Abstract:

Background

Infants exposed to intrauterine drugs present a number of challenging features with which the new mother is faced. They can be irritable, unresponsive, and unpredictable. Available treatments require specialized neonatal care for the first four to six weeks of life; a critical time for the parent-infant attachment relationship to develop. Neonatal nurses have the opportunity to promote this development and ameliorate the effect of other developmental risk factors the baby is likely to experience.

Objectives

The aim of this study was to explore neonatal nurses’ experiences of providing care to drug-exposed newborns and their parents throughout treatment for neonatal abstinence syndrome (NAS).

Design, Setting and Participants

This study used interpretive methods by conducting group interviews with eight neonatal nurses in each of four Special Care Nursery Units in South-East Queensland, Australia.

Results

Barriers to promoting the parent-infant attachment relationship were found to be both attitudinal and organisational. These barriers were significant, and were seen to impact negatively on optimal care delivery to this vulnerable population.

Conclusions

Unfortunately, the results of this study indicated that management of these babies and their parents is compromised by a range of attitudinal and organisational factors.
There is a need to address these barriers to optimize care delivery and improve the way in which neonatal nurses impact on parent-infant relationships.

**Keywords:** Neonatal Abstinence Syndrome, neonatal nursing, parent-infant attachment, drug-dependent parent.

**What is already known about the topic?**

- Strengthening the parent-infant relationship and promoting potential skills of parents are crucial to mediating the adverse care-giving environments into which drug-exposed newborns will be discharged.
- Attitudes towards and knowledge gained in caring for drug-exposed infants and their parents influence nurses’ ability to provide such optimal management.

**What this paper adds**

- This analysis demonstrates that neonatal nurses’ care of drug-exposed infants and their parents in the special care nursery is compromised by attitudinal and organisational factors.
- There is a need to address these factors to optimize care delivery and improve the way in which neonatal nurses impact on parent-infant relationships.

**Background:**

Specialist neonatal nursery staff caring for infants exposed to illicit drugs before they are born have an opportunity to influence adaptation to the parenting role and quality of the attachment relationship parents have with their newborns. This window of opportunity can exist for up to six weeks after the birth depending on treatment outcome for Neonatal Abstinence Syndrome (NAS).
This opportunity is critical. The parent-infant relationship can ameliorate the effect of environmental risk factors such babies are likely to experience once discharged. Unfortunately, management of drug-dependent parents and their newborns may be compromised by a range of factors\textsuperscript{1,2}.

This study used group interviews with four (4) groups of eight (8) neonatal nurses to explore experiences of managing drug-exposed newborns and drug-dependent parents to provide insights into the way in which effective care can be delivered. This study targeted an important clinical and public health issue. Infants of drug-dependent parents are at increased risk of physical and psychological disadvantage due to the environment into which they are born.

**Literature Review:**

Infants treated for NAS may require prolonged treatment and spend several weeks, or even months, in hospital\textsuperscript{3}. A constellation of symptoms may result from opiate withdrawal manifesting as a disruption of the mother-infant relationship, sleep-wake abnormalities, feeding difficulties, weight loss and seizures. Current treatments that are used to ameliorate symptoms and reduce morbidity rates include opiates, sedatives and non-pharmacological treatments\textsuperscript{4}.

The proportion of infants treated for NAS continues to rise both in Australia and overseas despite changing patterns of drug use\textsuperscript{5}. In the United States, more than 1.4 million women of childbearing age regularly used opioid derived substances such as heroin, analgesics and methadone\textsuperscript{5}. It has been estimated that current drug use among families with dependent children in Australia corresponds with rates reported overseas\textsuperscript{6}. The rising incidence and changing patterns of illicit drug use in Australia extends into the population of women of childbearing age. Escalating use of psycho stimulants in particular for which we have few treatment options demands an urgent
response from health services including those providing specialised expertise in the perinatal period\textsuperscript{7}.

The ability of drug-dependent parents to adequately care for their babies is compromised by factors clearly associated with substance abuse such as psychopathology, depression, antisocial personality, and family violence\textsuperscript{8}. Moreover, drug-dependence continues to be more prevalent among mothers living in poverty. Parents with drug problems are vulnerable to both acute and chronic poverty and poor employment opportunities\textsuperscript{9}. Children raised in such adversity are at increased risk of neglect and other forms of child abuse, as well as maladaptive development and behaviour problems, particularly in the early years of life\textsuperscript{10}.

The effects of prenatal exposure to maternal substance abuse on negative birth outcomes have received much research attention. Fewer studies have been concerned with the attitudes of professional caregivers, particularly nurses, towards drug-dependent parents in the perinatal period and their impact on infant outcome\textsuperscript{11}.

Mothers using illicit drugs during pregnancy can experience profound guilt concerning the damage their behaviour has had on the infant\textsuperscript{12}. When these vulnerable mothers are paired with irritable infants withdrawing from drugs and experiencing NAS, an understanding and supportive environment is required\textsuperscript{12}.

Enhancing interaction between substance abusing mothers and infants affected by NAS was explored in a 1998 study\textsuperscript{12} which determined whether teaching comforting and interacting techniques within 24 hours of delivery would improve the mother/infant interaction following discharge. The treatment group in this study showed a significant improvement in enhanced interaction at follow up. Nurses, it was concluded, were pivotal to the success of this enhanced interaction by
demonstrating care-giving behaviour and assisting the mother to recognise and respond to their infants’ behavioural cues.

The attitudes and knowledge of nurses towards caring for drug-exposed infants and their parents is pivotal to the success of promoting attachment. In a study of cocaine-exposed infants and their mothers, the attitudes of nursing staff were found to be generally negative, and this impacted adversely on quality nursing care. Nurses have been reported to consider drug-dependent parents to be at least partly responsible for their own illnesses and a patient history of drug use is associated with nurses' negative attitudes, reducing their willingness to interact with these parents. Nurses are also reported to embrace attitudes that are considered more punitive and negative than positive or supportive toward women who abuse drugs during the antenatal period. Interestingly, Ludwig et al observed that providing in-service and self-education to nursing staff correlated positively with attitudes towards the infants, but not necessarily towards their mothers.

In researching the broader nursing communities’ knowledge, attitudes and beliefs about substance abuse, Happell et al recommended that specific educational programs must be introduced to enhance nursing skills and therapeutic relationships in assessment and management of drug-related disorders. Nurses’ attitudes towards patients influence the ability to develop and maintain therapeutic relationships that are central to the suite of nursing interventions required to promote parent-infant attachment relationships.

Methadone administration during pregnancy remains controversial so it is important that nurses caring for the infants of women in treatment create a non-punitive environment that is conducive to behaviour change. Specialist neonatal
nurses have great potential to influence behaviour, yet negative attitudes and values towards the substance-dependent mother have been identified as barriers to successful substance abuse treatment during the perinatal stage\textsuperscript{5}.

**Method:**

**Aims of the study**

Thus, the aim of our study was to explore the experiences reported by neonatal nurses when providing care to infants of drug-dependent parents in the immediate postnatal period. The study was approved by the Queensland University of Technology Human Research Ethics Committee. Ethics approval was also gained from each of the four health service districts where the research was conducted.

**Sample**

A purposive sample of eight participants from each of four (4) special care nursery (SCN) units in South-East Queensland was recruited to the study. Participants were therefore experienced in the care of drug-exposed neonates experiencing NAS and their drug-dependent parents.

The potential for variation in clinical experience and exposure to drug addicted parents of nurses working within the SCN units was considered. We thus recruited from across a range of demographic and socio-economic districts in South-East Queensland, choosing four (4) SCN’s allowing for a range of confirmatory and contradictory responses and experiences.

**Data collection**

Semi-structured, open-ended, interview techniques were used. Interviews lasted for one hour and guideline questions were not asked in either a sequential or prescribed manner. Questions were generated from cues given by participants to explore attitudes
and perceptions raised within the groups. These were prompted by the guideline questions. The interviewer who then developed the questions further according to the findings of the completed interviews transcribed each interview immediately. A research assistant experienced in both neonatal nursing and group interview moderation conducted the four group interviews within a two month period.

Participants were informed in writing of the study details prior to conducting the group interviews. Each participant was asked to sign a consent form to indicate that they understood the nature of the research. Group interviews were conducted during professional development time paid for by the organisations.

At the commencement of the group interview, the study was briefly explained, and confidentiality and consent was explained by the Facilitator. Participants were asked to sign an attendance sheet, identified only by their first names, which were removed during the transcription process. All participants gave written informed consent and agreed to the audiotaping of interviews. No participant withdrew from the study.

**Data analysis**

Verbatim transcription of interviews was conducted immediately following each group interview. Thematic analysis was completed by firstly reading and rereading to gain an understanding of the fabric of the content. Next, the transcripts were analysed to identify significant concepts, statements and feelings expressed. These were then clustered into five themes.

**Results:**
Five themes were generated from the data:

The themes related to:

- The relationship with the baby;
- Response to the family;
- Tensions within the care environment;
- Nurses needs; and
- Making a difference.

**Relationship with the baby**

Participants spoke of caring for babies affected by abstinence syndrome as time consuming and difficult. Emphasis was placed on nursing assessment using scoring systems\textsuperscript{21, 22}, which are commonly used to score the severity of the symptoms of withdrawal, and balancing treatment regimes to ensure babies were comfortable. The babies were described as unsettled, crying and requiring supported care. The time needed to care for these babies and the need to acknowledge the acuity was highlighted by a number of participants, for example:

‘…they’re very time consuming, and I do think we need to share the (work) load around, and so when someone’s had enough, it’s okay to say, “it’s your turn now”.’ and

‘I just think that sometimes the acuity needs to be re-evaluated because we usually have up to four babies each, but sometimes when a baby is very, very unsettled someone can use a whole shift maybe for that baby, and sometimes we need extra staff.’

The use of volunteer helpers was mentioned as a way of providing comfort measures, and potentially lessening the impact on nursing time. Use of a volunteer
service, or so-called ‘cuddle mums’ was seen as a useful addition to the care regime for these babies. Yet this service, though available previously, was under-utilised and perhaps fraught with legal implications that had not been addressed.

Interestingly, discussion that related to caring for the baby was focused on the time taken and the behavioural response of the baby to withdrawal, as well as issues impacting on work load and the demand placed on nursing time. Conversely, there was little discussion that related to general infant care issues such as feeding and hygiene provision indicating perhaps heightened concern relating to organisational issues.

Response to the family

The findings suggest that no formal family assessment was conducted, and participants often seemed uncertain about the family environment, in particular the environment into which the babies would be discharged. These uncertainties, and fear of the unknown were significant issues in this discussion.

Participants described families as ‘chaotic’ with a wide range of emotional, social and practical support needs. That participants felt substance abusers were a ‘demanding client group’ is echoed within the literature. Frustration was felt when parents did not visit often and were perceived as not being emotionally and/or physically available for their baby. A participant suggested that:

‘…I think they plan their visits. Sometimes I feel they do, because they’re not really there often enough, or for a long enough period, to really see that the baby is upset.’

However, others attempted to explain the situation:
‘I think their personalities, where they are a little fragile, um, its not conducive to looking after high-risk babies. These babies just incessantly cry, and my perception is that sometimes they’re just scared off because they’re such hard work. It would be hard for anybody to cope with these babies who are crying 24 hours a day.’

Participants spoke of feeling ‘out of the loop’ regarding the care of the family. Tension seemed to exist between the role of the social worker, Department of Child Safety, medical officers and nursing staff in that while the family was intensively assisted, the nurses role in this area seemed minimal. Being ‘out of the loop’ in terms of communication about the family, meant that participants were not part of the care planning. In relation to this, participants seemed to be unaware of the details of maternal drug use and did not have access to this information, with assumptions being made of their drug use and the impact this may have on the baby. There was recognition of the need to communicate effectively with the family, and reference to the reluctance of mothers to disclose their drug history. Alternatively, a participant discussed the value of open and honest communication and how this would positively impact upon patient care outcomes:

‘The other side of it is as well, that often, the mum’s themselves are quite open about it, their drug use, and they’ll talk quite openly in front of the other parents that they need to go and get their methadone. And I encourage them to tell us the truth. That it’s important for us to know if they’re using, and that they’ve been using. So that they know it will make the withdrawal for their baby more difficult, and if you do go and do that, of if you have been using more than opium drugs, then we need to know that, because the baby may withdraw differently, or you know, a lot worse.’
These findings suggest that care provision for the parents and the baby occurs in parallel rather than in partnership, a situation highlighted by one participant as being a tension between providing a family centred approach to care and focusing on the babies’ needs. One participant discussed the difficulty of a family centred approach when dealing with the baby:

‘You see, philosophically, we have family centred care…Which is an important thing to have, …but it is really the baby that is our client. And trying to marry the concept of let’s nurture this family to be the best family they can be, and, this child is my client. What’s going to happen to it? And marrying these two ideas can sometimes be a pretty rough road.’

Tensions in the care environment

As well as a lack of time, staffing was discussed as an issue in providing care to this patient population. In particular, staff shortages adversely affected the relationship between the parents and the nursing staff. Staff shortages were frequently back-filled with casual staff, who did not know the history of the parents, and the parents were constantly having to recount their stories. This frequently lead to frustration for both parents, for example, as one participant commented:

‘I’ve worked in SCN for some years and during that time I’ve seen many babies come through and often it can put a difficult stress on the unit itself due to staffing as well as the needs of these babies because often they are with us for quite some weeks and have ongoing needs, more than we feel we can support sometimes.’
And

‘Yeah, that’s too hard with our staffing, they’re always having to get used to a different face and having to tell their story all over again, when they have gotten used to somebody, and are feeling comfortable and not judged.’

The relationship between medical officers and nurses was discussed in particular in terms of assessment and the ordering of medication. Participants stressed the need that their assessment skills be recognised and respected by the medical staff. They were, after all, the primary care providers and worked with the babies and their parents on a shift-by-shift basis. Overall, however, participants stated that for the most part, their assessment of the baby was listened to.

The inclusion of the nurse as part of the multidisciplinary team caring for the baby and his/her family did not extend to social workers and community providers, however. Participants expressed concern that they did not receive feedback about what happened to the baby following discharge. For example a participant discussed her lack of experience:

‘And I think there are significant child safety concerns, my barrier is inexperience of child safety when we’re often discharging these babies into an unsafe environment, unknown, and we’re making significant life changing decisions on behalf of these babies, when we know that a significant number of these babies have our alarm bells ringing. So I think my barrier is the lack of networking, and back-up and infrastructure within the community.’

And

‘The social workers just say “she’s got a great support mechanism out there”, and you go “well, what’s a great support network?!”’ Because I don’t know
what that means exactly. Does that mean somebody checking on her, somebody driving her, what does that mean? It’s all a bit nebulous.’

Heightening the tensions within the care environment was discussion about whether the environment of the special care nursery was the optimal environment for these babies and their parents. It was generally concluded that the physical environment was not conducive in terms of privacy and disruption caused by a constantly crying baby. For example in describing the environment participants suggested:

‘But I think too, I know if there are people in the room, you know, during the doctor’s rounds I try too do a little charade quietly, or just point to something for the doctors to see so I don’t have to say ‘this baby’s withdrawing’. But, they’ll often, you know, let the cat out of the bag. So that is hard, because they’re. .. you don’t know how to be discreet really.

Participants, therefore, were asked about what they felt the optimum environment for these babies and their families actually was. Suggestions include:

‘Err, I think there should be a centre geared up for this, because you need a key little group that monitor these babies. I know that at X in X they communicate closely with them when they go home, whereas we just send them home, sometimes on fairly significant doses of morphine and there’s concern amongst the nursing staff because these families really aren’t at the
point where they can monitor or look after their babies. And yet, we leave them to it.’

And

‘But it’s the biological perspective as well, these mothers and babies are separated for a long time. And, um, the system isn’t necessarily assisting them in any way. They have a tendency not to stay anyway, to go out and about, but, maybe if we had more rooming in rooms, and a little bit more flexibility with morphine in terms of having a unit where they could stay it might help in the long term, to keep these mothers and babies together.’

Nurses’ Needs

The emotional work involved in caring for NAS babies and their families was recognised, and strategies for distancing themselves from the situation were discussed, as one participant suggested:

... I mean, I don’t get that emotionally involved. That’s why I can stay in this profession. I do what I have to do, I say what I have to say. I mean, you have to do that... otherwise you just get far to involved with these poor little babies, knowing that they’re going to go into a household... You can’t stop them going home with these parents.

It is not surprising that nurses working with potentially emotionally charged situations need to develop coping mechanisms, or some form of emotional control or protection. This tendency to emotionally protect oneself may be justified, with Yang & McIlfatrick23 reporting that more than half of the nurses in their study experienced
profound feelings of sadness or loss following critical incidences and volatile situations, such as death or stress in working with families, within the work environment.

Participants recognised the importance of education and preparation in the areas of communication and counselling but also discussed the need to understand the physiology related to NAS. Importantly, one participant articulated the need to understand the background to substance abuse and acknowledged the impact of her own background on her knowledge in this area:

‘You really need to know how to word your questions, and all that sort of stuff, that’s what you need more training in... you know, the psychology of how to present yourself to these people. But being able to ask the right questions in the right way you can get more information out of them. Because, you don’t want to build a brick wall. You really do want to know, and I think that’s the hardest part. We need them not to necessarily be able to trust you, but to tell you what you need to know to care for their baby. But also to have some regard for us as well, as people but they see us either as dragons or these people that are going to take their baby away.’

And

‘…understanding why these people get themselves into these situations in the first place understanding the background problems. I dunno if that makes sense, but you know, I don’t know how to counsel these people… And I lack the knowledge and the skills to deal with these types of people. I work in the
clinic, and they tell you these stories and I think “okay where’s the social worker!”

When asked if the stress of working with these families was assisted by formal or informal debriefing, the majority of participants agreed that informal debriefing within their peer network was beneficial, with less importance placed on the opportunity for formal debriefing.

‘I really can’t see how an outside debriefing could be anymore beneficial than the network we’ve got here. We utilise our own network regularly, we have high levels of stress because we’ve got a lot of crying babies who are going through withdrawal, and it is difficult on the staff, and we try to say ‘I’ve looked after this baby for two days, and I need a break’, and we often, you know, vent our own frustration, particularly at handover times, or in private. And I think that’s a far better network because we’re talking to our peers, who understand.’

Discussion regarding the nurse passing moral judgement on families with babies experiencing NAS was met with mixed reactions, but generally, findings from this study reflect the literature, in that the attitudes of nurses towards substance abusing mothers was generally negative and judgemental.

‘We talk about judgement, and yeah, we do (judge them). We don’t mean to, but you just do, and the parents think, ‘well the babies gone to the nursery, and its started on medication, and I’m gonna be worried that I never get this baby
back’. And I think the reality of that is that there are people and families who think they are judged. And they are judged!’

When asked how staff demonstrated such judgemental attitudes a participant suggested that it is: ‘Just their body language. Perhaps they are condescending. Just the way they behave towards the parents. Or they don’t want to speak to them’.

Judgemental behaviours towards this client population have been demonstrated previously, where it has been reported that attitudes towards women who abuse substances were more punitive and negative if they continued to abuse during the perinatal period\textsuperscript{16}.

**Making a Difference**

Nursing staff were asked how delivery of care could be improved to this disadvantaged population, and what the organisation could do to support this. Suggestions of the staff focused primarily upon targeting these parents antenatally, and providing support to nursing staff in terms of professional development. A lack of ongoing education in this area was cited as a significant barrier by participants.

Pre-admission, or ante-natal education, was cited as an opportunity to interact with substance-abusing parents in order to prepare them for what to expect once their baby was delivered. This education, and facilitated familiarity with nursing staff and the organisation, was suggested as an opportunity to positively impact upon parents, and improve care delivery in the post-natal period. For example one participant suggested that:
‘I think that at times we have made a difference. I mean, I think the whole thing of nursing with these babies is we need to have a certain amount of empathy, and we need to be non-judgemental. If we can accept the parents and where they are, the bottom line is that we are the baby’s advocate, we can still try and be as non-judgemental as possible with the mothers, come down to their level, and get an honest, open communication going so A) they share what knowledge, or information they need to with us, and B) this can be used as an avenue to, you know, to link them into social work etc. It’s not always a positive situation, but quite often they don’t see nursing staff in a negative light, and have an honest, open communication and rapport and can utilise us, um, you know, for information, helping with their parenting skills and usually the majority treat us very favourably, and we do have a good rapport though not always.’

Discussion:

This study explored nurses’ experiences of caring for drug-exposed newborns and drug-dependent parents in an environment providing specialised care. It identified barriers to effective and appropriate caregiving from a range of perspectives. Widespread use of illicit substances extending to populations of childbearing women imposes substantial social and economic costs across health, welfare and criminal justice systems. Infants born to substance dependent parents require highly specialised nursing care due to the physical and biological effects of substance exposure during pregnancy.

Moreover, nurses play a key role in creating a positive social environment for infants born into adversity. The newborn period presents an opportunity to influence
the parent-child relationship which mediates high-risk care-giving environments into which these infants are born. This is a time when the underlying parental commitment and potential skills of parents are influenced.

Within the realms of this potentially therapeutic relationship, the importance of nurses’ attitudes towards disadvantaged client populations needs to be recognised as influencing one of the cardinal elements of the nursing profession\(^9\). Furthermore, the results of a 2003 study\(^{17}\) with neonatal nurses caring for infants affected by substance abuse revealed that there is a need for formalised education on substance abuse and its affects, and that this may positively impact upon nursing attitudes.

**Conclusion:**

Unfortunately, in this study, neonatal nurses identified that they experienced significant barriers to providing quality family centred models of care to drug-exposed infants and their parents. The results support the development, trialling, and dissemination of an intervention aimed at early intervention and risk reduction to enhance care in this disadvantaged patient population. Such an intervention would target both the attitudinal and organisational issues raised. Intervention strategies could include awareness raising workshops for nurses working in SCN units, as well as organisational change management strategies considering how, where, and by who these infants could best be cared in the immediate postnatal period for example.

Facilitation and support staff in healthcare environments attract a range of assistive professional skill sets. Challenging environments such as those featuring babies with NAS and high risk families however, are typically beyond the base training of most nursing staff and require appropriate responses from both the individual clinician and the support organisation.
Reference List:


