

Supplementary Information

Supplementary Table 1. Standard practice in the preterm birth clinic

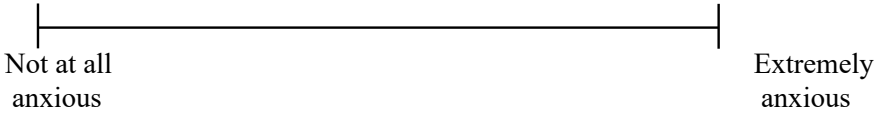
Clinic referral criteria	<p>At least one of the following risk factors for spontaneous preterm birth:</p> <ul style="list-style-type: none"> ▪ Previous spontaneous preterm birth or PPROM <36 weeks of gestation ▪ Previous spontaneous second trimester loss at 16⁺⁰ to 24⁺⁰ weeks of gestation ▪ Previous LLETZ with >10 mm depth of excision or ≥2 procedures of any depth ▪ Previous knife cone biopsy or trachelectomy ▪ Congenital uterine and/or cervical anomaly ▪ Short cervix detected on transvaginal ultrasound scan in current pregnancy of <25 mm at <24⁺⁰ weeks of gestation ▪ Other risk factors e.g. ≥2 surgical termination of pregnancy and/or evacuation of retained products of conception procedures, complicated caesarean section at full dilatation, history of diethylstilboestrol exposure (woman or her mother), known collagen or connective tissue disorders
Initial consultation at around 12 weeks	<p>Obstetric and medical review is undertaken to identify risk factors for preterm birth, along with vaginal examination, microbiological swabs, midstream urine for culture and transvaginal ultrasound assessment of the cervix.¹ Women are provided with information regarding their individualised risk for preterm birth and counselled on potential interventions including lifestyle and behaviour change (including support for smoking cessation), serial cervical length assessment, cervical cerclage and progesterone therapy, and an individualised plan of care is made. History-indicated (elective) cervical cerclage is generally reserved for women with multiple second trimester miscarriages or spontaneous preterm births, in line with current evidence.² Progesterone is not offered as prophylactic treatment and use is considered only in women who develop a short cervix.</p>
Psychological support	<p>Clinician assessment of psychological wellbeing was performed during routine clinical assessment. Referral to women's health social work or maternal mental health services was offered to women identified as needing additional psychological support.</p>
Subsequent reviews	<p>In the majority of cases, subsequent visits are fortnightly from 14 to 24 weeks and include a review of pregnancy progress and transvaginal ultrasound assessment of the cervix. Ultrasound-indicated cervical cerclage or vaginal progesterone are recommended if the cervix shortens to <25 mm. Decisions regarding these interventions are made on an individual basis including further review of risk factors, other signs and symptoms and cervical length.</p>
On-going care	<p>Women are discharged back to their lead maternity carer at 23 to 25 weeks. An overall risk assessment for very early preterm birth is</p>

	made at the final visit and includes the selective use of quantitative fetal fibronectin and the QUiPP App for those thought at highest risk. The QUiPP App ³ combines history, cervical length and fetal fibronectin to predict spontaneous preterm birth within certain timeframes and is used to guide decisions on hospital admission and antenatal corticosteroid use.
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LLETZ, large loop excision of the transformation zone; PPROM, preterm pre-labour rupture of membranes.

Supplementary Table 2. Study specific questionnaires from Set 1

Study specific questionnaire Set 1	
1. Which ethnic group do you belong to? Mark the space or spaces which apply to you.	<input type="checkbox"/> New Zealand European <input type="checkbox"/> Māori <input type="checkbox"/> Samoan <input type="checkbox"/> Cook Island Māori <input type="checkbox"/> Tongan <input type="checkbox"/> Niuean <input type="checkbox"/> Chinese <input type="checkbox"/> Indian <input type="checkbox"/> Other such as Dutch, Japanese, Tokelauan. Please state:
2. Were you aware that you had an increased risk of your baby being born early in this pregnancy before you got pregnant?	<input type="checkbox"/> Yes If yes, please go to question 3 <input type="checkbox"/> No If no, please go to question 4
3. Did you contemplate not getting pregnant prior to this pregnancy because you were worried about your increased chance of having a baby born early?	<input type="checkbox"/> Yes <input type="checkbox"/> No
4. Once you were pregnant, did your lead maternity carer (midwife, GP or obstetrician) identify that there was an increased chance of your baby being born early in this pregnancy?	<input type="checkbox"/> Yes If yes, please go to question 5 <input type="checkbox"/> No If no, please go to question 6
5. How did you feel when your lead maternity carer (midwife, GP or obstetrician) identified that there was an increased chance of your baby being born early in this pregnancy?	<input type="checkbox"/> Very anxious <input type="checkbox"/> Somewhat anxious <input type="checkbox"/> No different / the same <input type="checkbox"/> Somewhat reassured <input type="checkbox"/> Very reassured
6. How did you feel after your maternity care provider (midwife, GP or obstetrician) suggested you come to the Preterm Birth Clinic?	<input type="checkbox"/> Significantly more anxious <input type="checkbox"/> Somewhat more anxious <input type="checkbox"/> No different / the same <input type="checkbox"/> Somewhat more reassured <input type="checkbox"/> Significantly more reassured
7. How did you feel after you read the pamphlet about what to expect in the Preterm Birth Clinic that was included with your appointment details?	<input type="checkbox"/> Significantly more anxious <input type="checkbox"/> Somewhat more anxious <input type="checkbox"/> No different / the same <input type="checkbox"/> Somewhat more reassured

<input type="checkbox"/> Significantly more reassured
8. Do you have a partner? <input type="checkbox"/> Yes <input type="checkbox"/> No
9. How would you describe your social support network (for example your partner, whānau/family, friends)? <input type="checkbox"/> Very unsupportive <input type="checkbox"/> Somewhat unsupportive <input type="checkbox"/> Neither supportive nor unsupportive <input type="checkbox"/> Somewhat supportive <input type="checkbox"/> Very supportive
10. Note how anxious (on average) you have felt about your pregnancy over the past 7 days with a mark () on the line below. <div style="text-align: center;">  <p>Not at all anxious Extremely anxious</p> </div>
11. What are you most anxious about in this pregnancy? (<i>space for response</i>)
12. What do you find most helpful to relieve any pregnancy-related anxiety? (<i>space for response</i>)
13. Have you ever been diagnosed with any of the following mental health conditions? <input type="checkbox"/> Depression <input type="checkbox"/> Postnatal depression <input type="checkbox"/> Generalised anxiety disorder <input type="checkbox"/> Post-traumatic stress disorder <input type="checkbox"/> Social anxiety disorder <input type="checkbox"/> Panic disorder <input type="checkbox"/> Obsessive-compulsive disorder <input type="checkbox"/> Bipolar disorder <input type="checkbox"/> Schizophrenia <input type="checkbox"/> Borderline personality disorder <input type="checkbox"/> Other, please name _____ <input type="checkbox"/> None
14. Are you currently taking any prescribed medication for a mental health condition? <input type="checkbox"/> Yes. If so, what is the name of this medication? _____ <input type="checkbox"/> No
15. Have you ever taken any prescribed medication for a mental health condition? <input type="checkbox"/> Yes. If so, what is the name of this medication? _____ <input type="checkbox"/> No
16. Are you currently under the care of a psychiatrist or psychologist? <input type="checkbox"/> Yes. If so, what is this for? _____ <input type="checkbox"/> No
17. Have you ever been seen by a psychiatrist? <input type="checkbox"/> Yes. If so, when was this and what was it for? _____ <input type="checkbox"/> No
18. Are you taking any pregnancy supplements or probiotics, other than folic acid, Elevit or iodine?

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| <input type="checkbox"/> Yes. If so, what is the name of the supplement/s? _____ |
| <input type="checkbox"/> No |

Supplementary Table 3. Study specific questionnaires from Set 3

Study specific questionnaire Set 3	
1. How have you found the quality of your general pregnancy care?	<input type="checkbox"/> Very low quality <input type="checkbox"/> Low quality <input type="checkbox"/> Neither high or low quality <input type="checkbox"/> High quality <input type="checkbox"/> Very high quality
2. How have you found the quality of your care through the Preterm Birth Clinic?	<input type="checkbox"/> Very low quality <input type="checkbox"/> Low quality <input type="checkbox"/> Neither high or low quality <input type="checkbox"/> High quality <input type="checkbox"/> Very high quality
3. Do you think that being seen in a preterm birth clinic made you more or less anxious about your pregnancy?	<input type="checkbox"/> Significantly more anxious <input type="checkbox"/> Somewhat more anxious <input type="checkbox"/> Neither more or less anxious <input type="checkbox"/> Somewhat less anxious <input type="checkbox"/> Significantly less anxious
4. If you have another pregnancy, would you want to be cared for through a preterm birth clinic again?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure
5. Note how anxious (on average) you have felt about your pregnancy over the past 7 days with a mark () on the line below.	<div style="text-align: center;"> <p style="text-align: center;">Not at all anxious Extremely anxious</p> </div>
6. What are you most anxious about in this pregnancy? (<i>space for response</i>)	
7. What do you find most helpful to relieve any pregnancy-related anxiety? (<i>space for response</i>)	
8. Have you been diagnosed with a mental health condition since you were first seen in the Preterm Birth Clinic this pregnancy?	<input type="checkbox"/> Yes, if so please provide details _____ <input type="checkbox"/> No

Supplementary Table 4. Criteria for risk classification for study purposes at discharge from the preterm birth clinic

Risk classification	Criteria
Low	Cervical length >25 mm, AND Quantitative fetal fibronectin level of <50 ng/ml if performed (based on usual clinical indications), AND No intervention (progesterone or cerclage) required during the current pregnancy due to cervical change
Intermediate	Shortened cervical length to 11-25 mm, AND/OR Quantitative fetal fibronectin level of 50-199 ng/ml if performed (based on usual indications), AND/OR Need for progesterone and/or cerclage during the current pregnancy due to cervical change
High	Shortened cervical length to <10 mm, AND/OR Quantitative fetal fibronectin level of \geq 200 ng/ml if performed (based on usual indications)

Supplementary Table 5. Women's knowledge of their preterm birth risk and their perceptions of preterm birth clinic care

Question and response	Number (%)
Set 1 (baseline)	
1. Were you aware that you had an increased risk of your baby being born early before you got pregnant?	
Yes	59/73 (80.8)
No	14/73 (19.2)
2. Did you contemplate not getting pregnant because you were worried about your increased chance of having a baby born early? ^a	
Yes	19/59 (32.2)
No	40/59 (67.8)
3. Once you were pregnant, did your lead maternity carer (midwife, GP or obstetrician) identify that there was an increased chance of your baby being born early?	
Yes	51/71 (71.8)
No	20/71 (28.2)
4. How did you feel when your lead maternity carer (midwife, GP or obstetrician) identified that there was an increased chance of your baby being born early? ^b	
Very anxious	11/51 (21.6)
Somewhat anxious	20/51 (39.2)
Neither anxious nor relieved	12/51 (23.5)
Somewhat relieved	5/51 (9.8)
Very relieved	3/51 (5.9)
5. How did you feel after your maternity care provider (midwife, GP or obstetrician) suggested you come to the Preterm Birth Clinic?	
Significantly more anxious	8/71 (11.3)
Somewhat more anxious	12/71 (16.9)
Neither more or less anxious	11/71 (15.5)
Somewhat less anxious	24/71 (33.8)
Significantly less anxious	16/71 (22.5)
6. How did you feel after you read the pamphlet about what to expect in the Preterm Birth Clinic that was included with your appointment details?	
Significantly more anxious	1/69 (1.4)
Somewhat more anxious	13/69 (18.8)
Neither more or less anxious	30/69 (43.5)
Somewhat less anxious	20/69 (29.0)
Significantly less anxious	5/69 (7.2)
8. How would you describe your social support network (for example your partner, whānau/family, friends)?	
Very unsupportive	7/72 (9.7)
Somewhat unsupportive	1/72 (1.4)
Neither supportive nor unsupportive	2/72 (2.8)
Somewhat supportive	6/72 (8.3)
Very supportive	56/72 (77.8)
Set 3 (after last visit)	

1. How have you found the quality of your general pregnancy care? Very low quality Low quality Neither high or low quality High quality Very high quality	0/63 (0.0) 1/63 (1.6) 4/63 (6.3) 13/63 (20.6) 45/63 (71.4)
2. How have you found the quality of your care through the Preterm Birth Clinic? Very low quality Low quality Neither high or low quality High quality Very high quality	0/63 (0.0) 1/63 (1.6) 1/63 (1.6) 12/63 (19.0) 49/63 (77.8)
3. Do you think that being seen in a preterm birth clinic made you more or less anxious about your pregnancy? Significantly more anxious Somewhat more anxious Neither more or less anxious Somewhat less anxious Significantly less anxious	2/63 (3.2) 2/63 (3.2) 3/63 (4.8) 14/63 (22.2) 42/63 (66.7)
4. If you have another pregnancy, would you want to be cared for through a preterm birth clinic again? Yes No Unsure	55/63 (87.3) 7/63 (11.1) 1/63 (1.6)

GP, general practitioner.

Denominator reflects numbered of respondents that answered each individual question.

^a Only answered if responded 'Yes' to question 1.

^b Only answered if responded 'Yes' to question 3.

References for Supplementary Material

1. Auckland District Health Board. Referral to the National Women's Health Preterm Birth Clinic Auckland: Auckland District Health Board; 2019. Available from: <http://nationalwomenshealth.adhb.govt.nz/assets/Uploads/PTB-Clinic-Referral-Guidelines-ACH-May2019.pdf>
2. Vernet G, Watson H, Ridout A, Shennan A. The Role of PTB Clinics: A Review of the Screening Methods, Interventions and Evidence for Preterm Birth Surveillance Clinics for High-Risk Asymptomatic Women. *Women Health Bull.* 2017;4(4):e12667.
3. Kuhrt K, Smout E, Hezelgrave N, Seed PT, Carter J, Shennan AH. Development and validation of a tool incorporating cervical length and quantitative fetal fibronectin to predict spontaneous preterm birth in asymptomatic high-risk women. *Ultrasound in Obstetrics & Gynecology.* 2016;47(1):104-9.