

## The Manchester Rainbow Clinic, A Dedicated Clinical Services for Parents who have Experienced a Previous Stillbirth Improves Outcomes in Subsequent Pregnancies

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Tommy's



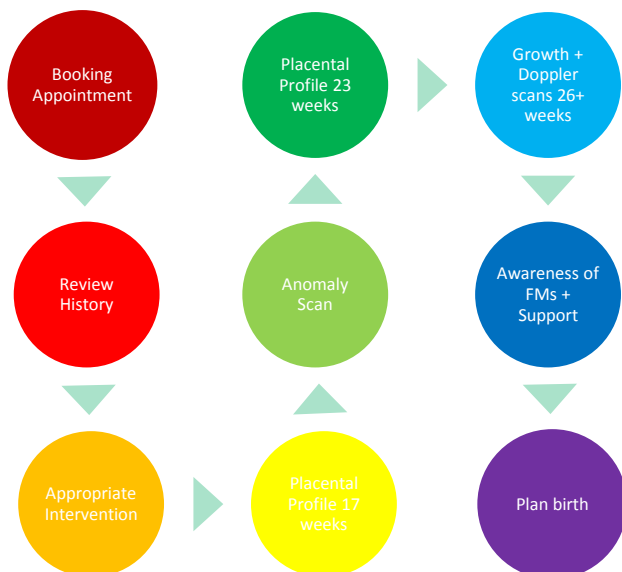
### Introduction

- Women who have had a stillbirth are at increased risk of complications in subsequent pregnancies including stillbirth (Odds Ratio (OR) 4.8),<sup>1</sup> pre-eclampsia (OR 3.1), placental abruption (OR 9.4), low birthweight (OR 2.8).<sup>2</sup>
- Embarking upon a subsequent pregnancy is also associated with increased psychological, emotional and social challenges.<sup>3</sup>
- Optimal care in pregnancies subsequent to stillbirth was identified as a priority for stillbirth research.<sup>4</sup>
- To address parents' needs a dedicated clinical service, the Rainbow Clinic, was established which combines regular appointments, therapies for specific indications, maintaining continuity of carer and identification of case notes.

### Methods

- We reviewed case notes from women attending the Rainbow Clinic to describe demographic characteristics and the number of visits.
- We conducted a retrospective case control study by reviewing the clinical outcomes for women with a history of stillbirth prior to the establishment of Rainbow Clinic (n=94) and for women who attended Rainbow Clinic (n=86).
- Parent and staff experience was quantified using a specifically designed questionnaire and the impact of Rainbow Clinic quantified using Social Return on Investment methodology.

### Rainbow Clinic – Plan of Care



### Results

- 70 women attending the Rainbow Clinic had a history of one stillbirth (81%), 6 women had two or more stillbirths (7%), 6 women had a history of late second trimester loss (7%), 4 women had a history of a neonatal death (5%).
- Women attending Rainbow Clinic ranged from 19-42 years. The majority were White British (55%), there was a significant proportion of women from Black African (20%), Black Caribbean (6%), White European (6%) and Pakistani (8%) ethnic groups.
- Women had an **average of 5 appointments** in the Rainbow Clinic (Range 1-10).
- 61% were prescribed aspirin and 12% received low molecular weight heparin** for proven thrombophilia / antiphospholipid syndrome.
- All pregnancies ended in live births.** Thirty-nine women had elective induction of labour (45%) and 14 were delivered by elective Caesarean section (16%).
- Clinical outcomes were improved following the establishment of Rainbow Clinic (see Table). Statistically significant **reductions were seen in preterm birth** (10% vs 21%; p=0.006) and **low birthweight infants** (9% vs. 18%; p=0.04).
- There was a reduction in NICU admission (9% vs. 14%) and subsequent stillbirth (0% vs 2%), but this failed to reach statistical significance.

Outcome	Prior Care n (%)	Rainbow Clinic n (%)
Preterm Birth (<37w)	20 (21)	8 (10)
Low birthweight (<2500g)	17 (18)	8 (9)
SGA (<10 <sup>th</sup> centile)	11 (12)	9 (10)
Planned Caesarean Section	16 (17)	15 (17)
NICU admission	13 (14)	8 (9)

- For every **£1 invested in Rainbow Clinic, £1.86 of value was derived** for parents and staff. This included improved education for staff and reduced psychological morbidity for parents.

### Discussion and Future Work

- A specialist clinical service for women with previous stillbirth improves clinical outcome and parents' experience.
- Further research is required to determine whether outcome is determined by the cause of stillbirth and which investigations in a subsequent pregnancy predict adverse outcome.