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Psychiatric Intensive Care & Leadership

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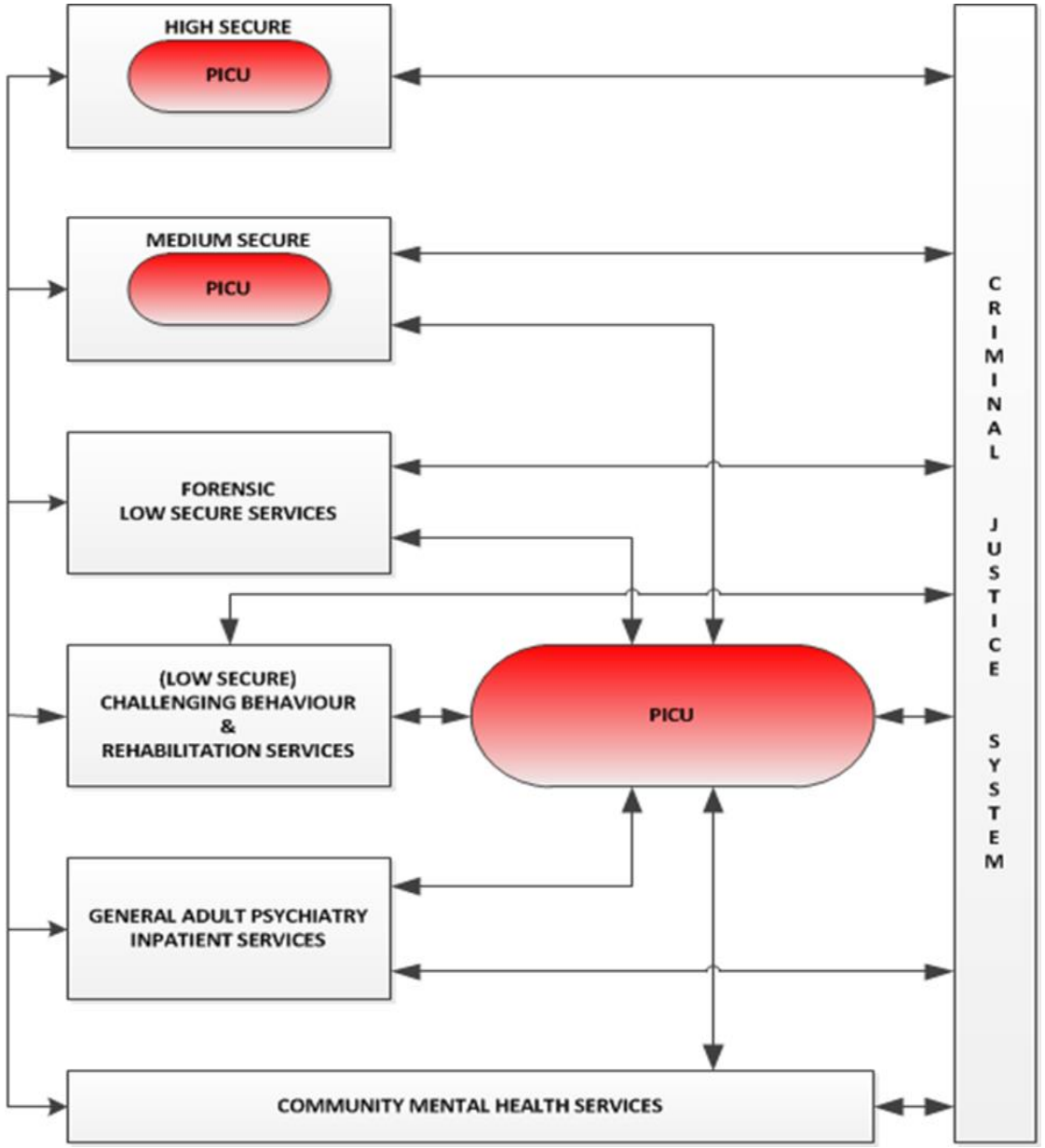
CONTENT

- ❑ **RESTRICTIVE INTERVENTIONS**
- ❑ **RAPID TRANQUILLISATION**
- ❑ **SECLUSION PRACTICE**
- ❑ **ART & MENTAL HEALTH**
- ❑ **DEMAND, CAPACITY & FLOW**
- ❑ **PANDEMIC & PICU**
- ❑ **VUCA**

The Essence of PICUs

- Fast paced and high intensity.
- Immediacy of response.
- Acute disturbance of multiple aetiology.
- Multidisciplinary.
- Dynamic.
- Leadership at all levels.
- Treatment interventions reduce risk and improve clinical state.
- **Innovative in approach.**



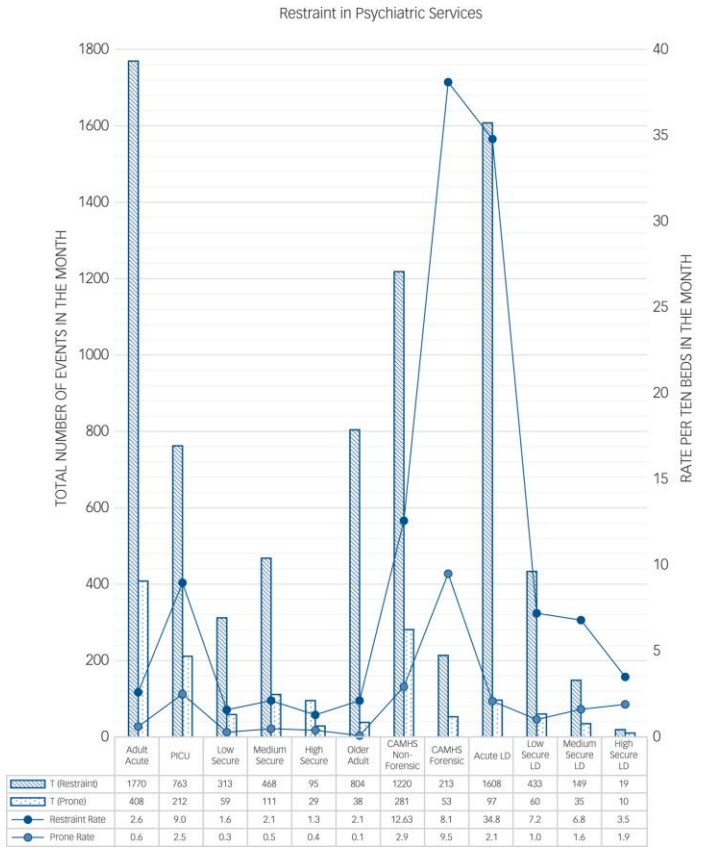
Restrictive Interventions

BJPsych | The British Journal of Psychiatry (2018)
212, 137–141. doi: 10.1192/bjp.2017.31

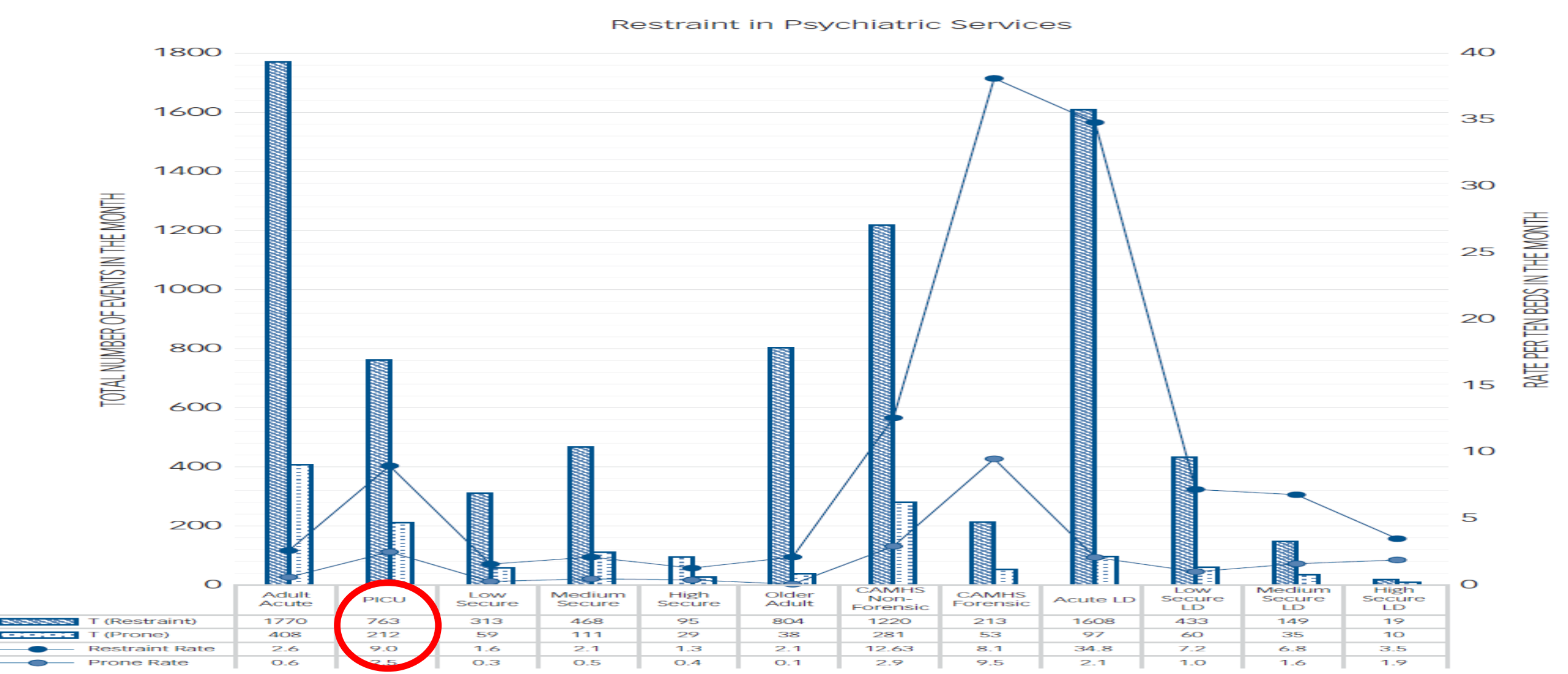
Analysis

Restraint in mental health settings: is it time to declare a position?

Faisil Sethi, John Parkes, Eric Baskind, Brodie Paterson and Aileen O'Brien



	Adult Acute	PICU	Low Secure	Medium Secure	High Secure	Older Adult	CAMHS Non-Forensic	CAMHS Forensic	Acute LD	Low Secure LD	Medium Secure LD	High Secure LD
T (Restraint)	1770	763	313	468	95	804	1220	213	1608	433	149	19
T (Prone)	408	212	59	111	29	38	281	53	97	60	35	10
Restraint Rate	2.6	9.0	1.6	2.1	1.3	2.1	12.63	8.1	34.8	7.2	6.8	3.5
Prone Rate	0.6	2.5	0.3	0.5	0.4	0.1	2.9	9.5	2.1	1.0	1.6	1.9



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Analysis

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BJPsych

The British Journal of Psychiatry (2018)
Page 1 of 5. doi: 10.1192/bjp.2017.31

Restrictive Interventions (2019)

Journal of Psychiatric Intensive Care

Journal of Psychiatric Intensive Care, 16(1): 23–28
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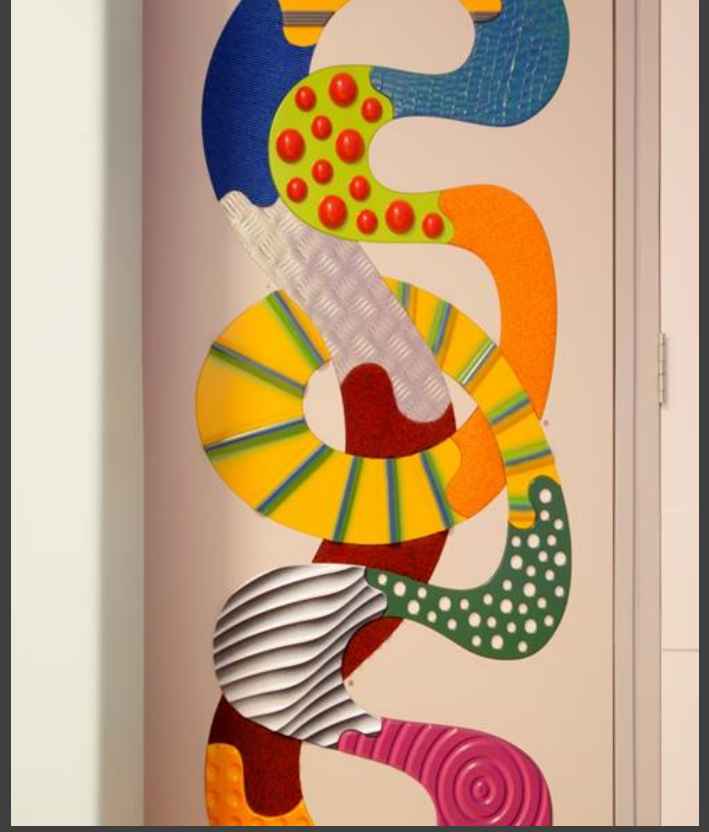
BRIEF REPORT

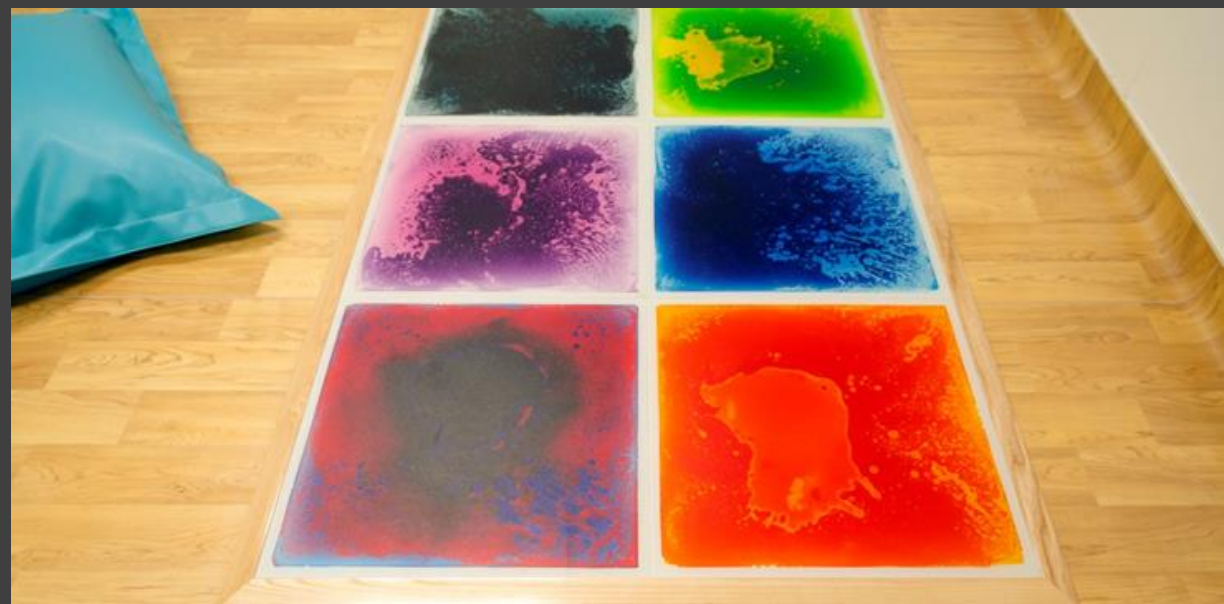
Sensory room in a psychiatric intensive care unit

Rebecca Davies, Kenneth Murphy, Faisil Sethi

Sensory Rooms & Sensory Based OT Treatments (De-escalation)

- Specially designed environment that offers a unique sensory experience
- Calming, de-escalating spaces but can also be immersive, interactive spaces
- Traditionally used in paediatric and learning disabilities
- Now used more often in adult psychiatric settings as an alternative method of de-escalation
- Support patients to improve skills in self-regulation of behaviour
- To potentially see a reduction in the use of restrictive interventions



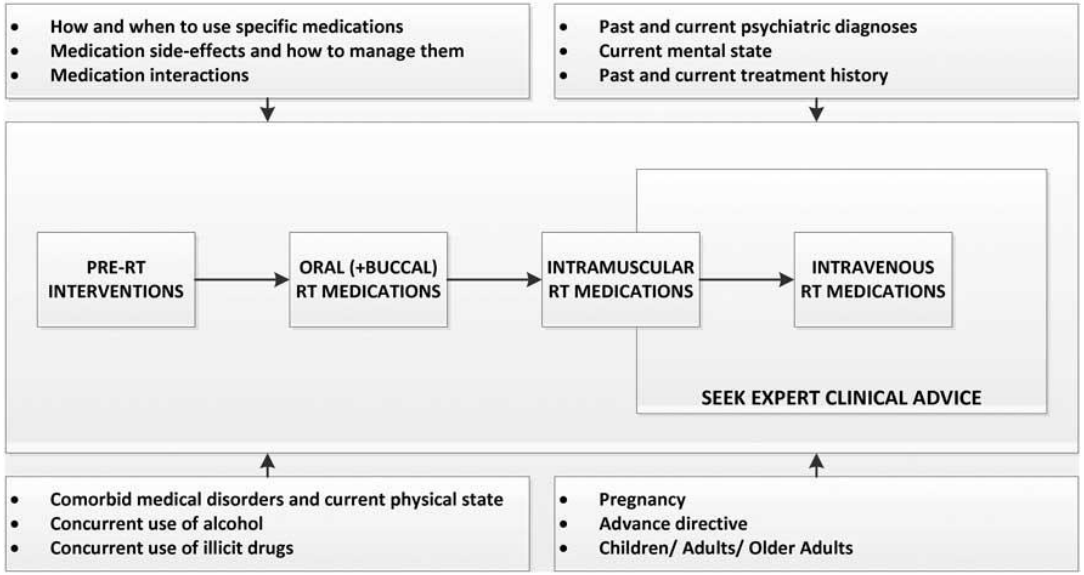


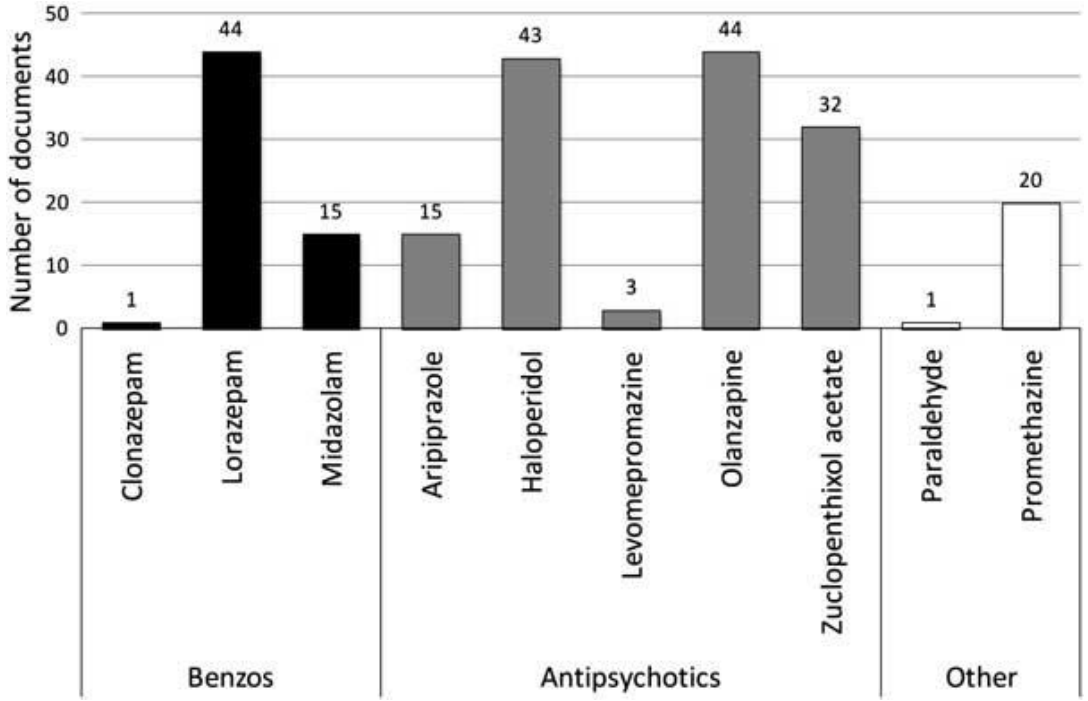
Sensory Rooms

- Evidence is emerging that sensory rooms can reduce agitation and distress for patients experiencing acute disturbance

- Sensory rooms can improve the therapeutic atmosphere on the ward and make patients and staff feel more valued

Rapid Tranquillisation (Innes & Sethi 2012)





Article

Joint BAP NAPICU evidence-based consensus guidelines for the clinical management of acute disturbance: De-escalation and rapid tranquillisation

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Maxine X Patel[1]*, Faisil N Sethi[2]* With co-authors (in alphabetical order): Thomas RE Barnes[3], Roland Dix[4], Luiz Dratcu[5], Bernard Fox[6], Marina Garriga[7], Julie C Haste[8], Kai G Kahl[9], Anne Lingford-Hughes[10], Hamish McAllister-Williams[11,12], Aileen O'Brien[13], Caroline Parker[14], Brodie Paterson[15], Carol Paton[16], Sotiris Posporelis[17], David M Taylor[18], Eduard Vieta[7], Birgit Völlm[19], Charlotte Wilson-Jones[20] and Laura Woods[21]

Journal of Psychopharmacology **32**(6): 601-640.
PMID: 29882463

AIM: To review evidence and provide recommendations on de-escalation and medication

Journal of Psychiatric Intensive Care

Journal of Psychiatric Intensive Care
doi:10.20299/jpi.2018.008
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Joint BAP NAPICU evidence-based consensus guidelines for the clinical management of acute disturbance: de-escalation and rapid tranquillisation

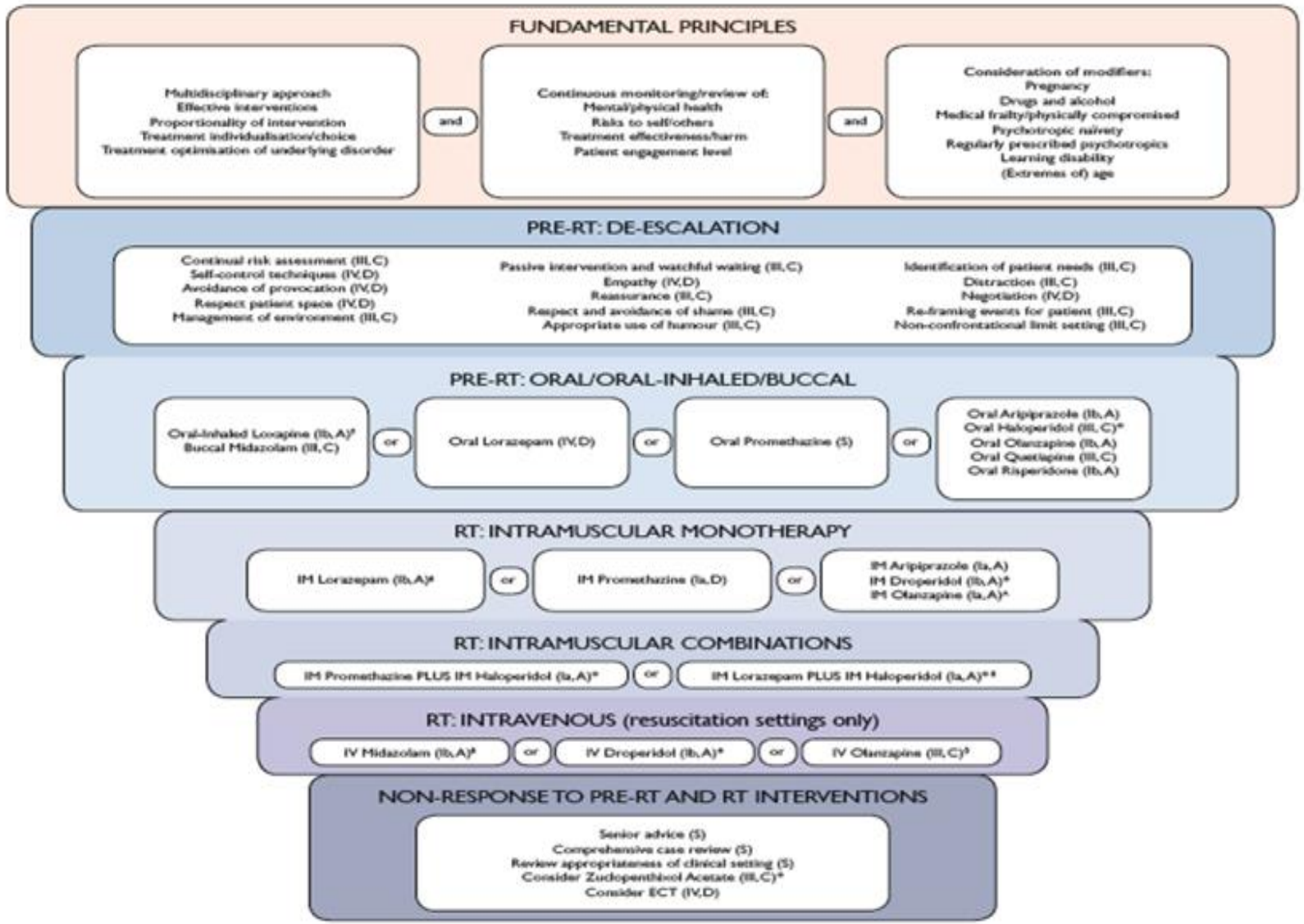
This contribution is being co-published in the following journals: *Journal of Psychopharmacology* and *Journal of Psychiatric Intensive Care*. To request permission to re-use any part of this contribution, please contact SAGE Publishing: https://uk.sagepub.com/en-gb/eur/journals-permissions.

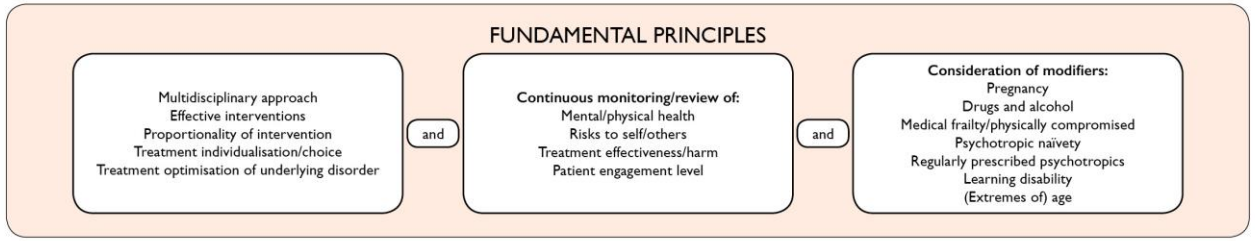
Maxine X Patel[1,*], Faisil N Sethi[2,*], Thomas RE Barnes[3], Roland Dix[4], Luiz Dratcu[2], Bernard Fox[5], Marina Garriga[6], Julie C Haste[7], Kai G Kahl[8], Anne Lingford-Hughes[3,9], Hamish McAllister-Williams[10,11], Aileen O'Brien[12,13], Caroline Parker[14], Brodie Paterson[15], Carol Paton[16], Sotiris Posporelis[17,18], David M Taylor[17], Eduard Vieta[6], Birgit Völlm[19], Charlotte Wilson-Jones[2] and Laura Woods[20]

BAP
British Association for Psychopharmacology

napicu
national association of psychiatric intensive care & low secure units

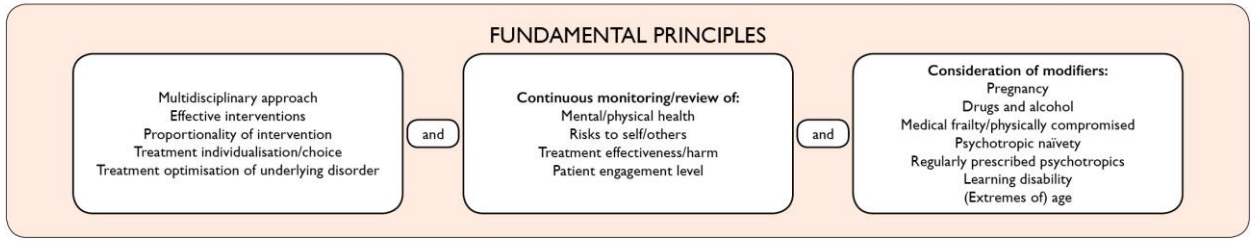
AN ALGORITHM FOR THE MANAGEMENT OF ACUTE DISTURBANCE





SEVEN FUNDAMENTAL OVERARCHING PRINCIPLES

- **Multidisciplinary approach:**
  - aetiology of acute disturbance is complex and heterogeneous
  - Mx: psychopharmacological, psychological, environmental and social interventions
- **Effective interventions:**
  - evidence base confirming that they increase positive outcomes and/or reduce negative outcomes (harm) of acute disturbance, in the immediate to short-term (minutes to hours)
- **Proportionality of intervention:**
  - an intervention's associated restriction on the patient should be proportionate (i.e. not excessive) to the acute severity of the clinical risk posed by the acute disturbance
  - least restrictive options available should always be considered first

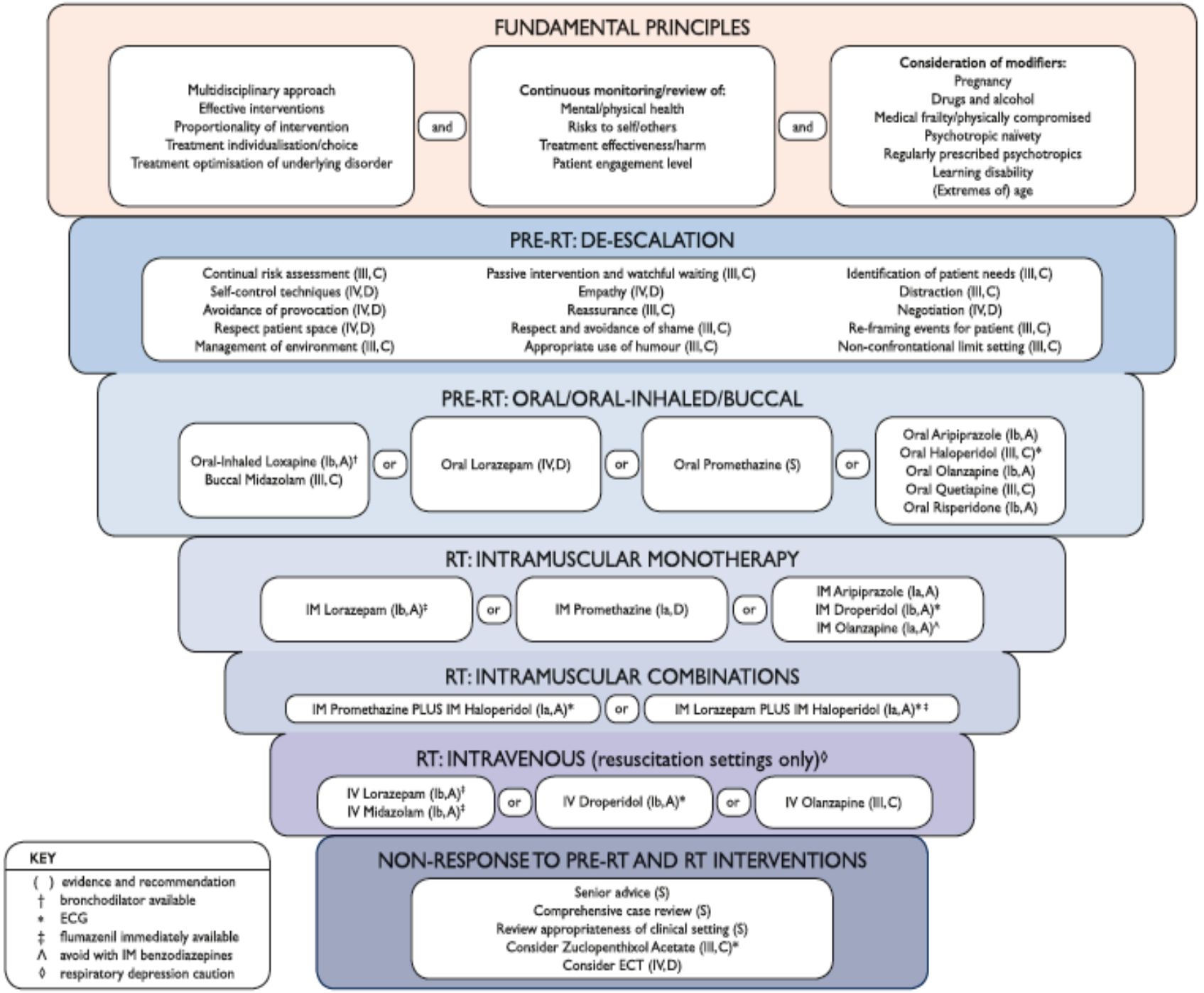


- **Treatment individualisation/choice:**
  - consideration of patient specific factors (clinical, risk and choice related)
- **Treatment optimisation of underlying disorder:**
  - Interventions should be set in a context of the overarching goal of optimising the treatment of the underlying disorder
- **Continuous monitoring/ review of:**

  (i) mental/physical health (iii) treatment effectiveness/harm

  (ii) risk to self/others (iv) patient engagement level
  - Risk is dynamic, and intervention selection needs to reflect this so that
    - ***the right intervention is used for the right scenario at the right time***

- **2018: Step change in the management of Acute Disturbance**
- **Still gaps in evidence, but there *is* evidence to inform practice**
- **Oral / IM / IV recommendations**
- **Exact choice should be tailored to the patient**



Seclusion Practice

Journal of Psychiatric Intensive Care

Journal of Psychiatric Intensive Care, 13 (2): 83–91
doi:10.20299/jpi.2017.007
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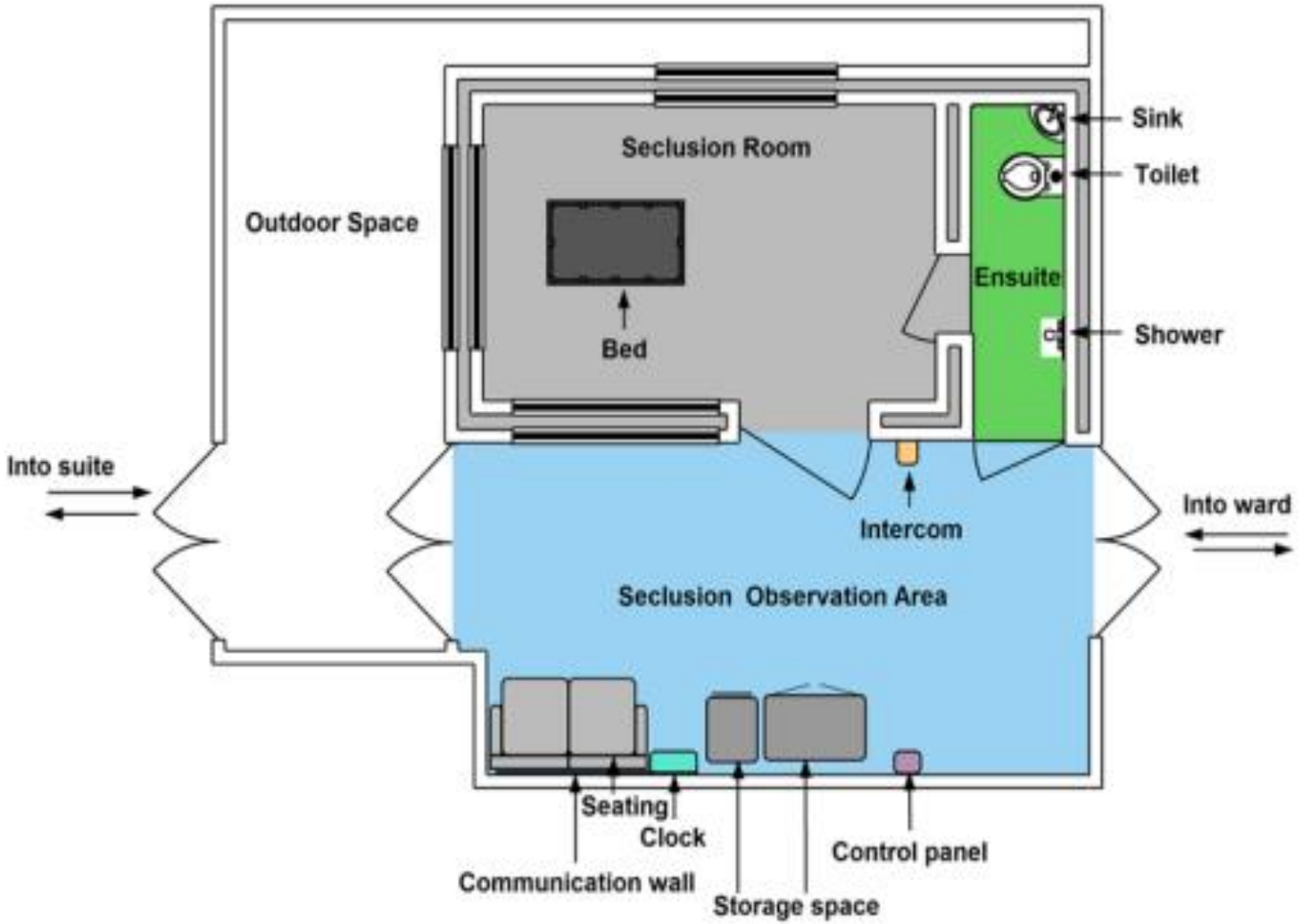
REVIEW ARTICLE

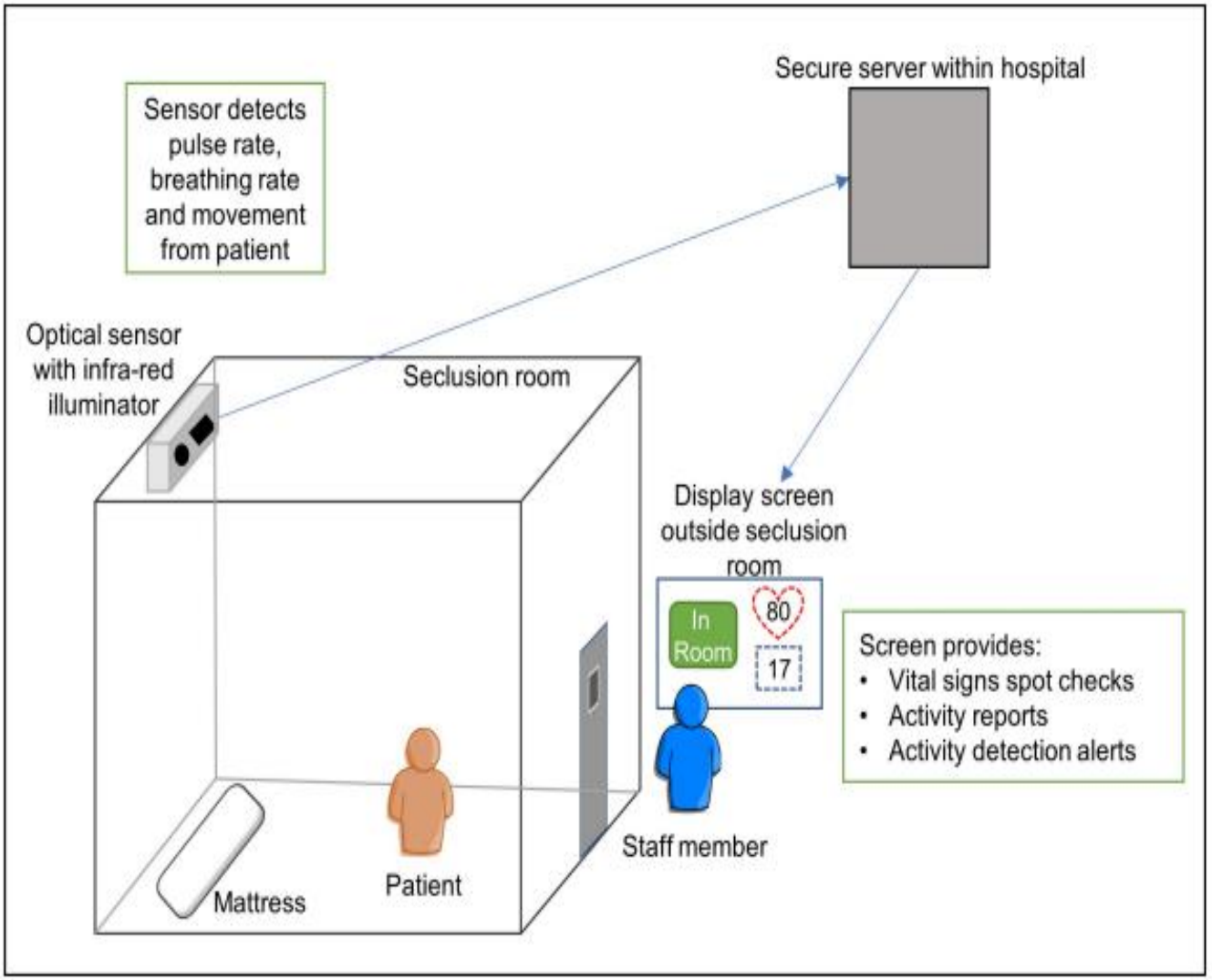
The function and design of seclusion rooms in clinical settings

Stephen J Kaar, Helen Walker, Faisil Sethi, Ronan McIvor

South London & Maudsley NHS Foundation Trust



Seclusion Practice (2020)



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BRIEF REPORT

Non-contact physical health monitoring in mental health seclusion

Hannah Clark[1], Allison Edwards[1], Rebecca Davies[1], Adenike Bolade[1], Rachael Leaton[1], Robert Rathouse[1], Marisa Easterling[1], Ronnie Adeduro[1], Matthew Green[1], Wellington Kapfunde[1], Oladapo Olawoyin[1], Kalliopi Vallianatou[1], Daniel Bayley[2], Oliver Gibson[2], Charlotte Wood[2], Faisil Sethi[3]

[1]South London & Maudsley NHS Foundation Trust, UK; [2]Oxehealth, Oxford, UK; [3]Dorset HealthCare University NHS Foundation Trust

Challenges to physical health

Challenges in seclusion:

- Higher risk of physical health conditions
- Communication difficulties
- Rapid tranquilisation and restraint

National guidance

- RT – 15min obs
- Seclusion – 2 hourly obs

Difficulties

- Patient engagement
- Challenging seclusion entries
- Maximising therapeutic rest

Novel & innovative technology

- Optical sensor = camera + infrared illumination in secure housing in room
- Screen outside seclusion room
- Pulse & breathing rate measurements without disturbance
- World first medical device
- Data on patient movement

Breaking Barriers (2018)

Journal of Psychiatric Intensive Care

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BRIEF REPORT

Art and mental health in the women's psychiatric intensive care unit

Sophie Butler[1], Ronnie Adeduro[1], Rebecca Davies[1], Onyekachi Nwankwo[1], Niamh White[2], Timothy A Shaw[2], Luke Skelton[1], Geordan Shannon[3], Emma Smale[2], Marie Corrigan[3], Daria Martin[4], Faisil Sethi[1]

[1]South London & Maudsley NHS Foundation Trust, Maudsley Hospital, London, UK; [2]Hospital Rooms, UK; [3]Global Health Disrupted, UK; [4]The Ruskin School of Art, University of Oxford, UK

Julian Opie, Corridors

Aimee Mullins, Seating Area

Julian Opie, Corridors

Nengi Omuku, Family Room

Harold Offeh, TV Room

Tamsin Relly, Communal Lounge

Paresha Amin, Interview Room

Tim A Shaw, Conference Room

Harold Offeh, TV Room

Tamsin Relly - Main Sitting Area

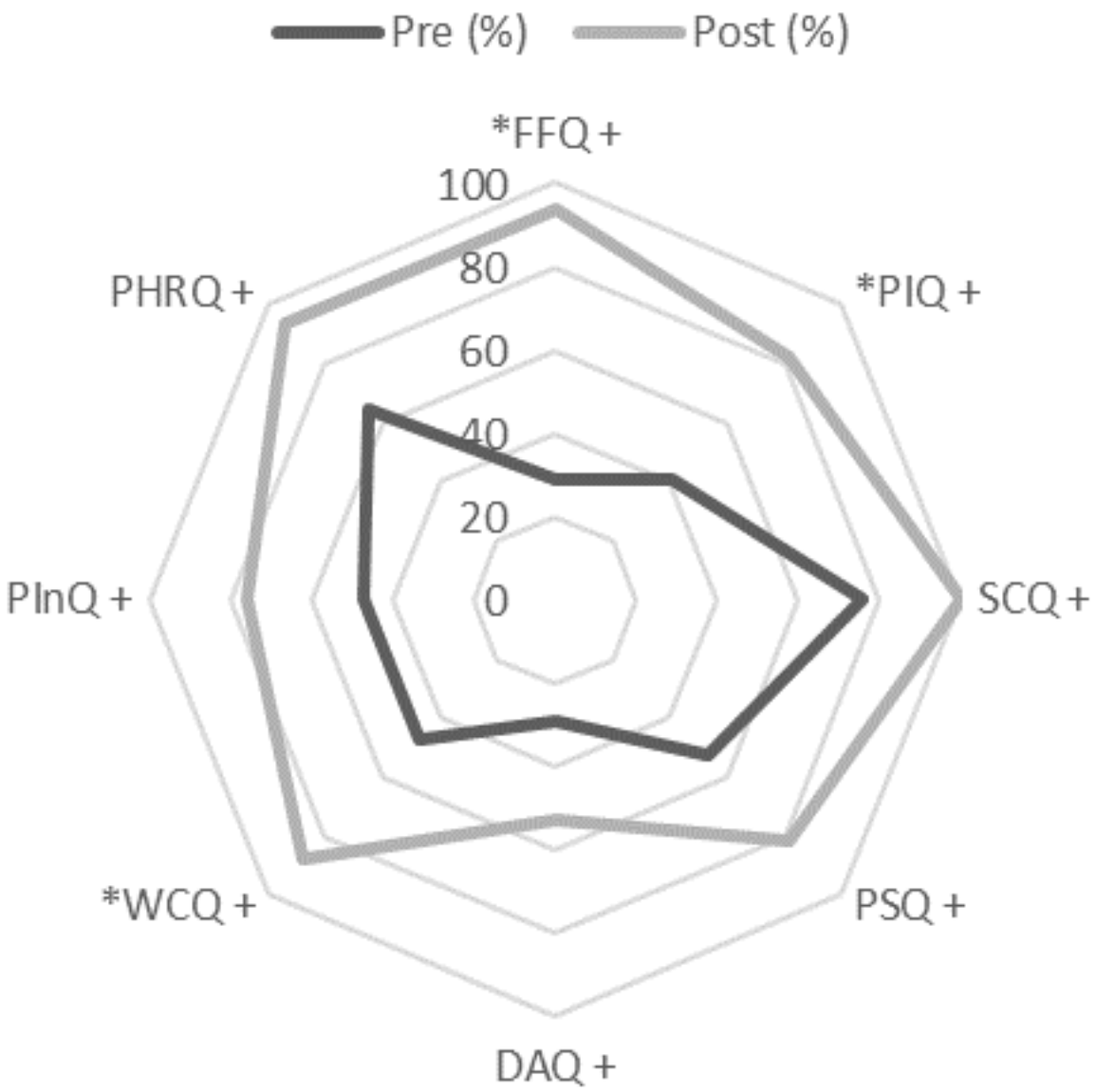
Julian Opie - Corridors

Harold Offeh - TV Room

Nengi Omuku - Family Room

IMPACT & EVALUATION

- *Engagement and Participation*
- *Service User*
- *Staff*



Code	Question
FFQ	How likely are you to recommend our ward to friends and family if they needed similar care or treatment?
PIQ	Do you feel involved in your care?
SCQ	Are staff kind and caring?
PSQ	Do you feel safe here?
DAQ	Are there activities 7 days a week?
WCQ	Do you think the ward is comfortable?
PInQ	Do we treat you as an individual by considering your culture, spirituality, disability, gender, sexuality, age and ethnicity?
PHRQ	Do you have hope that the care you are having from this ward will help you?

Demand, Capacity & Flow

Psychiatric Intensive Care Units: patient types, admission lengths and bed numbers

S. Dye [1], F. Sethi [2], V. Koravangattu [3], E. Rose [3], L. Penfold [1], M. Campbell [4], T. Kearney [5]

[1] Norfolk and Suffolk NHS Foundation Trust [2] Dorset Health Care University NHS Foundation Trust [3] South London and Maudsley NHS Foundation Trust [4] Central and North West London NHS Foundation Trust [5] NHS England and Improvement

INTRODUCTION

Patients spend varying lengths of time within a PICU, ranging from 1 day to over a year. Individual PICUs vary in capacity, but standards dictate that a ward's maximum size is limited to 14 beds.[1]

Health services aim to provide correct care in a timely fashion based upon patient needs. Classifying individual needs is distinct from diagnosing disorders or identifying underlying pathologies.

Within mental health services in England and Wales, a specific tool has been developed to identify patient needs by separating patient presentations according to a specific assessment: the Mental Health Clustering Tool (MHCT).[2] This mandatory assessment is based on the Health of the Nation Outcome Scale (HoNOS).[3]

It has been demonstrated that the MHCT does not distinguish patient need within a PICU and that a 'standard PICU admission' does not exhibit a typical clustering pattern.[4] Instead, **different identifiable clinical types of patients can be grouped by clinical need.** Groups were associated with differing lengths of stay and discharge destinations. **Discharge destination** is something that the clinical team should be aware of early in a patient's admission (if not beforehand) and is a measure of observed need.

OBJECTIVES

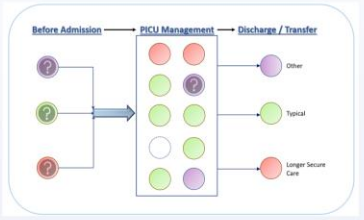
Primary objective: Use statistical techniques to determine if patient typing by discharge destination can be a useful classification tool to help predict length of stay within PICUs.

Subsidiary objective: Determine if a modelling process using patient typing can help measure needed ward capacity.

MATERIALS & METHODS

Following a focus group discussion with clinicians, specific PICU patient types were developed to be used within this project. Patients are admitted from, and discharged to, the following mutually exclusive groups:

1. TYPICAL: Adult acute psychiatric inpatient services or community settings (including A&E or subsequent to Section 136 (being brought to a place of safety by the police))
2. LONGER SECURE CARE: Care within a longer term secure environment (e.g. Medium or Low Secure Unit, 'Locked Rehabilitation' Unit)
3. OTHER: Other psychiatric settings (e.g. older adult wards, mother and baby units, another (normally out of area) PICU or other inpatient specialist services)



Four, 10-bedded PICUs were used: The lead NHS organisation (NSFT) approved the project as service evaluation and the University of Sheffield approved the project from an ethical perspective.

Data analysis was performed using R [code available upon request].[5]

Length of stay (LoS) is usually short (days). However, some 'complicated' patients may stay for more extended periods, and thus the LoS distribution is skewed (with the mean being greater than the median). In an attempt to solve this, **admission length values were transformed logarithmically** using natural logarithms.

Although the patient type categorisation was not precisely the same, data from Dye (2017) provided approximations for power analysis.[4] A power analysis using these figures for a one-way ANOVA suggested that each group should have 25 patients for a power of 0.95 at a 5% significance level. For pragmatic reasons, attempts were made to collect data on up to the last 40 patients discharged from each patient-type group from each of the PICUs. This was limited to a retrospective period of 4 years.

40 Patient Type 1 patients (TYPICAL) from each unit were easily collected. From the other types, the number discharged over the maximum four-year time period varied between units.

Apart from the **individual PICU** and **patient type**, other variables can influence LoS and its variation, but the number of variables was minimised as far as possible to make this a clinically useful project. These were:

Patient Age (six categorical groupings)	Patient Gender	Primary Diagnosis (ICD-10 chapter)	HoNoS Cluster

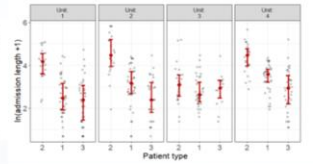
RESULTS

The number of records analysed within the four year period were:

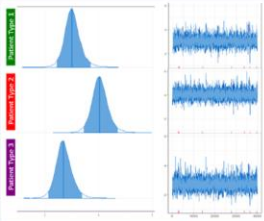
UNIT	Patient Type 1	Patient Type 2	Patient Type 3	TOTAL
1	40	22	38	100
2	40	20	28	88
3	40	23	17	80
4	40	23	37	100
TOTAL	*160*	*88*	*100*	*368*

Bayes factor is a ratio of the likelihood of observing the data given one model over the likelihood of observing the data given another. If it is greater than 1, then the first model is favoured, and the higher the number, the more that model is favoured (3-10:moderate evidence, >10: strong evidence). If the 'null' model is one with all parameters for variables collected being zero, each variable can be introduced while keeping the others at zero. Within this study, Bayes factors introduced in this manner show that **patient type** is the preferred variable. There is **no evidence to support 'cluster'** being used (Bayes factor of 1.04) and anecdotal evidence that the model with no parameters is better than that with the ICD(diagnosis) variable (Bayes factor of 0.44)!

Variable	Bayes Factor
Patient Type	5.78 x (10^{19})
Unit	111
Age group	2.69
Cluster	1.05
Gender	0.61
ICD diagnosis	0.44



The above figure reveals evidence of an interaction between unit and patient type variables: patient type 2 (LONGER LOW SECURE) individuals having shorter lengths of stay in Unit 3 compared to the other units. A parsimonious model for LoS would be one determined by patient type, unit and interaction between patient type and unit. When this is simulated over the units using 4 chains of 5000 iterations (each with a 'warm-up' of 1000), converting back to actual admission lengths, the following distributions are seen:



The left side of the figure gives densities of draws taken from the posterior distribution. This shows some separation of patient type 2. The right part shows trace plots that indicate good mixing of simulations and reasonable (but not excellent) model convergence: the caterpillar plot is straight, but the centre spans a large range).

To fully model ward capacity, the demand for PICU needs to be considered. Unfortunately, although admission rates were calculated, the number not admitted although Needing admission could not be obtained. Despite this, the modelling process was performed (to demonstrate how it can be done). The number of patients turned away due to units being at capacity was modelled for each unit over a four-year period (using the R *simmer* package). Although these are bound to be under-estimates, the table below displays the simulated number of turn aways for each unit over 4 years:

Unit	0.25 quantile	Median	0.75 quantile
1	2	4	7
2	4	8	13
3	10	14	19
4	2	4	8

CONCLUSIONS

Patient-typing contributed most to differences in admission length upon the PICUs studied (compared to age, sex, diagnosis and clustering). The unit to which a patient was admitted also influenced LoS. A model using both these variables and an interaction between them showed reasonable utility.

A method for modelling bed capacity based upon turn-away rates was introduced

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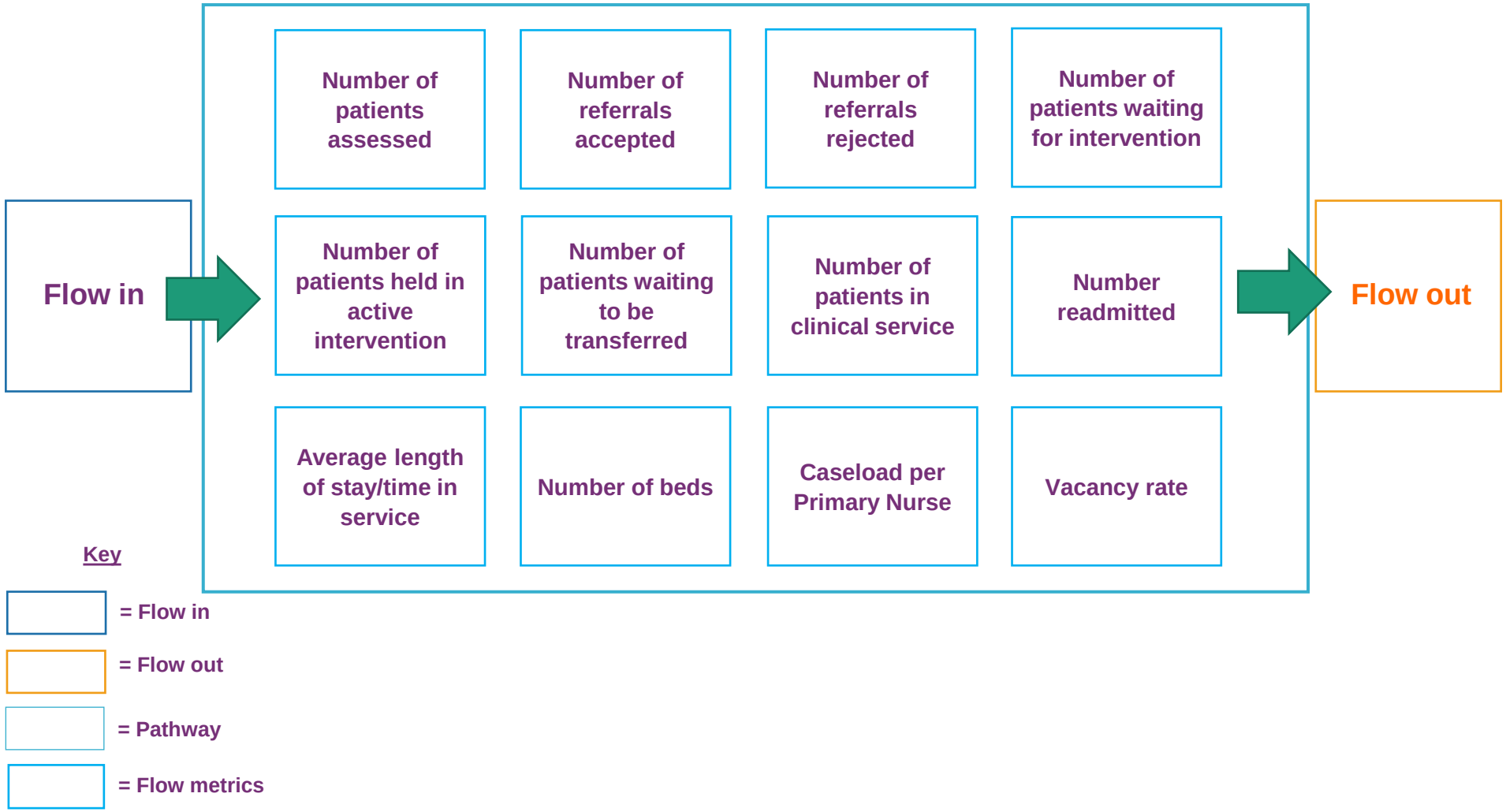
2. NHS England. 2016. Mental Health Clustering Booklet (V5.0 2016/17). NHS England.
3. Wing, J., R. Curtis, and A. Beevor. 1999. "Health of the Nation Outcome Scales (HoNOS)." The British Journal of Psychiatry 174 (5): 432–34.
4. Dye, S. 2017. "Can Mental Health Clusters Be Replaced by Patient Typing?" British Journal of Healthcare Management 23 (5): 229–37.
5. R Core Team. 2021. R: A Language and Environment for Statistical Computing. Vienna, Austria: R Foundation for Statistical Computing. https://www.R-project.org/.

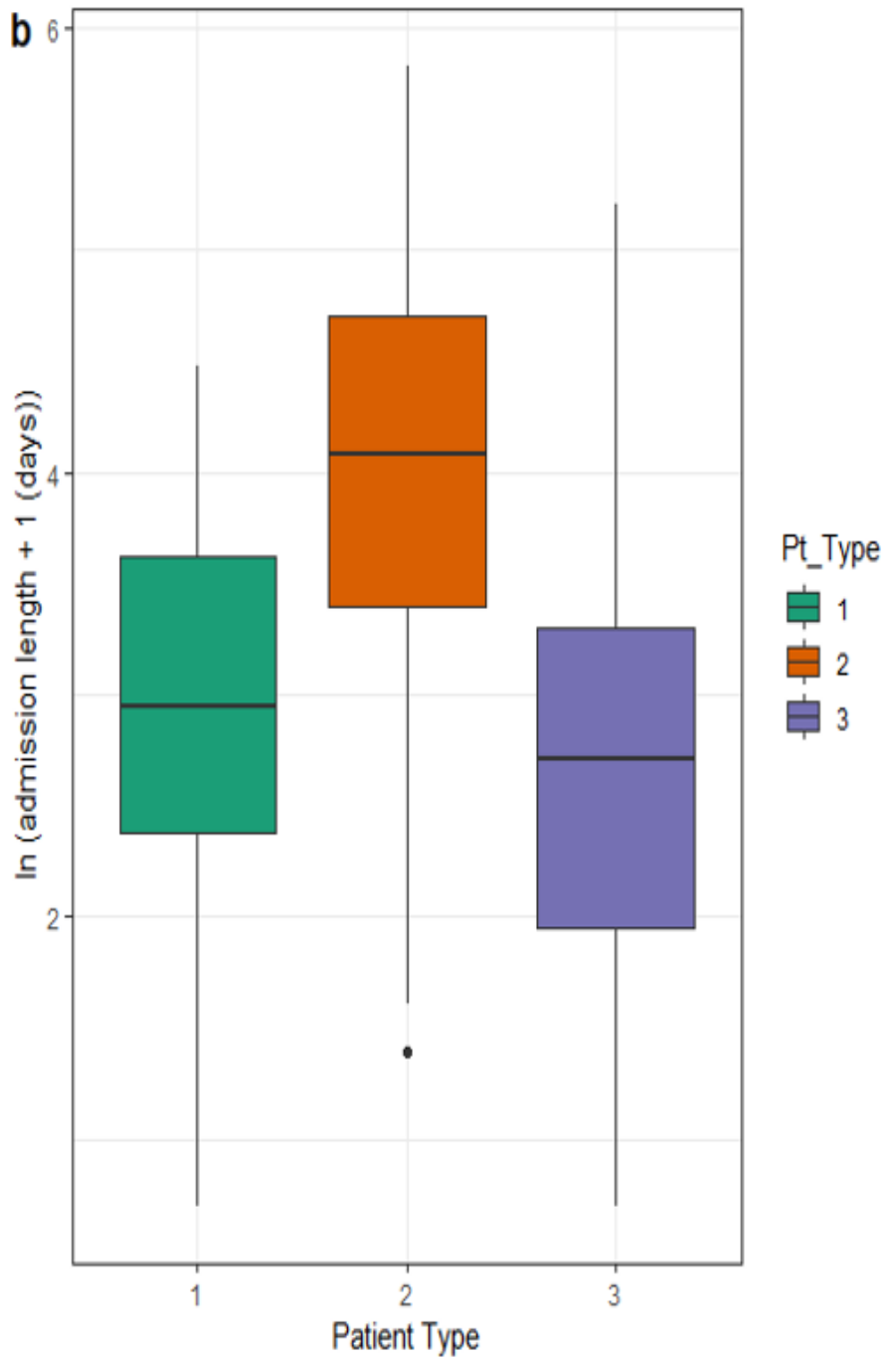
Which metrics support flow?

Example: Psychiatric Intensive Care Unit (PICU)



Models to Predict LOS in PICUs (Dye, Kearney, Sethi et al)

Patient Type	Median (days)
Typical	18.00
Secure Care	58.00
Other	14.00



Pandemic and the PICU

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BRIEF REPORT

The psychiatric intensive care unit clinical model and COVID-19

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BRIEF REPORT

Challenges facing psychiatric intensive care during COVID-19

Luke Skelton, Lucy Blake, Margaret Butler, Ria Pugh, Bethan Harries, Faisil Sethi

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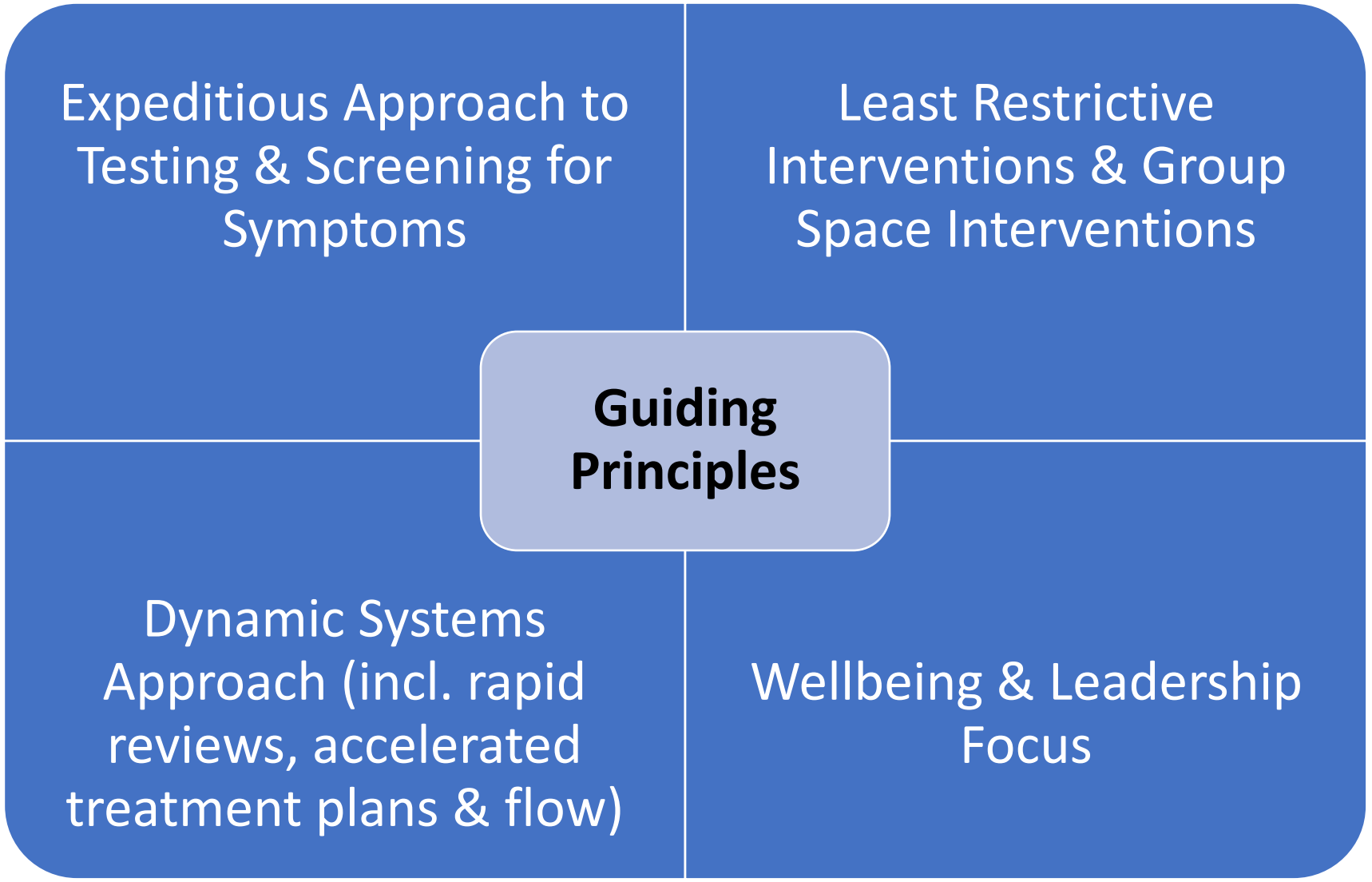
BRIEF REPORT

Risk mitigation and the legal and ethical considerations for COVID-19 in a psychiatric inpatient setting

Lucy Blake[1], Ria Pugh[1], Luke Skelton[1], Eric Baskind[2], Bethan Harries[1], Margaret Butler[1], Faisil Sethi[1]

Pandemic and the PICU: COVID-19 Clinical Model



VUCA

Volatile

Uncertain

Complex

Ambiguous

AIM HIGH

" In the long run you hit
what you aim at, so aim high"
Henry David Thoreau

TEAMWORKING

FAIL WELL & LEARN FAST

THANK YOU!