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Citation: Ayers, S., Crawley, R., Alderdice, F. & Eagle, A. (2021). Personalised approaches to intervention for perinatal mental health difficulties. *Journal of Reproductive and Infant Psychology*, 39(4), pp. 339-341. doi: 10.1080/02646838.2021.1962614

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Link to published version: <https://doi.org/10.1080/02646838.2021.1962614>

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JRIP Editorial August 2021

Personalised approaches to intervention for perinatal mental health difficulties

Susan Ayers^{1*}, Rosalind Crawley², Fiona Alderdice³ & Andrew Eagle⁴

¹ Centre for Maternal and Child Health, School of Health Sciences, City, University of London.

² School of Psychology, University of Sunderland.

³ National Perinatal Epidemiology Unit, University of Oxford.

⁴ Central and North West London NHS Foundation Trust.

Corresponding author Susan.Ayers.1@city.ac.uk

Word count 996 (not including references)

Perinatal mental health difficulties affect approximately 20% of women and the impact on women and children costs the UK £8.1 billion per annual cohort of births (Baur et al., 2014). For some women these difficulties occur for the first time in the perinatal period, while others have pre-existing mental health conditions. Conditions range from mild to moderate depression or anxiety to more severe conditions, such as post-traumatic stress disorder, psychosis and bipolar disorder. The question posed is how best to support women with newly emergent psychological difficulties as well as prevent the re-emergence of symptoms in those with a history of mental health difficulties.

Most evidence on interventions for perinatal mental health difficulties is based on studies examining the efficacy of a single intervention such as exercise, meditation or psychotherapy. However, it is unlikely that any single intervention will be appropriate for all women given the diversity in symptoms and severity, as well as women's individual and social circumstances. This may explain why some studies suggest an intervention that is not universally effective may be effective for some women e.g. HAbiT study of expressive writing (Ayers et al., 2018).

It is therefore important to move away from a 'one-size fits all' approach to a personalised approach which means offering a range of different interventions. Personalised medicine *'uses new approaches to better manage patients' health and target therapies to achieve the best outcomes in the management of a patient's disease or predisposition to disease'* (NHS England, 2016).

Personalised and person-centred approaches have been used throughout medicine but advances in genomics and informatics mean the field is advancing rapidly. This is especially the case in relation to physical illnesses, such as cancer (Gambardella et al., 2020).

Personalised approaches might deliver better health outcomes and provide a way to address equality of access for different socio-demographic groups and offer treatments suitable for the needs of local populations. The UK Long Term Plan (LTP) committed to delivering personalised care by 2024 (NHS, 2019). The six principles of personalised care are: (1) patient choice; (2) shared decision making; (3) patient activation and supported self-management; (4) social prescribing and community based support; (5) personalised care and support planning; and (6) personal health budgets. If women are currently well, the LTP recommends using patient choice, shared decision making, social prescribing and community support to increase wellbeing and prevent ill-health. If women have complications or long term conditions, the LTP recommends also using patient activation and self-management, personalised care and support planning to increase the likelihood of good outcomes.

So what might personalised care for perinatal mental health look like? First it would involve offering a range of interventions, in a range of settings. Improving Access to Psychological Therapies services which provide targeted cognitive behaviour therapy and supported self-help, report that 51% of people recover, two thirds show some improvement, and a third do not improve (Clark, 2018).

Providing a range of different interventions targeted according to a person's needs and characteristics might increase the potential to help this remaining third recover. Interventions might include community groups, physical exercise, peer support, through to psychological therapies such as mindfulness, guided self-help, CBT and other psychotherapies.

The challenge is how personalised care works in practice. How can we help women and practitioners to navigate care pathways and how can we best support women to make informed choices in the absence of evidence on the efficacy of interventions for specific groups? One way to address this is having 'social prescribers' who are link workers familiar with local population needs and services who advise health professionals and patients on local or online interventions relevant to a woman's needs (NHS, 2019). This provides information and choice for women and practitioners

to decide which option(s) to take up. However, this process takes time and effort and can involve trial and error.

Another challenge is that in order to target interventions to women in different groups, services have to decide which factors to use. These might include type of symptoms, severity of symptoms, other long-term health conditions or pregnancy complications, social deprivation or vulnerability. Little is known about the most effective combination of factors for targeting different interventions. Evaluation therefore needs to be built in from the beginning so factors can be adjusted to be as effective as possible. Evidence on personalised care in oncology shows that multiple factors need to be considered to consistently improve clinical outcomes (Gambardella et al., 2020).

Evaluation of the outcomes of personalised care is therefore critical. Ideally, interventions should be evidence-based and known to be effective and acceptable for women in groups they are offered to. Randomised controlled trials (RCTs) are the gold standard for evaluating efficacy in healthcare. However, RCTs by their very nature explore the average effect of an intervention across the population being studied. More flexible innovative designs are needed when evaluating personalised care. Basket trials, umbrella trials, and platform trials are examples of novel designs that explore multiple hypotheses through concurrent sub-studies (e.g., multiple treatments or populations) and facilitate evaluation of personalised medicine (Park et al., 2019).

Implementing standardized assessments in maternity and mental healthcare could also provide valuable complementary data to RCTs on treatment effectiveness. This approach is often referred to as practice-based evidence. With practice-based evidence, reliable and clinically valid patient reported outcome measures are used at multiple time points to enable patients and practitioners to see if the treatment is working, to identify problems, aid decision making and improve outcomes (Boswell, 2020). While not a substitute for RCTs, practice-based evidence could make a significant contribution to evidence on the effectiveness of interventions for perinatal mental health difficulties when used with different groups.

In summary, providing personalised care for women with perinatal mental health difficulties has the potential to provide choice, facilitate shared decision making and improve outcomes for women and their families, particularly those who do not access or respond to usual recommended care. However, it also raises challenges and requires proper evaluation to ensure it is effective.

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