

Retention in opioid against treatment following release from custody: results from the Release Study

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• Acknowledgement of country



- The Release Study was conducted in New South Wales by Local Health Districts located on the lands of the following Nations: the lands of the **Aniawan**, Awabakal, **Bahtabah**, Banbai, **Barindji**, Barrinbinja, **Barundji**, Bediagal **Bidjigal**, Biripi **Bundjalung**, Darkinyung, **Dharawal**, Dharug, **Gadigal**, Geawegal **Gomilaroi**, Gundungurra, **Gunu**, Gweagal **Kamilaroi**, Muruwari, **Nganyaywana**, Ngoorabul, Thungutti, Wailwan **Wangal**, Wiradjuri **Wongaibon**, Wonnarua, **Worimi**, Yallaroi and **Yuin** Nations.
- We pay our respects to Elders past, present and emerging, and extend these respects to all First Nations peoples.

Disclosures

A.D. reports grants from

- Camurus AB,
- Indivior

manufacturers of buprenorphine

to conduct clinical studies with buprenorphine formulations to Hunter New England Local Health District, who employ A.D

Summary of literature – OAT in prison / on release

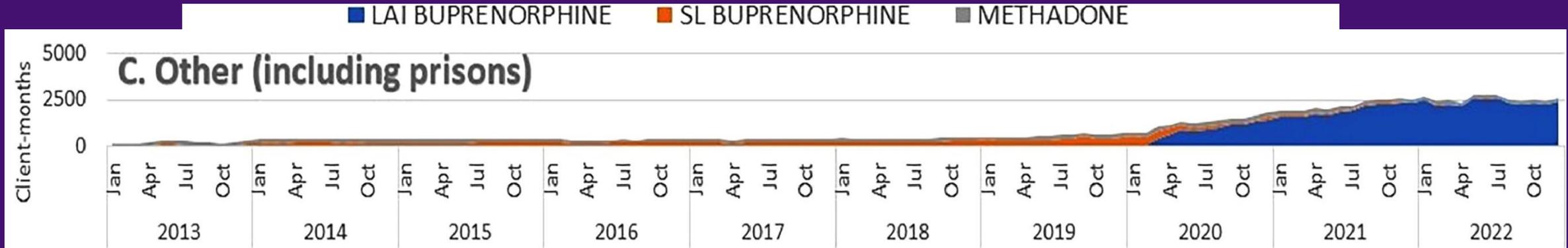
Finding	Author
Release from prison – ↑ risk of overdose +++	Merrell 2010, Cooper 2022
OAT ↓ drug use in prison	Glanville 2022
OAT ↓ injecting risk in prison	Palmateer 2022
OAT in prison ↓ overdose risk in prison & post-release	MacDonald 2024
OAT in prison ↑ engagement post-release	Moore 2019, Boksán 2023
OAT in prison ↓ drug use post-release	Moore 2019
OAT in prison ↓ re-incarceration	Boksán 2023

- Continuous OAT in prison – important
- Prison - opportunity to commence those not already in OAT

Long-acting injectable buprenorphine (XR-BPN) in custodial settings

- Woods 2025
 - No evidence of difference of LAIB vs SL BPN – LAIB shows promise - retention
- Russel 2024
 - LAIB – appears feasible and effective - may reduce community risks (eg OD) and improve retention, consider upscaling
- Wright 2020
 - LAIB – should not increase costs – may transform care
- Ivasy 2025
 - Retrospective insured cohort (n~59000, SL BPN 98%, XR BPN 2.4%)
 - Dropout, but higher retention with SL (50%) cf XR BPN (14%) 6mo

LAIB most common OAT in prison in Australia ~10% all OAT



- Currently 6847/8205 ~83% of all people in custody on OAT are prescribed LAIB*

The Release study



- **Investigators**

- Adrian Dunlop^{1,2,3}, Bethany White^{3,4,5}, Jillian Roberts^{1,3}, Nicholas Lintzeris^{3,5,7}, Robert Graham^{3,8}, Gilbert Whitton^{3,9}, Nadine Ezard^{3,10}, Lisa Maher¹¹, Elizabeth McEntyre¹², Michael Doyle^{4,13}, David Reid^{3,14}, Steven Childs^{3,15}, Stan Theodorou³, Katerina Lagios^{3,6}, Paul Haber^{3,4,5}

- **Research staff**

- Emma Black^{5,7}, Antoni Pazeski¹, Lucy Peck^{4,5}, Sam Lawson¹, Brennan Geiger⁴, Sophia Little⁴, Tsz Yan Chow⁴, Sarah Badewitz⁵

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- Christopher Oldmeadow^{2,16}, Erin Nolan^{2,16} & Lucy Leigh¹⁶

- **Health economists**

- Penny Reeves¹⁶, Shanthi Ramanathan¹⁶

- **Funding:**

- NSW Health TRGS competitive

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(2) School of Medicine and Public Health, Faculty of Health and Medicine, University of Newcastle

(3) Drug & Alcohol Clinical Research & Improvement Network, NSW

(4) Edith Collins Translational Research Centre, Sydney LHD

(5) Specialty Addiction Med, Faculty of Medicine & Health, USYD

(6) Justice Health and Forensic Mental Health Network

(7) Drug and Alcohol Services, South Eastern SLHD

(8) Drug Health Services, Western Sydney LHD

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(10) St. Vincent's Hospital Sydney, Alcohol & Drug Service

(11) Viral Hepatitis Epidemiology and Prevention Program, Kirby Institute, UNSW

(12) Worimi Guringai and Wonnarua Researcher, Australia

(13) Mura Leadership Program Fellow, Specialty of Addiction Medicine, USYD

(14) Drug and Alcohol Services, ISLHD

(15) Drug & Alcohol Service, Central Coast LHD

(16) Hunter Medical Research Institute (HMRI)

Release Study

- People released from NSW prisons referred to 9 NSW health districts
 - 23 publicly-funded opioid treatment clinics (~80% NSW)
- Non-randomised comparison of patients released on methadone and buprenorphine
- Outcomes - retention in treatment – 3 months
- Method **1 Apr 2023 –30 Jun 2024** (12 months + 12 weeks follow-up)
 - **Data extracted from clinical files – using multiple sources:**
 - medication administration, prescriptions (iDose)
 - clinicians contacting community pharmacies/other service providers
- Retention definition (end of study)
 - Methadone – not more than 2 weeks between doses
 - LAIB – doses < 8 weeks apart

Demographics and baseline characteristics by medication (n=1,513)

Characteristic	LAIB n = 1,162 ¹	Methadone n = 327 ¹	Sublingual BPN n = 24 ¹	Overall n = 1,513 ²
Age	35 (29, 41)	41 (36, 47)	39 (33, 46)	37 (30, 43)
Sex				
Female	115 (9.9%)	28 (8.6%)	6 (25%)	149 (9.8%)
Male	1,047 (90%)	299 (91%)	18 (75%)	1,364 (90%)
Aboriginal	292 (39%)	86 (33%)	11 (58%)	389 (37%)
Accommodation type				
Rented house/flat	372 (57%)	137 (60%)	7 (39%)	516 (58%)
Homeless/other	188 (29%)	74 (33%)	8 (17%)	270 (30%)
Privately owned	91 (14%)	17 (7.5%)	3 (17%)	111 (12%)
Main source of income				
Pension/social insurance	559 (86%)	200 (90%)	13 (77%)	772 (87%)
Employment	37 (5.7%)	3 (1.3%)	1 (5.9%)	41 (4.6%)
Referral source				
Self-referred	60 (11%)	25 (13%)	3 (20%)	88 (11%)
Justice system	477 (84%)	157 (82%)	10 (67%)	644 (83%)
Remoteness of site				
Major Cities of Australia	939 (81%)	295 (90%)	20 (83%)	1,254 (83%)
Regional/Remote	223 (19%)	32 (9.8%)	4 (17%)	259 (17%)
Referral type				
Expected	998 (87%)	227 (70%)	18 (75%)	1,243 (83%)
Unexpected	151 (13%)	97 (30%)	6 (25%)	254 (17%)
Prison type				
Public	952 (87%)	276 (86%)	21 (88%)	1,249 (87%)
Private	143 (13%)	44 (14%)	3 (13%)	190 (13%)

Analyses

- Most conservative – requires dosing information across 12 weeks (iDose)
- Less conservative: considered retained \geq one engagement (assessed via whether they had any doses in iDose for both LAIB and methadone) + reincarcerated or referred to another provider
- Least conservative: considered retained *regardless of engagement* (from iDose) + reincarcerated or referred to another provider

Retention 12 weeks post release: LAIB (n=1,136)

	Retained n = 800	Engaged not retained n = 3	Not engaged or retained n = 333
Ceased treatment	0 (0%)	0 (0%)	13 (3.9%)
Lost to follow-up	0 (0%)	2 (67%)	243 (73%)
Referred/self referred to other provider	0 (0%)	1 (33%)	51 (15%)
Reincarcerated	0 (0%)	0 (0%)	26 (7.8%)
Retained	800 (100%)	0 (0%)	0 (0%)

- **Most conservative analysis:** 800 / 1,136 (70%) retained
 - 3 (0.2%) engaged in treatment but weren't retained; 333 (29%) did not engage in any treatment
- **Less conservative:** 801 / 1,136 (71%) retained
- **Least conservative:** 878 / 1,136 (77%) retained

Associations with 12-week LAIB treatment (n=1,136)

Variable	Crude difference (n/N %)		Rate ratio of retention (95% CrI)		
	Reference	Comparator	Unadjusted	Adjusted	P(Direction) ²
Prison type	Public = 664/931 (71%)	Private = 90/140 (64%)	0.91 (0.8, 1.02)	0.90 (0.78, 1.01)	0.964
Referral	Expected = 673/983 (68%)	Unexpected = 120/143 (84%)	1.22 (1.12, 1.33)	1.23 (1.12, 1.33)	1.000
Remoteness	Major Cities of Australia = 646/919 (70%)	Regional/Remote = 157/220 (71%)	1.02 (0.92, 1.11)	1.03 (0.94, 1.12)	0.750
Sex	Female = 74/111 (67%)	Male = 729/1,028 (71%)	1.06 (0.93, 1.23)	1.08 (0.94, 1.25)	0.885
Age ¹	35 (336, 8)	36 (803, 8)	1.08 (1.01, 1.19)	1.08 (1.01, 1.18)	0.993

¹For the age variable, the mean (N, SD) age is presented by retention equals no (reference) or yes (comparator). The rate ratio reflects a 10 year increase in age.

²From the adjusted model.

Retention 12 weeks post release: Methadone (n=316)

	Retained n = 209	Engaged not retained n = 76	Not engaged or retained n = 31
Ceased treatment	0 (0%)	0 (0%)	1 (3.2%)
Lost to follow-up	0 (0%)	15 (20%)	13 (42%)
Referred/self-referred to other provider	0 (0%)	36 (47%)	12 (39%)
Reincarcerated	0 (0%)	25 (33%)	5 (16%)
Retained	209 (100%)	0 (0%)	0 (0%)

- **Most conservative analysis:** 209 / 316 (66%) retained
 - 76 (23%) engaged in treatment but weren't retained; 32 (10%) did not engage in treatment
- **Less conservative:** 270 / 316 (85%) retained
- **Least conservative:** 287 / 316 (91%) retained

No significant associations with 12-week methadone treatment (n=327)

Variable	Crude difference (n/N %)		Rate ratio of retention (95% CrI)		
	Reference	Comparator	Unadjusted	Adjusted	P(Direction) ²
Prison type	Public = 178/268 (66%)	Private = 28/42 (67%)	1.00 (0.76, 1.23)	0.98 (0.74, 1.2)	0.555
Referral	Expected = 141/219 (64%)	Unexpected = 67/95 (71%)	1.10 (0.92, 1.28)	1.08 (0.91, 1.26)	0.828
Remoteness	Major Cities of Australia = 189/284 (67%)	Regional/Remote = 21/33 (64%)	0.96 (0.69, 1.21)	1.01 (0.77, 1.26)	0.534
Sex	Female = 19/27 (70%)	Male = 191/290 (66%)	0.93 (0.73, 1.21)	0.89 (0.71, 1.15)	0.806
Age ¹	40 (107, 8)	43 (210, 8)	1.25 (1, 1.62)	1.27 (1, 1.66)	0.995

¹For the age variable, the mean (N, SD) age is presented by retention equals no (reference) or yes (comparator). The rate ratio reflects a 10 year increase in age.

²From the adjusted model.

Limitations

- No statistical assessment of LAIB vs. methadone due to data limitations
 - Different treatment populations
 - High retention in methadone group – limits modelling
 - Non-random missing outcome data for non-presenting referrals

Conclusions

- Rapid upscale LAIB in carceral settings (& elsewhere – cost & access issue)
 - Important due to past under-treatment
 - Nationally 2.6x increase in OAT population in prison
- Some differences in retention at treatment at 3 months
 - LAIB – 70-77%; methadone 66-91%
 - Retention poorer – private prisons LAIB
 - Not causal
 - May relate to different populations
 - May also reflect different properties of LAIB vs methadone (including retention)
- Opportunities to improve retention
 - Including those ‘new’ to LAIB – education, post release support