

Pulse Arts CIC at the Whittington

An evidence-based report on the
impact of musicians on the
antenatal, postnatal and children's
wards

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Introduction

“Our vision for maternity services...is for them to become safer, more personalised, kinder, professional and more family friendly.”

Better Births National Maternity Review (2016)

In January 2019, Pulse Arts CIC musicians began working at the Whittington. Musician Mel Draisey and I met through my teaching and Whittington Maternity Voices (MVP), and she told me about her work with Pulse Arts at Broomfield Hospital, Evelina London and Great Ormond Street Hospital. As Mel became more involved in the MVP we began to wonder what a difference musicians could make on maternity wards. I was delighted that the Whittington were very keen to find out.

Pulse Arts secured a grant from Children in Need and partnership funding from the Whittington's Patient Experience department to run 30 sessions on antenatal, postnatal and children's wards during 2019.

On Monday 20th May 2019 I shadowed Pulse Arts musicians in various wards at Whittington Health to watch the impact they had on people, both patients and carers. The effect was profound and it was a moving experience to see how deeply the musicians connected with people on the wards, and shifted their experience in such a powerful way.

I spent the morning on Eddington postnatal ward, providing breastfeeding support, noticing the mood of the space, and talking to the healthcare professionals. I felt that this would be more effective than collecting 'before and after' feedback from parents. I wanted the parents to experience the music as they would every Monday, as something unexpected. Parents complain that they experience numerous interruptions on the postnatal ward and it was not appropriate to add to this, so I only spoke to them once after the musicians had visited. Feedback is collected from every mother on the postnatal ward, and is significantly more positive on Monday afternoons.

Throughout the afternoon the musicians were almost like counsellors; they continually demonstrated Rogers' core conditions of empathy, congruence and unconditional positive regard in their interactions with the parents, babies, children and health care professionals.

The musicians play with real integrity. They consider key signatures, time signatures, lyrics, tone, length of bowing, and also sing songs from many languages and cultures. They constantly evaluate and reflect on their work which was powerful and reassuring to hear.

On Monday 14th October I returned, observing the musicians in the same wards, and also in SCBU and NICU. These observations have been added to the report.

The postnatal experience

The Better Births National Maternity Review (2016) discusses the historic underfunding for postnatal care and perinatal mental health care. Our own Maternity Voices Partnership group hears frequently from parents who found the postnatal experience at the Whittington particularly challenging. Both at the Whittington and nationally, new parents often feel left alone, inadequately supported, and stressed. Midwives report similar feelings and challenges.

Pulse Arts on the postnatal ward

I joined the Midwives and Family Support Workers in their morning 'huddle' to hear about their experiences of Pulse Arts:

The music is lovely, the timing is just right. The place is so noisy, as soon as the music starts everyone is calm.

If you're on the edge, there's something it does to the body.

It's that aura. Such lovely people, such warm hearts.

The babies stop crying.

It makes it easier to do your job.

Everyone benefits and enjoys it.

Very relaxing. The babies stop crying.

The singing is beautiful.

We have some cards from the patients saying how much they love it.

We want them more.

It's lovely. It calms the whole ward down.

Music is love. Love is music.

It's heaven.

I saw the musician this morning on the ward, he's so lovely. He played outside a room in which a mum was trying to use a breast pump, and feeling really anxious. It helped so much! (Breastfeeding Network Peer Supporter)

When the musicians arrived all the staff who saw them, from the lunch staff to the midwives, greeted them with smiles of delight. It is clear that the musicians are known, respected and welcomed.

The musicians began to play at the top of the ward. A midwife gently, with permission, opened some curtains. Midwives have been trying to explore ways to support families to open their curtains and feel more part of things for years without success; this worked. The first mother we saw visibly relaxed and said 'can I take your picture?'

When the musicians could see the women and their families, they made gentle eye contact, smiled and said hello, without any sense of being intrusive. David asked 'is it ok if we do a bit more?'

That was really nice, thank you. (mother)

On a postnatal ward, women feel they are in a place of constant instructions and interruptions. This is listening without obligation; someone comes in, smiles and says hello with no other motive.

The volume was so quiet that it would have been possible for someone to put their own headphones in and listen to something different if they had so wished.

I was interested that so many parents and health professionals commented that the babies stopped crying. This was not always the case, but the music changes the response to the crying, and makes the crying more manageable – this in turn enables parents to calm their babies as the tension has gone.

Really good. It made me feel uplifted. Gives a nice atmosphere. (mother)

I enjoyed it. It was soothing. The baby enjoyed it. (father)

It makes a change from hearing normal background noise. We need them in the nights! (mother)

The closest I've come to the outside world. (mother)

A mother peeked out from behind her curtain and drew it back. Bays are small and can feel very cramped, but parents seem to want to keep the curtains closed anyway; here, the culture started to shift as there was a reason to let more light and air into each bay.

It's lovely. I took him there to listen and he calmed straight down. (Mother)

The musicians interacted with the parents and the babies. They looked at the babies in adoration, as if each baby was the centre of the world. Their musical offer seemed to validate the babies, to hold and bring a gift to them. A couple were coming down the corridor, pushing their baby in a cot. They stopped and the musicians performed a song which felt as if it was just for them. The parents visibly relaxed and softened.

No song was too long, and the musicians never overstayed their welcome.

A mother came out of her private room and stood in the doorway. 'Will they come down here?' she asked me. They did, and she brought her baby to the door.

What a privilege. It was so nice.

I had spoken to this mother in the morning as a breastfeeding counsellor and it was remarkable to see how the music lifted the anxiety from her shoulders.

A crying baby was brought down the corridor in the cot. The musicians stayed totally calm and offered her a song. The baby stopped crying and the mother took her into her arms and smiled widely. *Thank you.*

It was really calming for the babies. It seemed to calm a lot of them down. Nice background noise. We had had classical music on the radio earlier, which we never listen to normally. (father)

As we left, we met a mother who was having to shuttle between her room and visiting her baby on NICU. She was very distressed when I had spoken with her earlier. The musicians offered her her own song. She filmed them, stood and rocked whilst she listened. *Oh wow that was so beautiful. Thank you so much. You cheered up my whole week.* She applauded and laughed.

October

That was literally the best thing ever. It feels like Groundhog Day in here! (mother)

Pulse Arts on Murray Ward (antenatal and induction of labour)

The midwives said:

It has a positive effect.

They feel good.

I feel it makes me calmed.

When they come, the babies stop crying.

It depends what is going on at the time. This was the only ambivalent comment I received.

This is a challenging space for the musicians to go into. Women and their partners may be in a state of high anxiety and feel they are in limbo. Emotions are hard to gauge and curtains are more likely to stay closed so it is harder for the musicians to judge the mood and adjust their playing. However, I felt that they managed beautifully. Once again, the volume was so low that it could not be an imposition.

It's making me feel relaxed.

It was really nice, really calming.

The musicians 'hold the space' for everyone. They showed an acute awareness of body language and responded to it, moving on or staying still. In conversation it was clear that David and Joe are very conscious of the possible physical vulnerability of the women, particularly on this ward, and they turn away or move on as appropriate and leave Mel to be the warm face.

It's so good! Do they have to leave us? I think it helps me to be calmer with the patients. It completely transforms the energy of the ward. (Maternity Care Assistant)

We want more! (Midwife)

October

A woman was sitting on a birth ball breathing through her contractions. The musicians noted the intensity and frequency of the contractions and chose music with a tone and even tempo to complement what was happening for the woman – 'Diamonds on the Soles of her Shoes'. They did not linger too long, just enough time to leave this gift for a woman going through a real challenge.

Pulse Arts on Ifor Ward (children)

If the musicians played in neonatal, they could offer some continuity to parents and their babies/ children between these two wards.

Reception Staff:

Ten out of ten.

They are very good with the children, they interact. We love these ones.

Very calming for staff and patients. Nice to have it in the background.

Amazing. We hope we never lose them!

I would never listen to that music normally but it is lovely.

I observed several non-invasive but highly effective interventions by the musicians on this ward.

Intervention 1:

In the main area, a little girl was crying and refusing to take the medicine which a nurse and her parents were trying to persuade her to take. The musicians noticed this and came to the corner of the space. They knelt down and began to play gently. Shortly afterwards, the little girl took her medicine and the musicians shifted the music to a jauntier tune. The parents and nurse clapped when they finished and one musician said, "I think you deserve a clap." The exchange was light and relaxed. Once again, we saw and felt a huge shift in mood.

It is so peaceful. It is good for the parents as well. (mother)

The musicians went into 'Rose's Day Care' where two healthcare professionals (HCPs) were working on computers; they all recognised each other. A musician gave one of them an instrument and she played and danced along. This was a very brief interaction but the HCPs really loved it:

I enjoyed that.

I like it. I look forward to them coming.

All stress diminishes. It brings a positive atmosphere.

Intervention 2:

The musicians passed a door which was slightly open and began to play quietly outside. The mother came to the door, opened it to listen and picked up her baby; there was a very clear moment of bonding between the mother-baby dyad which was inspired by the music that shifted the atmosphere.

The musicians are extraordinarily responsive and sensitive to the people around them. Not only do they show great awareness of how long to play for before they move on, they consider the appropriateness of lyrics, tempo and style.

Intervention 3 – simultaneously with intervention 2:

One musician heard a child saying no in the main room so he quietly moved to the corner of that space to provide a distraction whilst the HCP was trying to put a BP cuff on him. This left two musicians that

the mother and baby in the room could watch and enjoy, whilst he attended to another patient as well. Gradually the other musicians joined him when it felt appropriate. One musician went up to the child and gave him a silver bell which he played. The parents had been trying to distract him with a mobile phone without success. Once the cuff was on, the music shifted to a bouncy interactive song that distracted and calmed the child. Mum said thank you, the musicians played 'shake it up baby' and the HCP commented on how much the musicians had helped. A necessary treatment had been completed because of the music.

October

As we made our way to the lifts, we met an HP from Ifor who called out 'come to outpatients! Come to outpatients!' The musicians are clearly valued and popular, and this enthusiasm has built since my first visit.

The musicians shared with me the story of a teenager on Ifor who had been self-harming. The musicians spent about 45 minutes with her and her parents said it was the first time she had smiled in hospital; the session with Pulse Arts transformed her mood and her experience.

In Rose's Day Care a boy was sitting on a bed staring at his laptop. As the musicians played to a baby and a toddler, he became increasingly engaged, took the instrument he was offered and began to join in, smiling and even requesting a song.

It's great. They interact well and it makes it calm.' (HP)

It should be noted that the musicians observe health and safety guidelines and clean the instruments thoroughly after each use.

In the Play Room, a boy and his mother were invited to play the drum together; both reacted with huge smiles. They played 'play and stop' and ended with a round of applause when the boy bowed. The musicians introduced themselves and gently chatted in a way that was kind and sensitive and in no way intrusive. This gives the parents a break from worry about their children, and from having to keep them occupied.

That's really lovely. It's brilliant. It's very boring here and it changes the day. It makes the experience fun. Very memorable. (mother)

When the musicians needed to move on they dealt with this sensitively by singing the song 'can we put the things back in the box' which the boy happily did.

Pulse Arts on Paediatric Outpatients (October)

In this space there is a lot of movement with people being called briefly then returning, and a wide age range of children. The space has a video game corner, and fish tank, but is still very quiet and the musicians broke the tension.

I like the violin. (girl)

On the way out they met a mother, grandmother (?) and baby in a pram. They sang to the baby who was mesmerised, as was her carer. The mother began to cry and the musicians reflected on this,

thinking about how if they show they are comfortable with tears, they inspire and create a safe space for distressed parents to release their emotions.

Pulse Arts return to the Postnatal Ward

The musicians returned to the postnatal ward. A baby was crying loudly and persistently and the musicians began to play quietly outside the curtain; the baby started to calm and then went quiet. I later spoke to the mother who said:

It's wonderful. It made her fall asleep. It's nice. I would like them at night time too.'

A father who had heard the musicians earlier came out of his room with his baby cradled in his arms, clearly requesting more music. He stood and rocked and gazed at his baby and clearly was building his bond with them as the musicians played them a song. It was deeply profound and moving to watch as the father visibly relaxed and connected with his baby, afterwards thanking the musicians and saying:

Wonderful. It's a great thing what you do. Brilliant. He loved it.

The musicians introduced a gentle drum like a heartbeat.

An HCP walked past, dancing; the mood for everyone in the ward lifted.

I sat behind a curtain in an empty bay to listen. The music flowed over me. There is so much tension and vulnerability in new parents; calm parents mean calm babies. It is interesting that it did not seem necessary to see the musicians and indeed the sensation of hearing them from behind the curtain was even more magical and ethereal. It feels like a gift in a space where there are a lot of demands being placed on the parents and the health professionals. It feels like being covered over with a warm blanket, by generous hands.

Pulse Arts on NICU (October)

The room is silent, except for intermittent beeps. The atmosphere is quite oppressive and the musicians break the tension with incredibly quiet and gentle music. A mother in there with her 3-month-old baby took them up to cuddle and rock. She chatted to the musicians and visibly relaxed. The musicians told me that sometimes a number of the staff come in to listen, taking a quiet moment away from their work. The staff clearly benefit immensely from the music.

An HP asked the musicians to come to the ITU, which was their first visit. An HP reported a strong response in the babies: *It calms them down. I like it too.*

A member of staff came in and sat down for a couple of minutes. *That's really good.*

The musicians draw attention away from the silence and the machines, supporting the staff with the human touch that is so essential in these high-pressure areas. The music helps people to breathe more deeply, and so relax and release tension.

Pulse Arts on SCBU (October)

This is a large, quiet, tense space, with strip lights and gloomy lighting. The staff greeted the musicians with real enthusiasm; the music calms them and brings the space to life in a way that does not disrupt the needs of the babies or parents. The staff told me:

It is very calming.

It is very soothing.

Parents say it is beautiful.

The Role of Oxytocin – labour, breastfeeding and bonding

Oxytocin is a crucial hormone for:

- effective contractions (for women being induced on Murray Ward)
- breastfeeding initiation and continuation (on Eddington)
- creating a mood of calm and connection and lowering cortisol levels (Murray, Eddington and Ifor)

“Reducing early levels of cortisol and raising early levels of oxytocin have a long term impact. Oxytocin supports breastfeeding, and early, positive initiation of breastfeeding has long term health benefits for mother and baby.... When opioids and oxytocin are in dominance in the brain, the world feels like a warm, inviting place.”

Sunderland (2007: p.86)

Sunderland’s comments make clear that the musician’s presence can help ease the newborn into the world, supporting both parents and baby in their oxytocin levels. A calming postnatal environment may have a long term effect on the whole family. From feedback it is clear that parents much prefer Eddington Ward on Monday afternoons, as do their carers. If breastfeeding and bonding can get off to a positive start, parents are less likely to have issues in the early days and weeks, and may be less likely to return to the hospital for further care. The impact could be wide-ranging.

Oxytocin is the hormone of ‘calm, love and connection’ that ‘drives’ contractions; as more and more oxytocin is produced during labour, more oxytocin receptors are produced in the uterus, so driving levels still higher. As oxytocin levels rise, so endorphins rise as well, providing pain relief. These hormones can be compromised by the stresses and interventions of induction of labour, or any other medical issues that women may be experiencing on Murray Ward. Music can support the oxytocin levels to rise and heart rates to lower (Kashino et al 2017); if the mother is having skin to skin this will also support her baby’s heart rate.

Furthermore, in breastfeeding and expressing it is oxytocin that makes the milk flow along and fill the ducts. Oxytocin creates the reflex to feed and is “conditioned to the mother’s sensations and feelings” (WHO 2009). If the mother is in severe pain or is upset, the reflex may be inhibited and the milk may suddenly not flow well. Support and comfort will reverse this; music offers that support, enabling mothers to relax and so initiate breastfeeding. It will also encourage mothers to hold and cuddle their babies and do skin to skin, which is proven to support babies in numerous ways such as managing their heart rate. It is known to affect mothering behaviour, creating calm and reducing stress, and promoting

bonding (ibid). If mothers, their partners, and their carers are feeling more relaxed, this will have a domino effect on everyone, including the baby.

As oxytocin aids bonding, the musicians could also support parents and babies to bond, breastfeed and express on the NICU and SCBU.

Oxytocin also causes the contractions in the uterus after delivery and helps to reduce bleeding (ibid).

As oxytocin is the hormone of calm and connection, the children on Ifor Ward, and indeed their parents, would feel the effects of the music, and be more able to cope with the stress and demands of being on the ward. Slow-tempo music lowers cortisol levels (Kashino et al 2017) and the musician's variations in mood and tempo were then entirely appropriate on Ifor.

The power of music – a strong evidence base

As Pulse Arts are exploring using music in areas not tried before, there is not a specific body of research. However, a great deal of research into the use of music in healthcare is relevant to this situation, as is research into oxytocin.

Music as medicine is an intervention that carries no risks and is non-invasive when practised by experienced musicians such as Pulse Arts who are so sensitive to their audience.

“The evidence for the beneficial effects of music on reward, motivation, pleasure, stress, arousal, immunity and social affiliations is mounting.”

Chanda, M. & Levitin, D. (2013)

Pain

Pulse Arts could have a strong, positive impact on women who are recovering from a caesarean birth, particularly if they are then wanting to breastfeed.

A systematic review and meta-analysis in the Lancet concluded that

“...music reduced postoperative pain, anxiety and analgesia use and increased patient satisfaction.”

Ball et al (2015)

Furthermore,

“Considering all the possible benefits, music interventions may provide an effective complementary approach for the relief of acute, procedural, and cancer/chronic pain in the medical setting.”

Lee, J.H. (2016)

Nilsson's (2009) research shows that music significantly increases oxytocin levels in patients who have undergone heart surgery the previous day; such research is relevant to women experiencing pain after an assisted or caesarean birth.

Stress and anxiety

Many women and their partners can be in a state of shock following news that labour is to be induced, or that mother or baby is unwell, or else after a traumatic or challenging birth experience. Whilst not experiencing depression at this stage, they may be feeling very stressed and tense.

A Cochrane systematic review by Aalbers et al (2017) concludes that there is evidence that music can reduce depression and anxiety. Daykin et al (2016) also conclude that there is “high quality evidence to suggest that music can improve wellbeing in other groups: for example, reducing anxiety in young adult and pregnant women.”

In exploring music interventions for preoperative anxiety, Bradt et al (2013) conclude that music interventions may have a beneficial effect, even listening passively, and participating in music making can be particularly beneficial and empowering. This research is particularly relevant to the musicians’ work on Murray and Ifor Wards.

Chang et al (2015) found that music significantly lowers stress in pre-natal women; this shows how effective the musicians are on Murray where women might be in for monitoring due to concerns about their own or their baby’s health.

Conclusion and Recommendations for the Future

Pulse Arts give people a gift in a space where there are a lot of demands being placed on everyone all of the time. The musicians create a warm, nurturing environment. Their impact is significant and wide-ranging. Pulse Arts must stay at the Whittington, for the benefit of everyone there.

Recommendations

1. Pulse Arts should continue on Murray Ward to support and calm women who are being monitored or awaiting or experiencing induction of labour. Their presence relaxes what is often a very high pressure and tense ward and also has an impact on the staff.
2. Pulse Arts should continue on Eddington Ward (and on Cellier when the postnatal ward moves) as this is also a tense and noisy environment. Parents and health care professionals report on the huge impact the musicians make on the mood of the space, supporting calming of babies, breastfeeding and bonding as well as enabling carers to offer kinder, gentler, more compassionate support as they feel calmer themselves.
3. Pulse Arts should continue on Ifor Ward as their sensitive interactions with the children, their parents and carers positively supports the care offered.
4. Pulse Arts should also visit SCBU and NICU to offer calm and oxytocin to parents, babies and their carers. October – this is now the case and should continue.
5. Pulse Arts **should also visit** Triage to help to calm parents at the start of their labour and birth experience as this is often a high-pressure point and Pulse Arts could impact on women's entire experience, having helped to lower their stress levels when they enter the maternity unit.
6. Pulse Arts **should also visit** the caesarean recovery area.
7. The Whittington should support the musicians to find ways to fund longer hours.

Roz Webb - Lay-Chair, Whittington Maternity Voices, NCT antenatal facilitator and breastfeeding counsellor, Active Birth and baby massage teacher

Finally, a tweet from Siobhan Harrington, Whittington CEO:



Siobhan Harrington

@S_HarringtonNHS

Follow



Wow just went to see Dave & Mel on our postnatal ward - from @PulseArtsCIC playing live music to mums new babies & staff - thank you from all of us @WhitHealth It was so special to see how calming it was for the babies, new mums & staff

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