace is classed as suspicious because of a reduction in variability and there are additional intrapartum risk factors such as slow progress, sepsis or meconium, then a lower threshold for action should be considered A CTG with reduced variability for 30-50 minutes would be suspicious and in the presence of slow progress - why would this lower threshold for action? Furthermore is there strong enough evidence that reduced variability less than 50 minutes with an otherwise stable baseline and no decelerations even in the presence of meconium or sepsis be enough to lower the threshold for action? I absolutely recognise the impact of meconium and sepsis on evolving hypoxia but as a feature in isolation it is then changing your management- the whole guideline states about not viewing the CTG in isolation however recommendations such as this only exemplify that. Given the medico-legal impact of this guideline recommendations must be carefully considered in their interpretation. Suggest	Thank you for your comment. This recommendation has been amended to remove the suggestion that the reason for a suspicious trace is due to a reduction in variability, as action should be taken for any suspicious CTG regardless of why it is suspicious. The action has also been amended to suggest that senior review is obtained, and not just a lower threshold for action.

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				removing as it already says taking into account antenatal and intrapartum factors and that hypoxia may develop quicker in these cases.	
University Hospitals Southampton NHS Foundation Trust	Guideline	023	026 - 029	1.5.5 if a CTG trace is classed as suspicious because of a reduction in variability and there are additional intrapartum risk factors such as slow progress, sepsis or meconium, then a lower threshold for action should be considered Lower threshold for action – what 'action' is being implied?	Thank you for your comment. This recommendation has been amended to clarify that the action is to obtain senior review.
University Hospitals Southampton NHS Foundation Trust	Guideline	025	003 - 004	1.6.1 If the CTG trace is pathological without other antenatal or intrapartum risk factors for fetal compromise Those withou A as the method of fetal monitoring. This recommendation is unclear.t risk factors for fetal compromise would be recommended I	Thank you for your comment. This has now been amended to state that fetal scalp stimulation should be considered if the CTG is suspicious and there are additional risk factors.
University Hospitals Southampton NHS	Guideline	025	012	1.7.1 Do not offer fetal blood sampling in labour to assess fetal wellbeing. The evidence used to remove FBS from guidance is limited. If FBS is removed, the	Thank you for your comment. The committee has not reinstated the recommendations on fetal blood sampling as they did not think there was evidence to demonstrate benefits, and they have amended their

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Foundation Trust				skill and confidence of performing may be lost. If the research due to be complete end of 2024 shows that FBS is of benefit it will be hard to then reimplement. This recommendation may impact on the ability of the research to be completed. Recommend inclusion of FBS in the guideline with caveat to consider appropriate case selection and that performing the procedure may delay birth. *The quality of the evidence was rated low to very low with 19 concerns around imprecision and risk of bias*.'….only 2 studies of 123 and 87 patients I think a blanket 'no longer recommend' is a bit strong based on the low quality of the evidence. Perhaps something along the line of: There is no strong evidence either way to support FBS over conservative approaches, however it may be considered in such scenarios as a progressing multiparous women, whom you are just trying to 'buy more time'.	recommendation to state this. The committee were aware that there was ongoing research into the benefits of fetal blood sampling compared to fetal scalp stimulation so have included this in their rationale for this recommendation. The committee recognise there may be training implications with changes to practice, but agreed this should not be a barrier to evidence-based practice.

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				Another point is training implications – this will need to be revisited by the RCOG and may need to be removed from the training matrix.	
White Ribbon Alliance UK	Guideline	General	General	WRA UK advocate for the inclusion of 'woman and birthing person' throughout for the inclusion of non-binary and transgender birthing people	Thank you for your comment. The NICE editorial team are currently reviewing the use of more inclusive language, and all guidelines will use this terminology when agreed. Currently, the information at the beginning of the guideline explains that the guideline includes people who do not identify as women but are pregnant or have given birth.
White Ribbon Alliance UK	Guideline	General	General	There is evidence that understaffing contributes greatly to whether and how quickly a health care provider (HCP) can access second opinions, assistance in carrying out the recommended actions, and urgent reviews by senior or obstetric staff. Sound knowledge of appropriate methods of fetal monitoring in labour and CTG interpretation are negatively impacted and undermined when there are organisational failings outside of a HCP's control that means they are often unsupported and overworked. We would encourage an overall recommendation for HCPs facilitating fetal	Thank you for your comment. The committee added a new recommendation (1.5.10) about expediting birth to include the advice that the decision to seek urgent help and expedite birth should be clearly documented.

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				monitoring in labour to document and escalate their concerns if requests for assistance or review have been ignored, hampered or delayed due to understaffing or an inappropriate skill mix amongst staff.	
White Ribbon Alliance UK	Guideline	004	004	Rec. 1.1 - We welcome this additive language around information and shared decision-making	Thank you for your comment and support of this recommendation.
White Ribbon Alliance UK	Guideline	004	014	Rec. 1.2.3 - We welcome the inclusion of this reminder	Thank you for your comment and support of this recommendation.
White Ribbon Alliance UK	Guideline	009	018	Rec. 1.2.21 - This recommendation could be improved by also recommending that staff receive mandatory training on how to appropriately use, store and maintain telemetry equipment	Thank you for your comment. NICE does not usually make specific recommendations around training as NHS providers are responsible for ensuring staff are suitably trained.
White Ribbon Alliance UK	Guideline	009	026	Rec. 1.3.1 - We are concerned that there has been no mention of best practice if a woman declines the recommended route of intrapartum fetal monitoring, either antenatally or in labour, and how her choice will be documented and supported.	Thank you for your comment. As described at the beginning of the guideline, the choice of method of fetal monitoring is the woman's decision and this decision should be supported. As with any other procedure or intervention, the discussion and decision should be recorded in the woman's notes (this is also already advised in the guideline), and ongoing care should then be provided in accordance with her wishes. CTG would be

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					no different to any other type of monitoring or intervention in this respect.
White Ribbon Alliance UK	Guideline	013	018	Rec. 1.4.6 - Fetal scalp electrode (FSE) monitoring should be adequately explained to the labouring person (i.e. that it includes piercing the fetal scalp with a small metal screw to access the fetal bloodstream) so that an informed decision can be made - WRA recommend that the use of the word screw be explicitly used in conjunction with electrode	Thank you for your comment. Details about the placement of the fetal scalp electrode have been added to the recommendation.
White Ribbon Alliance UK	Guideline	014	007	Rec. 1.4.11 - We would encourage this recommendation to include discussing concerns for fetal well-being with the woman before or whilst requesting obstetric review, so that she is not alarmed or surprised if expedited birth is recommended	Thank you for your comment. A new over-arching recommendation has been added to the beginning of the guideline about keeping women informed if urgent review is sought, as this is mentioned in a number of places in the guideline.
White Ribbon Alliance UK	Guideline	014	012	Rec. 1.4.12 - We are concerned that there is no mention of assessing information from the labouring person themselves on the frequency, length and strength of their contractions and documenting this as part of the assessment.	Thank you for your comment. A reminder to ask women about their contractions has been added to the initial section of the guideline on assessment during labour.
White Ribbon Alliance UK	Guideline	014	023	Rec. 1.4.15 - We would encourage the inclusion of an assessment of the woman's pain relief and emotional support needs in the	Thank you for your comment. Advice to keep the woman informed and ensure that she has

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				event of uterine tachysystole, to ensure her psychological well-being	adequate pain relief has been added to this recommendation.
White Ribbon Alliance UK	Guideline	019	014	Rec. 1.4.30 - We would encourage the inclusion of language around how to inform and support the woman and her birth companion(s) in the event of an urgent obstetric review	Thank you for your comment. A new over-arching recommendation has been added to the beginning of the guideline about keeping women informed if urgent review is sought, as this is mentioned in a number of places in the guideline.
White Ribbon Alliance UK	Guideline	021	022	Rec. 1.4.44 - We are concerned that the language used ('consider stopping pushing') is disempowering and may cause distress to the birthing person. We would encourage language that reflects an understanding of the physiological urge to push that occurs in many births and acknowledges the harm or fear that may be caused by expecting a woman to stop pushing if she is unable to. Consider including language around encouraging the woman to adopt positions and breath patterns that may help reduce the urge to push if it is clinically indicated.	Thank you for your comment. The committee have changed the recommendation to 'discouraging pushing' rather than stopping pushing.
White Ribbon Alliance UK	Guideline	025	012	Rec. 1.7.1 - We welcome the removal of this recommendation, as it has not been evidenced to improve outcomes	Thank you for your comment and your support of the removal of the recommendations on fetal blood sampling. The committee has now amended this recommendation to highlight the lack of

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					evidence to support fetal blood sampling. The committee were aware that there was ongoing research into the benefits of fetal blood sampling compared to fetal scalp stimulation so have included this in their rationale for this recommendation.