

An Evolutionary Process: CTG Interpretation

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Practice Development

Overview

- Setting the scene
- CTG interpretation
- Change
- Umbrella theory of change
- Implementation
- Challenges
- Response
- The future



The birth of CTG monitoring

- CTG monitoring became popular in the 1960's & 1970's
- Main aim to identify the fetus most at risk of hypoxic injury₂
- To offer timely and appropriate intervention₂
- Early studies found CEFM shown to decrease the incidence of neonatal seizures compared to IA when used in high risk women ₁
- No effect on overall perinatal mortality and cerebral palsy₁

- Later studies demonstrated poorer obstetric outcomes when CEFM expanded to low risk women:
 - →↑ C/S
 - →↑ Instrumental ₁
- Delivery expedited unnecessarily according to CTG interpretation-based on results from umbilical pH & modified apgar scores₁
- However, the quality of studies are questionable (outdated, underpowered, predominantly low quality evidence)₁

CTG Interpretation

- Serious incidents linked to CTG interpretation
- Why?
 - →Is it the tool?
 - →Is it lack of training?
 - →Failure to understand basic physiology in relation to FH response during labour?
 - →Defensive practice?
 - →Lack of support/blame culture?
 - →Subjective-pattern recognition?
 - →Technology dependant?

Time to change...a bold move

- NICE, gold standard but confusing
- Labour ward leads stepped outside the box after critically appraising NICE & FIGO
- Discussion with London labour ward leads
- Rejected new NICE guidance on FH monitoring and opted for FIGO

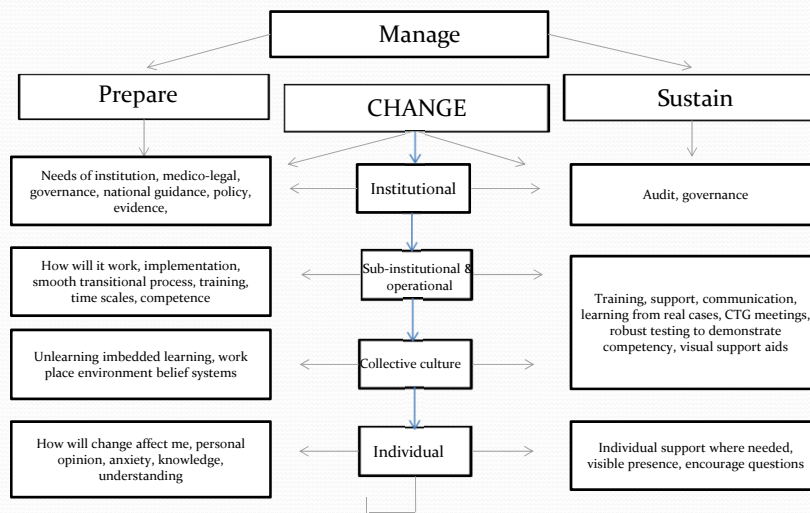


Implementing change

Umbrella-a theoretical concept



A synergistic approach-prepare, manage, sustain



Implementation & preparation

- Developed new guidelines based on FIGO consensus paper
- Training analysis
- Developed new training package and robust test paper based on previous SI cases
- Positive communication to create excitement and alleviate anxiety before launch
- Offered ad hoc training sessions prior to launch

The challenges of managing change

Developing guideline

- Comments for guideline change did not meet deadline

Training & Testing

- As only a small amount of previous CTG training in unit a lot of time taken to develop new package
- →More focus on physiology
- Developing new standardised test paper, same paper-different mark scheme
- →First cohort to attempt paper did not go well
- →Back to the drawing board!
- →One test paper developed with two mark schemes and preliminary test paper prior to training
- →Data kept as evidence of testing process and competence
- →Pathway created for those who require further support

The challenges of managing change continued...

Communication

- New notice board on labour ward
- Visual aid tools developed to help implementation of reversible causes
- →A few went missing!
- Baseline
- Ad hoc sessions on labour ward facilitated by consultants, consultant midwife and PDT
- →Difficult to offer to all staff two weeks before launch
- →Staff response was mixed

Midwife & Dr responses

- “The suspicious box is too broad”
- “Quite like it”
- “No space to write our impression and no upper limit for fetal tachycardia to classify as pathological”
- “I like that we have stopped using atypical & typical”
- “I like the maternal comment box”
- “Clearer and easier to understand”



Sustaining change-the future

- Continue to identify training needs
- Ad-hoc workshops
- External expert speakers
- Audit-standard of care against guideline
- Governance-review adverse events from SI's relating to CTG interpretation
- Continual support and open door policy



References

Alfirevic, Z., Devane, D., ML Gyte, G. (2013) Continuous cardiotocography (CTG) as a form of electronic fetal monitoring (EFM) for fetal assessment during labour. Cochrane Database of Systematic Reviews. [<http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD006066.pub2/full>]

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