TOWARDS AN EVALUATION FRAMEWORK FOR INFANTS AND PARENTS ADMITTED TO KEMH MOTHER BABY UNIT

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Safe
Smart
Sustainable

Infants and Parents in the MBU

- MBU is a mental health care setting for treating maternal, dyad and infant mental health
- National Institute of Health and Clinical Excellence Guidelines for Antenatal and Postnatal Mental Health support the establishment of MBUs as best practice mental health care for mothers and their infants (NICE 2017).
- Mother can concurrently be assisted in her parenting functioning while development of her infant and attachment relationship supported while range of clinical issues addressed
- Infant preventative opportunity, identify developmental issues, physical health, parenting, relationship and risk issues in higher risk cohort

Infants and Mental Health Disorders

- Infants of mothers with untreated mental illness in the postpartum period are at risk of a range of current and subsequent mental health disorders (Hipwell)
- Improving an infant's caregiver relationship however may modulate the risk of adverse biological and psychosocial factors on their development (Tronnick and Weinberg)

Evaluations of MBU Infants and Parents

- Evaluations of Australian MBUs have described clinical characteristics and outcomes of mothers and have compared resources and model design of units (Galbally 2018, Buist 2014).
- The infant's risks of growth and developmental delay (Hill 2019 Yelland 2015) and child protection involvement (Hill 2019) have been assessed in small cohorts and distinct clinical populations
- Parenting stress, confidence, parent-infant relationship and behaviour targets for caregiving interactions have not been studied.
- A recent systemic review of research in MBUs highlighted that there was a paucity of use of validated tools which were sensitive to change used in the evaluation of infant and parenting outcomes. (Connellan 2017).

Current Findings of Infants and Parents in MBUs

- Clinical features and outcomes of infants, mother infant relationships and parents admitted to MBUs are limited in their findings.
- Schizophrenia, Bipolar diagnosis associated with poorer global developmental outcome (Wright et al 2108) and lower birth weight
- Small cohort study showed that a significant proportion of baby's admitted for any maternal mental health diagnosis met criteria for an infant mental health disorder and had developmental delay (Wright et al 2018)
- A recent study of mothers with postpartum psychosis admitted to an Australian MBU found no physical or developmental compromise of infants (Hill 2019)
- Treatment outcomes in a long stay MBU in the UK (average length stay UK 68 days vs Australia 15-27 days) showed significant improvement in maternal sensitivity and reduction in maternal intrusiveness in the caregiver relationship. Clinical population diversity, LOS differences

KEMH Mother Baby Unit

KEMH Mother Baby Unit

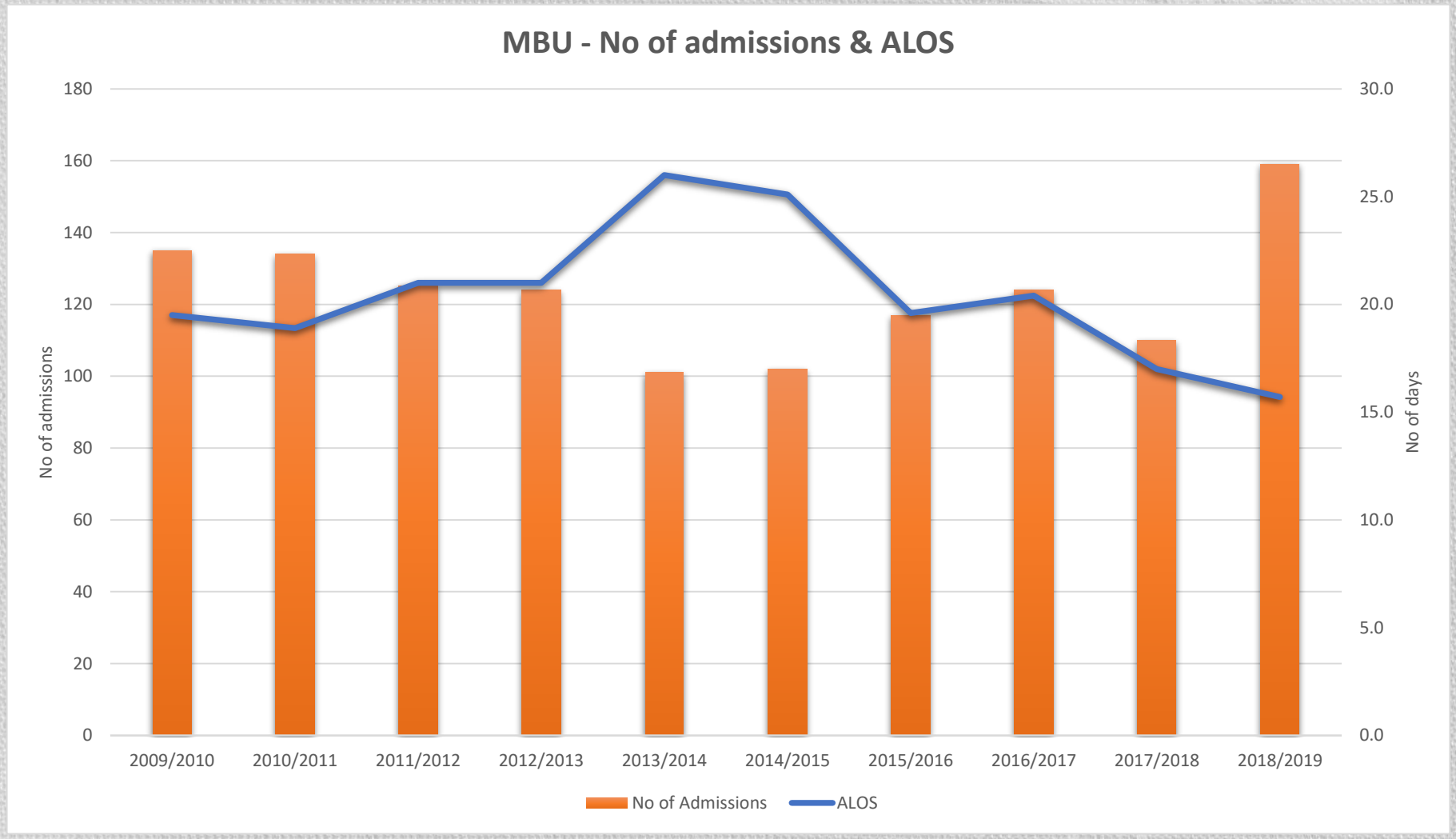
- An eight bed authorised mental health facility on the site of King Edward Memorial Hospital, a maternity hospital
- Provides acute inpatient care from a multidisciplinary team for women with mental health issues with their babies up to 12 months post partum
- Treats a range of both low and high prevalence maternal mental health disorders
- It is a safe, nurturing environment with the expertise to meet the specialised psychiatric and obstetric requirements during this vulnerable period.
- The MBU has links with Psychological Medicine at the maternity hospital which provides psychological and psychiatric care to women attending KEMH, including serious mental illness clinic

FACILITIES

- 8 bedrooms all with ensuite and queen-size beds
- Open plan kitchen, dining room and lounge
- Large laundry
- Group room
- Small outdoor area

Kitchen and baby play area

KEMH MBU Model LOS and Admissions



Infant and Parenting @KEMH MBU

- Survey of staff training needs and training sessions in attachment, mother-infant relationship interventions in focus month
- Provision of toys, large play space, dedicated mat time sessions, information social-emotional development, mothercraft nursing. nurse led play groups
- Watch, Wait, Wonder weekly open therapy group. Inclusion of COS DVD sessions and COS group and individual sessions
- Parenting functioning, attachment relationship and supports form part of individual management plan
- Creation of pediatric fast track clinical sessions clinical issues, vaccination, feeding support.
- Research infant clinical characteristics, parenting
- Still no funding of infants

Aims of Parenting Interventions at KEMH MBU

- Increase the security of attachment
- More cooperative attuned dyad
- Change reflective functioning caregiver
- Improve quality of relationship so there are more balanced representations from caregiver
- Create an empathetic shift in caregiver
- Infant experiences a caregiver who is wise, kind and creates a sense of security

Clinical Characteristics of Infants and Their Parents Admitted to KEMH MBU

B Harrison, P Brown, I Fruzynski, G Ennis

Aims:

- To report on infant physical health, growth, development including social-emotional, feeding, sleeping, medication and other use, vaccination status in all mothers admitted to an MBU
- To assess the quality of Parent-Infant Relationship and attachment in dyads admitted to an MBU
- To describe parenting functioning, behaviour, relationship, supports and stress in mothers admitted to an MBU

Measures

- KEMH Mother Baby Unit Infant Checklist (Self Report)
- Ages and Stages Questionnaire (ASQ-3)
- Ages and Stages Questionnaire Social Emotional (ASQ: S-2)
- Postpartum Bonding Questionnaire (PBQ)

Subscales: Infant Focused Anxiety, Abuse, Rejection- Anger

- Parenting Stress Index Long Form (PSI)

Subscales: Parent, Attachment, Health, Competence, Isolation, Role Restriction

- CARE- Index, Bayley III

Infant Mental Health Diagnosis

- Spitz anaclitic depression/ infantile grief arising from infant's distress in 1940s
- 1970s Pediatric depression included in textbooks so relatively late to field of psychiatry
- At present our understanding, assessment, nosology, treatment of mental health problems in early childhood lags behind school age children (Egger and Angold 2006)
- Utility of Diagnostic nosology depends on if it can be measured reliably and validly with boundaries clear between health and illness and disorders
- Infant Mental Health has multidisciplinary origins so approach to psychopathology is different with dimensional approaches rather than categorical
- American Acad Child Adolescent Psychiatry tasked with developmentally appropriate axis 1 chose 2 years and above (RCA- PA)
- DC: 0-3 published 1994, based on expert based clinical consensus, Crosswalks to DSM and . Data on reliability, validity limited. Inter-rater reliability, test-retest reliability still needs more study (Dunst et al 2006)
- Most checklist measures begin beyond 12 months ITSEA, CBCL, ECI, PAPA

Crosswalks Infant Mental Health Disorder

EATING DISORDER OF INFANCY AND EARLY CHILDHOOD

DC 0-5	DSM-5	ICD-10	ICD-10 CODE
Overeating Disorder	Unspecified Feeding or Eating Disorder	Overeating Associated with other psychological disturbance	F50.4
Undereating Disorder	Unspecified Feeding or Eating Disorder	Undereating Associated with other psychological disturbance	F50.8

POST TRAUMATIC STRESS DISORDER

DC 0-5	DSM-5	ICD-10	ICD-10 CODE
PTSD	PTSD less 6	PTSD	F43.10

Crosswalks Infant Mental Health

DISORDERS OF SLEEPING AND CRYING

DC: 0-5	DSM 5	ICD-10	ICD-10 COde
Excessive Crying Disorder	None	Non specific Symptoms specific to infancy	R68.1
Other Sleep, Eating or Excessive Crying Disorder infancy /early childhood	Other specified feeding and eating disorder Other specified sleep-wake disorder	Other eating disorder Other non-organic sleep disorder	F50.8 F51.8

Feasibility of Measures MBU

- Staff Training: CARE- Index, Bayley III
- Mixed Clinical Population, Acuity, Trauma
- Clinical Pathways: Pediatric, Child Health Nurse, Vaccination, Social Work, Outpatient Parenting Interventions, Child Protection
- PSI long form vs PSI-4-SF (parent distress, parent-child dysfunctional interaction, difficult child)
- Postpartum Bonding Questionnaire
- Outcome Measures vs LOS

Infant Clinical Results

- Birth Gestation Early 37 weeks (36-40 wk)
- Lower Birth Weight 2.8kg (2.1-3.08 kg)
- Majority of under 4 months formula fed only
- Minority late for vaccinations
- Gastro-esophageal Reflux (GOR) commonest medical diagnosis 30%, 50% on medication

(47% one month old one or greater daily regurg v 6.4%age seven months (Miyazawa) /higher rates sleep disturbance, longer onset to sleep (Ghaem et al))

- Physical Growth Adequate, one FTT
- Development Gross Motor Delay one infant, Fine Motor Delay one

Table One: Developmental Delay

DSM DIAGNOS	ASQ Total	Gross Motor	Fine Motor	Problem Solving	Personal Social	Commun
MDD GAD	285	50	55	60	60	60
MDD GAD	280	40*	60	60	60	60
Chronic SCZ	280	60	40*	60	60	60
MDD	285	60	60	55	60	50

* Denotes clinically significant

Table Two: Parenting and Attachment PNDA

DSM Diagnosis	EPDS	PASS	BDI	BAI	Post Partum Bonding	PSI Parent Scale	PSI Sub Scale
MDD Severe GAD	22*	56*	38*	19	37*	170* (90%)	Attach Compet Isolation
MDD Moderate GAD	18*	40*	18	12	27*	177* (95%)	Attach Compet Isolation Health
MDD Severe GAD	28*	75*	39*	38*	14*	157* (90%)	Attach Isolation Health

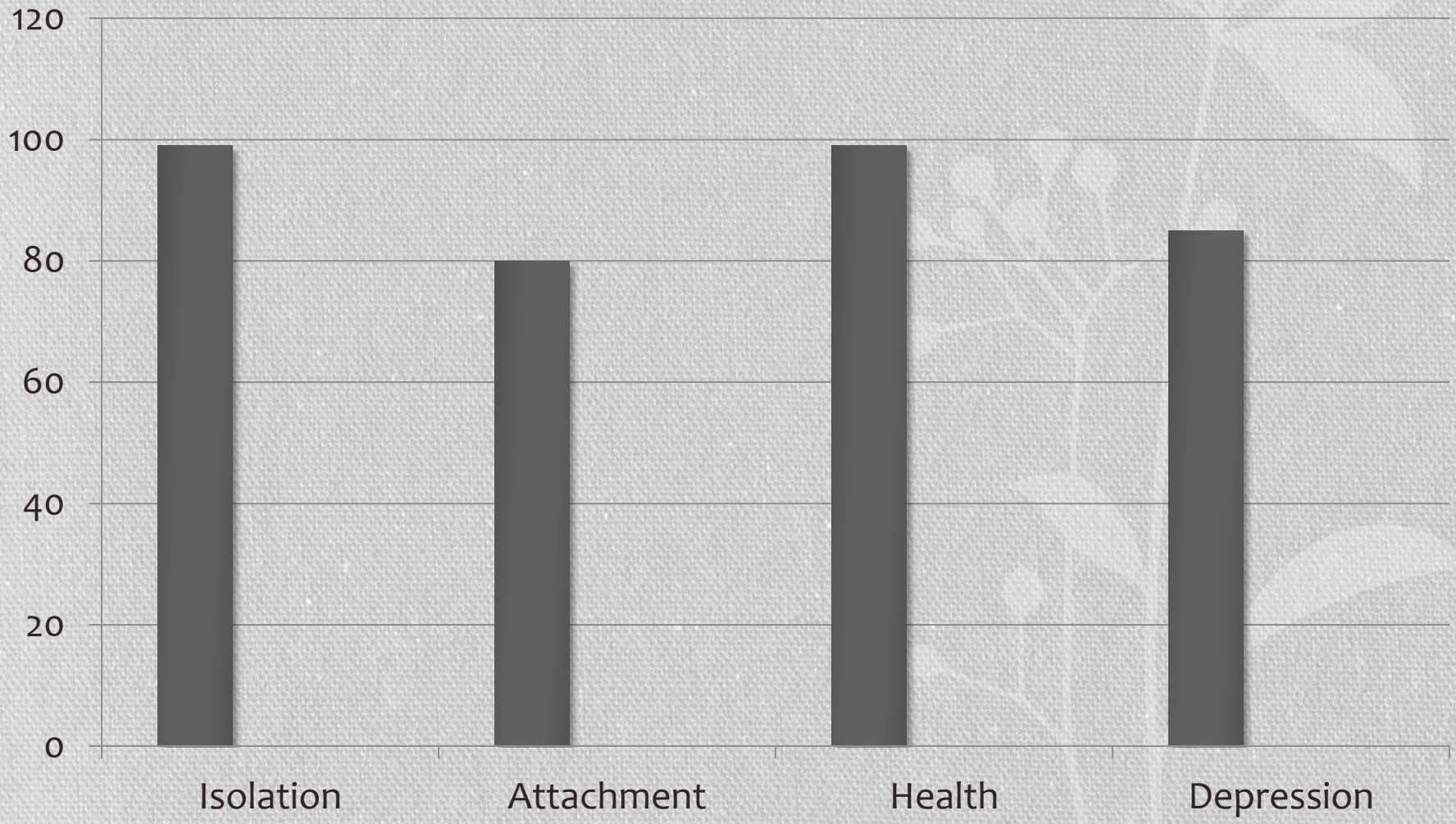
* Denotes clinically significant

Table Three: Bonding Impairment

Postpartum Bonding Impairment	Rejection/Anger	Imminent Abuse	Infant Focused Anxiety
37	24*	1	12*
27	16*	0	11*
14	3	0	11*

* Denotes clinically significant

Parenting Stress with Suicidal Ideation



Importance Of These MBU Findings

- Do Infants have lower rates of breastfeeding, lower birth weights and higher rates of physical health problems in setting of mental health issues?
- Women with postnatal mental health disorders report impaired bonding with anxiety and anger rejection common
- Parenting stress in the setting of postnatal mental health is in the clinical range across a range of diagnosis
- Attachment difficulties, isolation and feelings of lack of Competence are reported by women are contributors to their parenting stress
- Few infants had developmental compromise at the early postpartum stage
- The measures used in this project generally were well accepted and able to be completed in a clinical setting

Future Directions of Evaluation Framework

- Commence ASQ: S-2 to track Social and Emotional Development
- Clinician Rated Development Scale Bayley III
- Clinician Rated Parent-Infant Relationship and Attachment Tool (CARE-Index)- sensitivity, control, unresponsiveness, 4 infant subscales
- PSI- Short Form
- Gastro-Oesophageal Reflux Measures and By Age
- Risk Reporting
- Outcome Measures vs LOS
- Infant associated Mental Health and Physical Health Diagnosis
- Larger Cohort

Infants and Parents on the MBU