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Assessing Capacity to Change in High-Risk Pregnant Women

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Pre-birth risk assessment is a process by which circumstances affecting an unborn child can be identified and support for mother and infant embedded. This mixed methods study describes a community-based pre-birth assessment and care pathway that utilised the Parents Under Pressure (PuP) programme to assess parenting capacity and provide support pre- and post-birth for 'at risk' women. Sixty-eight pregnant women referred to children's social care services were allocated to the pre-birth assessment and care pathway (n = 35) or to routine care (n = 33). Standardised measures of psychological distress, social support and alcohol measured change for the women in the assessment and care pathway. Twenty women who provided pre- and post-data reported significant improvements on all measures except alcohol use. Safeguarding outcomes at 12 months were obtained for both groups using administrative data. Forty-two per cent of the infants whose mothers received the pre-birth assessment and care pathway showed an improvement in child protection status compared to 14 per cent of the routine care infants. Safeguarding status deteriorated or stayed the same in 52 per cent of the routine cases compared to 26 per cent of those receiving the pathway. Qualitative data revealed that the pathway was acceptable and helpful to service users and service providers.

KEY PRACTITIONER MESSAGES:

- The current project found that a community-based pre-birth assessment and care pathway with high-risk pregnant women was feasible and acceptable for practitioners and service users.
- The pathway began mid-pregnancy and support was provided following the birth of the infant for up to 12 months.
- Over 40 per cent of infants whose mothers were allocated to the pre-birth risk assessment pathway showed improvements in child safeguarding status at 12 months.

KEY WORDS: safeguarding children; child protection; child abuse; baby/infant; assessment; interventions

'Describes a community-based pre-birth assessment and care pathway that utilised the Parents Under Pressure (PuP) programme'

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Introduction

An optimal caregiving environment during the perinatal period is critical for the healthy development of infants (Shonkoff *et al*., 2009). Challenges to optimal development include poor nutrition, a chaotic and stressful environment and, critically, insensitive and unresponsive caregiving. Infants are at higher risk of maltreatment than any other age group and have a higher-than-average risk of being the victims of homicide (US Department of Health & Human Services *et al*., 2016). Despite their vulnerabilities, 'at risk' infants are often not given adequate protection within a time frame that is consistent with their developmental needs (Ward *et al*., 2010, 2014). Increasingly, pre-birth risk assessment guidelines emphasise the importance of determining potential risk to the unborn child with appropriate and timely action taken in the post-birth period. This has been encapsulated in legislative change in the UK, specifying a 26-week time limit to finalise cases (Ministry of Justice, 2014).

'At risk' infants are often not given adequate protection within a time frame that is consistent with their developmental needs'

This legislative change provides a time frame by which decision-making needs to occur, and is therefore one potential solution to ensure timely decision-making. However, the actual process of decision-making is fraught with problems. In their review of the evidence for effective assessment and decision-making in child protection, Bartelink *et al*. (2015) noted that problems lay in (i) individual practitioner bias and selective attention to information confirming previous judgements and (ii) systemic problems associated with assessment and evaluation in the decision-making processes. There was highly variable evidence for structured decision-making, the use of risk assessment instruments, shared decision-making and family group decision-making. Despite these mixed findings, the authors proposed that improvement in decision-making will occur when practitioners use a combination of the above. They emphasise both the importance of using reliable and valid measures of family functioning and the importance of families participating in in shared decision making around the nature and focus of support plans.

A potential model for determining whether a parent has the capacity to provide a safe and optimal environment for a child that incorporates these components is the capacity to change model (Harnett, 2007). This involves four distinct stages: a cross-sectional assessment using interview and standardised measures to identify strengths and difficulties in the family; development of a case conceptualisation that informs collaborative goal setting addressing specific child protection issues; offering therapeutic support to families that helps them move towards achieving these goals; and reviewing and reporting on goal attainment and the extent of change on standardised measures. The model provides practitioners with a dynamic assessment process where capacity to change can be explicitly tested across a specific time period; in this case, in the pre-birth period and up to 12 months post-birth. This model emphasises the importance of using both standardised assessment/diagnostic tools and collaborative goal setting with the family within agreed time frames, and was identified as a key feature of good practice in decision-making in child protection (Barlow *et al*., 2012).

'Capacity to change can be explicitly tested across a specific time period'

In the light of legislative change and converging evidence around the problems associated with decision-making in early infancy, the current study

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was developed as a pilot study (Eldridge *et al*., 2016) investigating the acceptability and appropriateness of a model of pre-birth assessment and care pathway based on the capacity to change model (Harnett, 2007). This is a mixed methods study that investigated the four stages of the capacity to change model utilising the Parents Under Pressure (PuP) programme (Dawe and Harnett, 2007), developed for high-risk families with potential or current involvement in child protection services. Child protection outcomes are compared to a group of women who received routine care: that is, standard pre-birth assessment consisting of visits made by social workers within children's social care to assess the risk of harm to the unborn/newborn baby. Following the birth of the infant, the assessment process continues and may include a variety of interventions such as therapeutic foster care. The key point of difference is that the pre-birth assessment and care pathway begins during pregnancy, provides a therapeutic and individually tailored treatment plan, and continues beyond the birth, up to 12 months if required.

'A mixed methods study that investigated the four stages of the capacity to change model utilising the Parents Under Pressure (PuP) programme'

First, we report quantitative data on a range of indicators of wellbeing for women referred to the service using standardised measures. Second, we compared the child protection outcomes at 12 months for women referred to the pathway with a matched group of women who received routine care. Finally, an analysis of the major themes that emerged from qualitative interviews reflecting the utility of the capacity to change process is presented.

Method

Procedure

This was a prospective, quasi-experimental study in which pregnant at-risk women were alternatively allocated to either the community-based pre-birth assessment care pathway or to routine care. This pathway provided support to high-risk pregnant women (from 18 weeks' gestation) and beyond the birth of their infant up to 12 months in Oxfordshire, UK. The team, consisting of social workers and family support workers, received training and implementation support in the capacity to change process (Dawe and Harnett, 2007; Harnett, 2007) with the PuP programme embedded as the treatment component. A specifically designed database, the PuP Online Support Tool, provided automated scoring on standardised assessment instruments and generated an interpretive summary of the scores to assist practitioners develop an individualised support plan. Referral to the study was made by midwifery staff at a hospital antenatal clinic at 18 weeks' gestation. Allocation was every alternate pregnant woman referred to children's social care in pregnancy whose level of risk met the entry criteria. Following referral to the pre-birth assessment and care pathway, the service provider asked the woman if she would be willing to take part in the study, and obtained her written consent for de-identified data to be shared with the research team, and for the practitioner to share her contact details with the research team so that she could be contacted and invited to take part in an interview. Women had at least one high-risk criteria including domestic abuse, mental health problems, previous children removed, offending, partner in prison, homelessness/housing

'This pathway provided support to high-risk pregnant women (from 18 weeks' gestation) and beyond the birth… up to 12 months'

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problems, drug or alcohol problems or were care leavers, aged 14–35, and were between 18 and 28 weeks pregnant.

For those allocated to the pre-birth assessment and care pathway, standardised measures were completed at referral and post-birth (2 months). The child protection status of the infants was obtained from administrative records at birth and at 12 months for both groups. Finally, semi-structured, qualitative interviews were conducted to gather perspectives on the acceptability, usability and usefulness of the pre-birth pathway. Informed consent was given by participants, and ethical approval was granted by the Social Care Research Ethics Committee, University of Warwick.

'The child protection status of the infants was obtained from administrative records at birth and at 12 months'

The PuP Programme

The PuP programme is a home-based parenting programme developed for high-risk, vulnerable families including those with current or potential involvement in the child protection system (Barlow *et al*., 2013; Dawe and Harnett, 2007). The PuP programme uses a model of case conceptualisation to develop an individualised support plan for each family that draws from a set of resources including a Parent Workbook, filming of mother-infant interaction to support the development of sensitive and responsive caregiving and the use of standardised measures scored using the PuP Online Support Tool to score measures and generate feedback reports for practitioners. The primary therapeutic focus of the PuP programme is to facilitate the development of a safe and nurturing relationship between a primary carer and infant or young child. The programme has an explicit focus on helping parents develop emotional regulation skills (e.g. using mindfulness strategies) and problem-solving skills to address stressors such as housing and financial difficulties (Table 1; see also Barlow *et al*., 2016).

'The PuP programme uses a model of case conceptualisation to develop an individualised support plan for each family'

Participants

Sixty-eight pregnant women were identified and 35 were referred to the pre-birth assessment and care pathway during the study period. Four women terminated their pregnancy and withdrew, resulting in a final sample of 31 women. The average age of the women referred was 24 years (age range 18–48) and the majority (87%) were White British. Thirty-three women were allocated to routine care. Of these, three had terminations and one woman moved and was transferred to a different local authority, resulting in a final

Table 1. Key features of the pre-birth risk assessment and care pathway

- Early referral of 'high-risk' or 'vulnerable' pregnant women to a specially trained social care team by midwifery staff at the antenatal clinic at approximately 18 weeks' gestation.
- Assessment of the family's capacity to change using goal attainment scaling and a range of standardised measures as part of a model of structured professional judgement.
- Delivery of an evidence-based intensive intervention (Parents Under Pressure programme) as part of a model of partnership working with families.
- Avoidance of 'double jeopardy'[a] through making more timely and proactive use of foster placements and concurrent planning where appropriate.
- Timely decision-making about the need for permanent out-of-home placements — no later than six months postnatal.

[a]The term used by Ward *et al.* (2012) to identify children who are doubly traumatised by late removal and then repeat foster placements.

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sample of 29 women in this group. Demographic data were not available for those allocated to routine care as ethical clearance was only given to track data on the child protection status of their infant using agency identification. Seventy-six per cent of pregnant women referred to the pre birth pathway had four or more risk factors, 20 per cent had three and four per cent had two risk factors.

Participants who took part in the qualitative interviews were social workers and family support staff ($n = 8$), service users ($n = 4$) and external stakeholders: foster carers, an adoption servicer manager and a community midwife ($n = 8$).

Quantitative Measures

The Depression, Anxiety and Stress Scale (DASS; Lovibond and Lovibond, 1995) is a 21-item scale used to measure each of the three dimensions of psychological distress included in its name. The Multidimensional Scale of Perceived Social Support (MSPSS; Zimet *et al*., 1988) is a 12-item self-report measure of perceived social support composed of three specific dimensions of social support, being family, friends and significant others. Scores on all 12 items are summed to derive a global score of perceived social support. The Alcohol Use Disorders Identification Test (AUDIT-C; Meneses-Gaya *et al*., 2010) consists of three questions about recent quantity and frequency of alcohol use.

Child Protection Outcomes

The outcomes of a core assessment into the circumstances of children considered to be at risk of 'significant harm' (HM Government, 2015) include: *case closure* if no concerns are identified; a classification as a *child in need* (section 17 (10) of the Children Act 1989) indicating concerns about achieving or maintaining a reasonable standard of health or development without the provision of services by a local authority; a *child protection plan* occurring if there is evidence for significant concerns around health and safety, and a detailed plan is put into place; and *care proceedings* including an interim care order (ICO) that grants the local authority parental care and other care proceedings that result in permanency planning including adoption and long-term guardianship. A child can become subject of an ICO with parental responsibility shared between the parent and the local authority; a full care order is granted if permanent alternative care is required (HM Government, 2015). These outcomes were used to classify changes in child protection status as either 'improved', 'deteriorated' or 'no change' (see Table 3).

Data Management and Analysis

Descriptive statistics and analyses of the quantitative data were conducted using SPSS. Paired sample *t*-tests were used to compare change across time on the standardised measures described above. The small sample size precluded the use of statistical analyses of the child protection status data. Qualitative interviews were fully transcribed and the data were analysed using an inductive thematic approach which involves ordering and synthesising data in order to identify key categories, themes and patterns (Ritchie *et al*., 2013) using NVivo 10 (NVivo qualitative data analysis Software; QSR International

'The small sample size precluded the use of statistical analyses of the child protection status data'

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Pty Ltd. Version 10, 2014). The interviews were transcribed and coded (by CC), and secondary coding to validate these themes was undertaken (by JB). This approach is particularly suitable for qualitative analysis undertaken in multidisciplinary health settings involving practitioners, service users and other non-clinical staff such as foster carers as it allows for the identification of divergent themes across different groups of practitioners (Gale *et al*., 2013). For this paper, the data have been presented to reflect each of the four stages of the capacity to change assessment process.

Results

Quantitative Findings on Standardised Measures and Child Protection Outcomes

Thirty-one pregnant women referred to the pre-birth assessment and care pathway completed measures on entry to the care pathway, and 20 women completed the measures two months following the birth of their infant (see Table 2). Significant decreases in depression ($p < 0.01$), anxiety ($p < 0.01$) and stress ($p < 0.01$), and an increase in social support ($p < 0.01$) were found. There were no changes in AUDIT-C scores.

'Significant decreases in depression, anxiety and stress, and an increase in social support were found ($p < 0.01$)'

Data on child protection status are provided in Table 3. While only one case was closed immediately following the birth of the infant for those receiving the pre-birth assessment and care pathway, nearly a third of cases receiving routine care were closed at the time of the infant's birth. Legal proceedings (including an ICO) were instigated for a quarter of all cases in the pre-birth assessment

Table 2. Summary of quantitative measures (M, SD) for the total sample and for those retained at follow-up

	Total sample $N = 31$		Subset of 20 families			
			Pre-birth assessment		Follow-up	
	M n	(SD) %	M n	(SD) %	M n	(SD) %
DASS depression: M (SD) n = 30[a]	8.8	(10.6)	9.2	5(10.8)	1.3	(2.2)**
Normal/mild	24	77.4%	15	7.0%	20	100%
Moderate	4	13%	2	10.0%	0	0%
Severe	3	10.0%	3	15.0%	0	0%
DASS anxiety: M (SD) n = 30[a]	5.6	(5.8)	6.1	(6.3)	2.1**	(2.5)**
Normal/mild	23	76.6%	15	75.0%	20	100%
Moderate	6	20.0%	4	20.0%	0	0%
Severe	2	6.7%	1	5.0%	0	0%
DASS stress: M (SD) n = 30[a]	10.5	(9.7)	11.7	(10.5)	4.5	(5.5)**
Normal/mild	25	83.3%	16	80.0%	19	95.0%
Moderate	5	16.7%	3	15.0%	1	5.0%
Severe	1	3.3%	1	5.0%	0	0%
MSPSS social support: M (SD)	5.1	(16.4)	4.8	(1.2)	5.6	(0.94)**
Reported any alcohol use	9	29.0%	7	35.0%	9	45.0%
Alcohol use: M (SD) n = 29[b]	0.93	(2.4)	1.4	(2.9)	1.2	(1.6)
No alcohol use or low risk <3	26	89.7%	17	85.0%	16	80.0%
Medium risk: 3–7	2	6.9%	2	10.0%	4	20.0%
High risk: 8+	1	3.4%	1	5.0%	0	0%

[a]1 Depression, Anxiety and Stress Scale (DASS) missing;
[b]2 Alcohol Use Disorders Identification Tests (AUDIT-C) missing at pre-birth assessment. MSPSS = Multidimensional Scale of Perceived Social Support.
**$p < 0.01$.

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Table 3. Safeguarding outcomes at 12 months for pre-birth pathway and routine care infants

	Pre-birth pathway $n = 31$		Routine care $n = 29$	
Case closed following birth	1	(3%)	9	(31%)
Legal proceedings instituted immediately post-birth leading to an adoption order at 12 months	8	(26%)	0	(0%)
Safeguarding status: deteriorated	5	(16%)	3	(10%)
Safeguarding status: no change	3	(10%)	12	(42%)
Safeguarding status: improved	13	(42%)	4	(14%)
Stillbirth	0	(0%)	1	(4%)
Lost to follow-up at 12 months	1	(3%)	0	(0%)

Note: Safeguarding status deteriorated indicates a change from either (i) a child in need to a child protection plan or (ii) a child protection plan to legal proceedings; and safeguarding status improved indicates either (i) a change from child protection to a child in need or (ii) case closed due to no further concerns.

and care pathway following birth while none were undertaken for those in routine care. Safeguarding status improved at 12 months for those in the pre-birth assessment pathway in 42 per cent of cases compared to 14 per cent for those in routine care. No change in safeguarding status was observed at 12 months for over 40 per cent of those receiving routine care compared to ten per cent of those in the pre-birth assessment and care pathway.

Qualitative Findings from key Informant Interviews

The experiences of service users and practitioners involved in the new pre-birth assessment and care pathway were typically positive as illustrated by the following thematic analyses reflecting the capacity to change model.

'The experiences of service users and practitioners involved in the new pre-birth assessment and care pathway were typically positive'

Capacity to Change Stage One: Cross-Sectional Assessment Involving a Combination of Interview and Administration of Standardised Measures

The introduction of the PuP Online Support Tool to score and interpret standardised measures as part of the pre-birth care pathway required a major culture shift from traditional social work practice. Practitioners reported an initial 'settling in' as they became familiar with the standardised measures and confident in the use of the online tools. With time and a supportive team, the team acknowledged the value of using standardised measures and were united in a positive endorsement of the measures and the impact on their practice.

> 'And I'd find that those [baseline measures] reveal an awful amount of stuff that you would not necessarily know about your client… And in one instance with one of my families it was just so revealing of how depressed she was and how fed up she was and in the last week alone how suicidal she'd felt and how close she'd come to self-harming and what she'd done to stop herself doing that.' (Family support worker)

> 'I really find them [standardised measures] invaluable for eliciting more information from the client that perhaps you would not necessarily find out until further down the line. Without doing something like that, without doing the assessment measures you do not get a foothold on who the person really is. It just enables you to in a very unobtrusive way ask them a little bit of why they have scored that. It's almost like they are giving you the information and you just need to ask the question because they may not necessarily be able to volunteer it. Why would you sit down and tell a complete stranger that in the past week you'd felt suicidal and you felt like cutting yourself without having a conversation that led you into that. And

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that's really important to know where your clients are emotionally and how stable they are and it also gives an indicator to what family life is like, what their support is like, what their relationship is like and also what the triggers are for those things.' (Family support worker)

'Strong support for the use of a system that kept track of standardised assessment scores and generated a summary report'

The team noted that an automated system to flag when questionnaires for each client were due to be repeated would be a useful enhancement of the online system. Nevertheless, there was strong support for the use of a system that kept track of standardised assessment scores and generated a summary report.

'I love the online system [PuP Online Support Tool] because it logs everything. You have got it all in one place. It's very visible... and at the end you can create a summary report which I used recently with one of my families where we closed the case... [in this] instance there had been improvements and we could talk about when she had real anxiety and stress prior to baby being born for example where she did not know if she was going to get to keep the baby, through to that easing right off and the scores coming right down.' (Family support worker)

Capacity to Change Stage Two: Development of a Case Conceptualisation and Collaborative Goal Setting to Address Specific Child Protection Issues

'Most service users reported feeling anxious and defensive at the first meeting with the practitioners'

Most service users reported feeling anxious and defensive at the first meeting with the practitioners. For some, this was based on previous experience with professionals and, for others, hearsay. Framing the assessment process as an opportunity for the parents to demonstrate a willingness and capacity to make change was important in building trust and developing a partnership model of working. This was something that was consistently noted and valued by service users.

'She always said that she'd be open and honest with us regardless, whether it's good, whether it's bad, whether she's going to decide that yeah we need a Court case, we need a Judge to decide or no I am willing to let you come home now. And she done everything she could to reassure me and she even… didn't she… even got a letter in the post just to reassure you… she put it all in writing for me and everything.' (Service user)

The advantages of setting goals to monitor change were also noted.

'It is a good way of measuring the tasks, have they been reached, have they been even attempted sometimes. Sometimes you make some [goals] and think oh well there's been an attempt, let's work more, let's you know break it down even further to make it even more achievable… I think you begin to sort of think… bit more work or yes this person's really going… trying, let's put this in place now, let's do this.' (Social worker)

Capacity to Change Stage Three: Working Therapeutically to Provide a Time-Limited Evidence-Based Intervention to Support the Family with Goal Attainment

The practitioners reported satisfaction with the PuP programme, the array of materials offered and implementation support. They particularly valued the underlying theoretical framework and its flexibility that they felt allowed them to work with service users' priorities at the time.

'It looks at the things that we know affect the outcomes for babies. …it obviously looks at attachment. …you know there's a lot of focus on eye contact. There's a lot of focus on sensitive parenting… it also addresses aspects around adult emotional regulation which

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you know historically when we look at the families that we've worked are where things have gone wrong.' (Family support worker)

The practitioners highlighted the importance of being able to offer a therapeutic intervention as part of the pathway, which was a departure from standard practice of referring families to other therapeutic services. This was described by one social worker as 'real social work'. Service users also reported satisfaction with the PuP programme.

'The practitioners highlighted the importance of being able to offer a therapeutic intervention as part of the pathway'

'A lot of the PuP workbook I liked… Like what you feel like when you look at your babies, what kind of emotions do you feel. And it gets you thinking like actually like different ways of looking at your babies and like you recognise a bit more information about your own babies.' (Service user)

'Realising what to expect with a baby and what to do and if I need help just ask for help. Because I wouldn't even have thought about doing that otherwise. And engaging with family centres and stuff. Because they got me into that.' (Service user)

Capacity to Change Stage Four: Reviewing and Reporting on Standardised Measures and Goal Attainment

Practitioners reported that administering the standardised measures on a regular basis was useful in setting goals, treatment planning and monitoring progress.

'... the second measures gives us the next goals that we can work for, work too, to see if there's been… it is a good way of measuring the tasks, have they been reached, have they even been attempted.' (Social worker)

Court reports included information from standardised measures and on the capacity of the family to meet the goals that had been decided upon. This in combination with the ability to work closely and therapeutically with families led to the view that decision-making was more informed. Social workers reported increased confidence in the decisions they made.

'Social workers reported increased confidence in the decisions they made'

'One of the nurses said "how do you actually feel, aren't you even sad…? [Infant being removed from mother soon after birth]". I say "no" because by the time we've come to this point we are a hundred and fifty per cent, not a hundred per cent, a hundred and fifty per cent, that we've done everything, we've tried everything, we've put everything into it…' (Social worker)

'But the most important thing is babies. We're making the right decisions for babies. And they're being you know offered optimum chances... If they're being placed you know… whether they stay at home… we've got cases where babies are staying at home as well, but wherever and whatever the placement might be, the decision's been made early enough to offer the absolute best opportunity.' (Social worker)

The capacity to change model contributed to more timely decision-making. One social worker noted that a magistrate had commented to her that the evidence she presented in court was 'overwhelming' and that he was in an 'unprecedented position' to make a decision regarding the case.

'The capacity to change model contributed to more timely decision-making'

Discussion

This study investigated the feasibility of embedding the capacity to change model of risk assessment and the PuP programme into a pre-birth assessment

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pathway for high-risk pregnant women. A distinctly different pattern of child protection outcomes was observed for the infants whose mothers were part of the pre-birth assessment and care pathway compared to those receiving routine care. Changes in scores on standardised measures suggested that many women offered the PuP programme made significant gains in wellbeing and perceived social support. Finally, qualitative analyses indicate that the pre-birth assessment and care pathway was perceived to be successful across all four stages of the capacity to change process, as judged by a range of professionals and service users.

'The pre-birth assessment and care pathway was perceived to be successful across all four stages of the capacity to change process'

Findings on Standardised Measures and Child Protection Outcomes

The baseline measures of women in the pre-birth assessment period indicated that approximately one-third of the sample experienced levels of depression, anxiety or stress that placed them in the moderate to severe risk range. For the subsample of women who retained their infants and completed these measures at two months following the birth of their babies, a significant improvement was found on all measures except for the AUDIT-C. Notably, at assessment (i.e., while pregnant) three women reported drinking alcohol at rates that exceed recommended guidelines for pregnant women highlighting the issue of alcohol consumption amongst high-risk vulnerable young women (Ospina and Dennett, 2013).

'Interestingly divergent patterns of child protection involvement for the two groups'

The findings from the child protection data show interestingly divergent patterns of child protection involvement for the two groups. Legal proceedings were instituted for 26 per cent of the infants in the pre-birth pathway with an ICO granted prior to hospital discharge and either an adoption order or adoption plans in place at 12 months. None of the infants receiving routine care had an ICO in place prior to discharge from hospital. This may reflect either more timely and better decision-making for those infants in the pre-birth pathway or an overly intrusive child protection system that is failing children by removing prematurely. We would propose that the former is more likely as: the women had been engaged in support for nearly half of their pregnancy, extensive home visiting and community support had been provided and despite this, the senior practitioner reported that she was confident in her decision-making process. It is possible that the long-term double jeopardy of exposure to an abusive environment followed by disrupted care arrangements had been avoided (Ward *et al*., 2012), in part due to the additional surveillance during pregnancy. There were also marked differences in the level of statutory intervention across the two groups. An improvement (i.e. a less intrusive or no order) was recorded for over 40 per cent of the infants in the pre-birth care pathway at 12 months, with families moving away from the child protection system as greater certainty about longer-term functioning of the mothers enabled cases to shift from child protection and child in need to closure. Notably, a similar proportion of infants in routine care had not changed in status, remaining in the child protection system. Not only is this placing ongoing financial burden on the child protection system (Fang *et al*., 2012), but families continue to have their own parental autonomy limited in the absence of genuine and sufficient attempts to facilitate change (Harnett and Day, 2008). A care pathway that provides both more timely decision-making and enables families to exit the child protection system will be associated with considerable cost savings. An economic analysis of the PuP programme

'Marked differences in the level of statutory intervention across the two groups'

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(Dalziel *et al*., 2015) concluded that for every 100 families receiving the PuP programme, 20 would be diverted from the child protection system. This represented a net present value saving of an estimated AUD3.1 million (£1.7 million). Ultimately, the only way to determine whether better decision-making has occurred in this cohort would be a longitudinal study to determine the outcomes for the infants through early and middle childhood.

Acceptability and Utility of the Capacity to Change Process: Qualitative Findings

The capacity to change model provides a platform for structured professional judgement, enabling practitioners to combine practice knowledge with information obtained from standardised assessment tools. While there has been a long tradition of suspicion and reluctance to utilise psychometric evaluation in social care practice (e.g. Léveillé and Chamberland, 2010), current commentary is increasingly recognising the benefits of using standardised measures (Barlow *et al*., 2012). Notably, although the practitioners who implemented the pre-birth assessment pathway had not previously used standardised measures, they reported these to be a useful addition to the assessment process. The practitioners reported sharing the results with families as part of the process of being clear and transparent. Thus, the PuP Online Support Tool removed a significant barrier for the successful implementation of the new assessment and care pathway. The information gained allowed for the development of a support plan that had clear goals. This, combined with regular monitoring and feedback on progress towards goal attainment, was seen to help engage and motivate parents, a finding that is consistent with previous research where specificity and feedback in goal attainment is a key factor in motivating change (Locke and Latham, 2002; Poulsen *et al*., 2015).

‘The PuP Online Support Tool removed a significant barrier for the successful implementation of the new assessment and care pathway’

The data from the present study suggest that the results of the case reports detailing the extent of change from involvement in the pre-birth assessment pathway (stage 4) resulted in earlier permanency planning. One in five infants was placed on an ICO before leaving hospital. For just over 40% of the families, a reduction in social service involvement was indicated by a change in child protection orders that lead to either case closure or a far less intrusive order, for example, child in need. Court decisions were made on the information provided by the practitioners trained in the pre-birth care pathway without the delays and costs associated with ordering specialist assessments.

‘For just over 40% of the families, a reduction in social service involvement was indicated by a change in child protection orders’

Limitations and Future Directions

As only limited background information could be obtained on mothers receiving routine care, it was not possible to assess whether the two groups varied demographically. Second, it was not possible to obtain information on the nine closed cases in routine care as administrative data were not available. Third, as those in routine care did not complete the standardised measures, it is not possible to know whether the changes observed in the pre-birth pathway group would also have occurred for those receiving routine care. Clearly, further research is needed to more thoroughly test the efficacy of the pre-birth assessment and pathway. Ideally, this would occur within the context of a

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randomised controlled trial that would be sufficiently powered to both test the model itself and identify the mechanisms leading to change in families.

Conclusion

The pre-birth assessment and care pathway provides practitioners with a structured approach to assess families and provide parenting support. Women referred to the pathway who provided pre- and post-birth data reported significant decreases in depression, anxiety and stress, and an increase in social support. An improvement in child protection status was observed in just over forty per cent of the families referred to the pre-birth assessment process compared to 14 per cent of those in routine care. Notably, just over forty per cent of the infants in routine care showed no change in safeguarding status. While these results are promising, further research is required to investigate the cost- and clinical effectiveness of this process compared to routine care, and to test potential predictors of outcome.

'Further research is required to investigate the cost- and clinical effectiveness of this process compared to routine care'

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Conflict of Interest

PHH and SD are the developers of the PuP programme. Findings from this study contribute to the evidence base for the PuP programme. The programme is owned and disseminated by Griffith University with a non-exclusive licence granted to the University of Queensland. Proceeds from dissemination are distributed in accordance with Griffith University policy with five per cent of training fees paid to the University of Queensland. Surplus funds from training contracts are used to support research activities associated with the PuP programme. JB, CC and CN report no competing interests.

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