

# IDENTIFYING THE NEEDS OF MOTHERS IN SUBSTANCE USE TREATMENT SERVICES USING ELECTRONIC HEALTH RECORDS

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LISBON 2022



# DISCLOSURE

- No conflict of interest
- This research was funded by the Nuffield Foundation (FR-21778)



# THE PROBLEM

- Maternal substance use is considered a significant risk for child maltreatment and neglect
- The consequences of intoxication or withdrawal, and the high prevalence of comorbid psychiatric disorders may limit the mother's abilities to provide a stable and nurturing environment for their child/ren<sup>1</sup>
- Families involved in the social care system in England today are characterised by a series of complex problems including domestic violence, parental mental ill-health, substance use, poverty, and homelessness<sup>2</sup>
- In the majority of cases, these families end up in the social care system due to these adversities, rather than actually causing or being at risk of causing harm to their children

<sup>1</sup>Canfield, M., Radcliffe, P., Marlow, S., Boreham, M., & Gilchrist, G. (2017). *Maternal substance use and child protection: A rapid evidence assessment of factors associated with loss of child care*. *Child Abuse & Neglect*

<sup>2</sup>Masson, J. M., Dickens, J., Garside, L. B. E., Bader, K. F., & Young, J. (2019). *Child Protection in Court: Outcomes for Children*. School of Law, University of Bristol.

# FIGURES

- Between 40% and 70% of women in treatment for substance use are mothers<sup>1,2</sup>
- Approximately 50% of mothers receiving substance use treatment are involved with care proceedings<sup>2</sup>
- Toxic trio—domestic violence and abuse, parental substance misuse, and parental mental illness—which are all key drivers for children ending up in care, is present in the households of 3.6% of all children in England<sup>3</sup>.

<sup>1</sup>Fernandez, E., & Lee, J. S. (2013). Accomplishing family reunification for children in care: An Australian study. *Children and Youth Services Review*, 35,

<sup>2</sup>National Treatment Agency for Substance Misuse. (2012). *Parents with drug problems: How treatment helps families, 2012*

<sup>3</sup>Chowdry, H. (2018). *Estimating the prevalence of the 'toxic trio'. Evidence from the Adult Psychiatric Morbidity Survey, 2018*

# GAPS

- Not all mothers who use substances neglect their children
- As not all children of substance using mothers are removed from maternal care, several questions remain about which specific maternal characteristics contribute to childcare outcomes
- In England, there is surprisingly little empirical research involving mothers receiving treatment for substance use
- Very little information about the relationship between substance use treatment and childcare outcomes



# BARRIERS TO RESEARCH



- Identifying maternal problematic substance users during care proceedings involvement is challenging
- Engage these mothers in research is even more problematic<sup>1</sup>
- Social service casenotes:
  - Lack of a standardized substance use assessment
  - Reports on engagement were not required
  - Disclosure relied on self-report and information about substance use treatment engagement
- Electronic health records (EHRs): promising alternative

<sup>1</sup>Radcliffe, P., Canfield, M., Boreham, M., Marlow, S., & Gilchirst, G. (2020). How to capture the experience of mothers with alcohol problems involved in English family court proceedings – Lessons from the field. *Advances in Dual Diagnosis*.

## STUDY AIMS



To use EHRs to identify groups of vulnerable mothers in substance use treatment services who could benefit from more tailored service to their needs, thus increasing the chances of maternal substance use recovery, health improvements and better child welfare

# STUDY OBJECTIVES & METHODS

- Anonymized EHRs of women receiving within South London and Maudsley (SLaM) National Health Service (NHS) Foundation Trust addiction services between Jan 2013- 2020
- Data was extracted through the Clinical Record Interactive Search (CRIS) system

## **1. Identify who are the mothers of dependent children (age <18 years old) attending substance use treatment**

Retrospective observational cohort

Linked to NHS Hospital Episodes (HES): hospitalization information including the number of live births

## **2. Which information that might impact mother abilities to care for their children is being recorded in substance use services?**

A “deeper dive” in-depth investigation of unstructured data (“free text notes”)

## OBJECTIVE 1

# WHO ARE THE MOTHERS RECEIVING SUBSTANCE USE TREATMENT

- Cohort: 4370 women who attended SLaM substance use services (Jan 13/Jan 20)
- Approximately 40% (N=1730) were mothers, with an average of nearly two birth episodes
- Approximately 80% (N=1340) of identified mothers reported being a mother of dependent child(dren) ( <18 years old)

**TABLE 1. DESCRIPTION OF FEMALE SERVICE-USERS BY MOTHER STATUS AT THE DATE OF THE FIRST TOP ASSESSMENT RECORDED BETWEEN JANUARY 2013-2020**

	MOTHERS <sup>a</sup> (N = 1,730, 39.6%)	NON-MOTHERS (N = 2,640, 60.4%)	P VALUE	OR (95% CI)
<b>Socio-Demographics</b>				
Age [Mean (SD)]	38.2 (8.2)	43.3(13.06)	<.001	.62 (.58, .67)
White British	1,150 (69.3%)	1,720 (67.4%)	.204	1.09 (.95, 1.24)
Not in paid employment	1,515 (87.7%)	2047 (77.5%)	<.001	2.54(1.72, 2.42)
Housing problems	264 (15.3%)	275 (10.4%)	<.001	1.55 (1.29, 1.86)
<b>Substance use and treatment</b>				
Opioids used in the past 28 days	316 (18.3%)	382 (14.5%)	.001	1.18 (1.05, 1.41)
Crack-cocaine used in the past 28 days	352 (20.3%)	336 (12.7%)	<.001	1.75 (1.49, 2.06)
Cocaine used in the past 28 days	109 (6.3%)	162 (6.1%)	.826	1.03 (.80, 1.32)
Cannabis used in the past 28 days	284(16.4%)	367 (13.9%)	.022	1.22(1.03, 1.43)
Alcohol consumed mostly every day of the week in the past 28 days	426 (24.6%)	885 (33.5%)	<.001	.65 (.56, .74)
AUDIT total score	17.8 (12.3)	19.1 (12.1)	.009	.90 (.83, .97)
Probability alcohol dependence – AUDIT	437 (44.0%)	895 (55.7%)	<.001	.62 (.53, .74)
Overdose history <sup>2</sup>	860 (69.9%)	1,264 (75.7%)	<.001	.74(.643, .88)
<b>Health characteristics</b>				
Overall quality of life (scores ranging 0-10) [Mean (SD)]	11.38 (4.9)	11.05 (4.8)	.030	1.32 (1.12, 1.55)
Psychological health (scores ranging 0-10) [Mean (SD)]	10.93 (4.8)	10.49 (4.7)	.003	1.10 (1.03, 1.67)
Physical health (scores ranging 0-10) [Mean (SD)] <sup>^</sup>	11.90 (4.8)	11.24 (4.7)	<.001	1.15 (1.08, 1.23)
Blood borne virus <sup>2</sup>	118 (9.6%)	195 (11.7%)	.073	.80 (.63, 1.03)
Suicide attempt history	482 (39.2%)	613 (36.7%)	.179	1.10 (.95, 1.29)
Lifetime hospitalisation due to mental health problems	567 (46.1%)	782 (46.8%)	.683	.97 (.84, 1.13)
Lifetime domestic violence victimisation <sup>3</sup>	205(15.5%)	73 (4.3%)	<.001	4.03 (3.0, 5.3)
Social isolation	283 (22.9%)	461 (27.6%)	.005	.78 (.66, .93)

# Key findings: Childcare arrangement

MOTHERS OF DEPENDENT CHILD(REN) (N= 1340; 77% OF IDENTIFIED MOTHERS)

48% child(ren) in alternative care (N=640)

10 % child(ren) in the care of the mother (N=141)

42% mothers didn't disclosure childcare arrangements (N=559)

- Not possible to identify the nature of alternative care and the type of contact mothers have with their children

# HIGHLIGHTS

It also demonstrates that EHRs can identify key characteristics of mothers

The study highlights the need for substance use services to invest in approaches to improve mothers' disclosure of parenting and childcare issues

## Objective 2

# Which information that might impact mother abilities to care for their children is being recorded in substance use services?

- Free text notes include case notes, referrals to the multi-agency risk assessment conference, multi-agency public protection arrangements, or new referrals and plan for children's social care
- Subsample of 50 mothers of dependent children extracted from Cohort 1
- First qualitative study to address this question using EHRs

# FIGURE 1. SAMPLE STRATIFICATION FLOW DIAGRAM

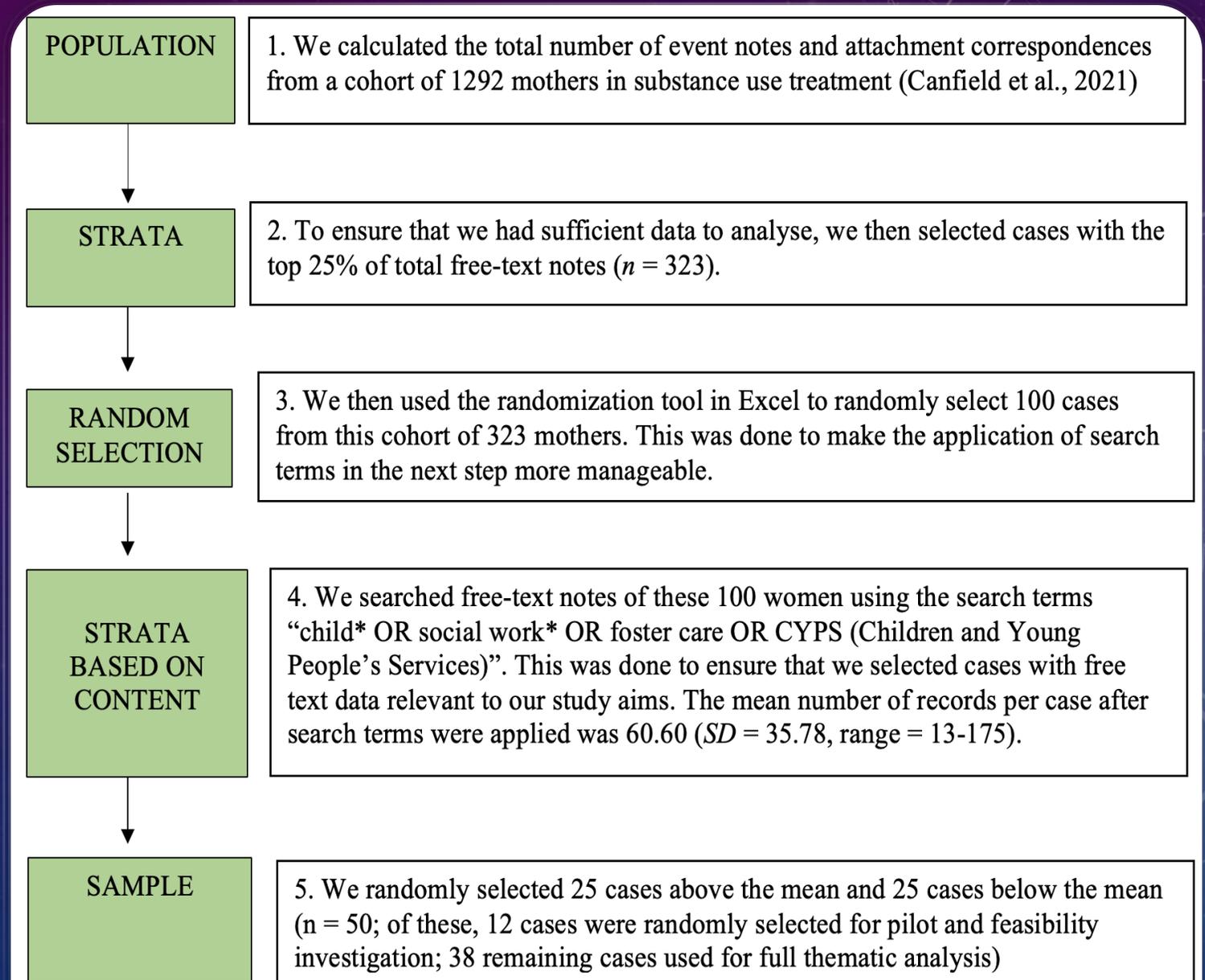
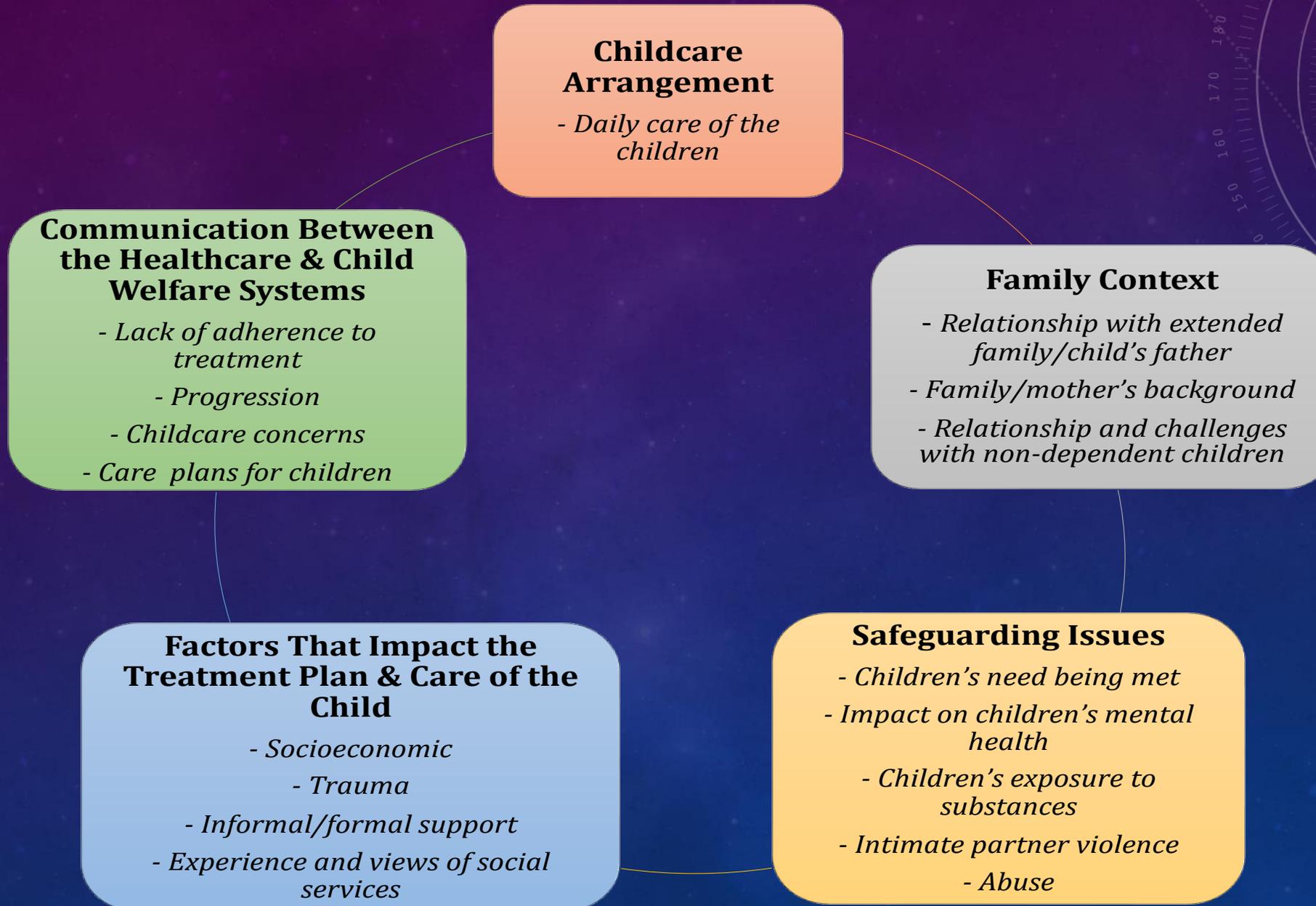


Figure 1. Sample stratification flow diagram

# DEDUCTIVE THEMATIC ANALYSIS (38 CASES)



# CONCLUSIONS

- The study demonstrates a modern methodological approach to use structured and unstructured data from EHRs to investigate maternal and childcare information about women in substance use services
- A range of maternal and childcare information are documented on EHRs
- Lacking is information on how treatment and support is being offered to patients in response to the issues documented on EHRs.
- Further investments in implementing effective family-centered strategies within substance use services are needed.
- Work is needed to improve text analytic technologies within EHRs' platforms.

# NEXT STEPS

- Analysis of a linkage dataset of substance use treatment (CRIS) and family court (Cafcass) to explore the outcome of care proceedings and the characteristics of the mothers
- Developing an approach to explore fathers in substance use services involved in care proceedings

# MUITO OBRIGADA!

Further information about the study:

- Nuffield Foundation: <https://www.nuffieldfoundation.org/project/mothers-in-treatment-for-substance-use>
- Canfield M, Norton S, Downs J, Gilchrist G. (2021). Parental status and characteristics of women in substance use treatment services: Analysis of electronic patient's records. *Substance Abuse and Treatment*
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