Prevalence of HIV indicator conditions in people with late diagnosis of HIV 25 years on:

Are we still missing opportunities for earlier care?

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Disclosures

- *Nil personal disclosures*
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Background – Late Diagnosis HIV

- Defined as CD4 count <350 cells/μL at first test
- 37% new HIV diagnosed late in Australia in 2023

Year of first ever HIV diagnosis	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Characteristic										
Total cases[a]	1,079	1,029	1,006	962	840	895	626	541	553	722
Diagnosed late	277	263	260	285	269	276	225	225	215	247
Late HIV diagnosis, %[c]	27.3%	27.7%	29.4%	32.5%	35.8%	35.8%	41.5%	47.5%	43.7%	37.0%

[3] Kirby Institute, 2024

Background – Indicator Based Testing

WHO recommends reflexive, provider-initiated testing in conditions that may indicate presence of HIV[4]:

- AIDS-defining
- Linked to an undiagnosed HIV prevalence > 0.1%
- Where undetected HIV could result in serious negative outcomes e.g. pregnancy, immunosuppression

[4] World Health Organisation, 2007

Neurology: primary cerebral lymphoma, toxoplasmosis, cryptococcal meningitis, progressive multifocal leukoencephalopathy (PML), aseptic meningitis/ encephalitis, Guillain-Barre syndrome, chronic inflammatory demyelinating polyneuropathy (CIDP), cerebral abscess, transverse myelitis, peripheral neuropathy, dementia, leucoencephalopathy

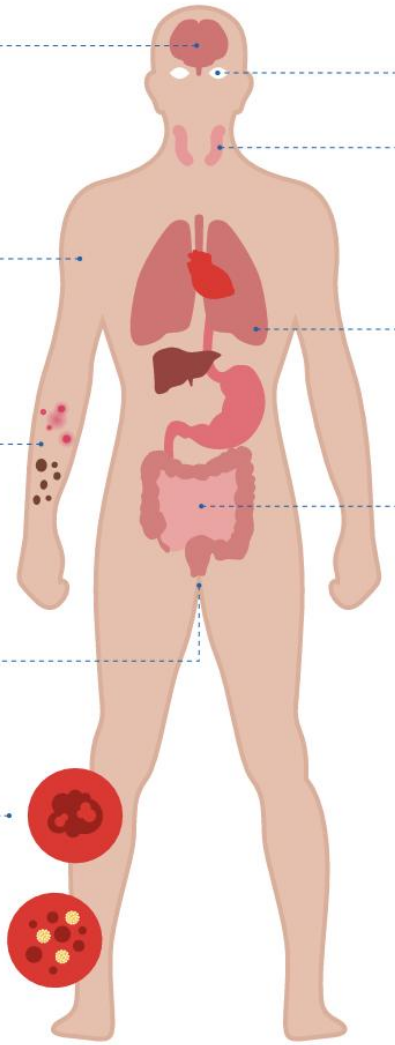
Any AIDS-defining Illness: oesophageal candidiasis, Kaposi's Sarcoma, pneumocystitis jiroveci pneumonia, histoplasmosis, cryptosporidiosis, toxoplasmosis, cryptococcal meningitis, cytomegalovirus (CMV), mycobacterium avium complex, non-Hodgkin lymphoma

Skin: Kaposi's Sarcoma, severe or recalcitrant seborrhoeic dermatitis or psoriasis, extensive warts or molluscum contagiosum, multidermatomal or recurrent varicella zoster, severe folliculitis

Infections: any STI (including syphilis, hepatitis B & C, chlamydia, gonorrhoea), refractory fungal infections, oral or oesophageal candidiasis, herpes varicella if multi-dermatomal or recurrent, toxoplasmosis

Malignancies: Hodgkin lymphoma, cervical, vaginal or anal intraepithelial neoplasia, Castleman disease and head & neck cancers

Blood disorders: unexplained thrombocytopaenia, lymphopenia or neutropenia >4 weeks



Eyes: CMV retinitis, unexplained retinopathy or infective retinal disease (HSV & toxoplasma), syphilitic eye conditions

Glandular fever type illness (could be HIV seroconversion): pharyngitis, malaise, fever, lymphadenopathy, headache, maculopapular rash

Persistent generalized lymphadenopathy

Respiratory conditions: tuberculosis, recurrent bacterial pneumonia, aspergillosis, pneumocystitis jiroveci pneumonia

Constitutional symptoms without an obvious cause: pyrexia of unknown origin, unexplained weight loss, diarrhoea, myalgia, mononucleosis-like syndrome

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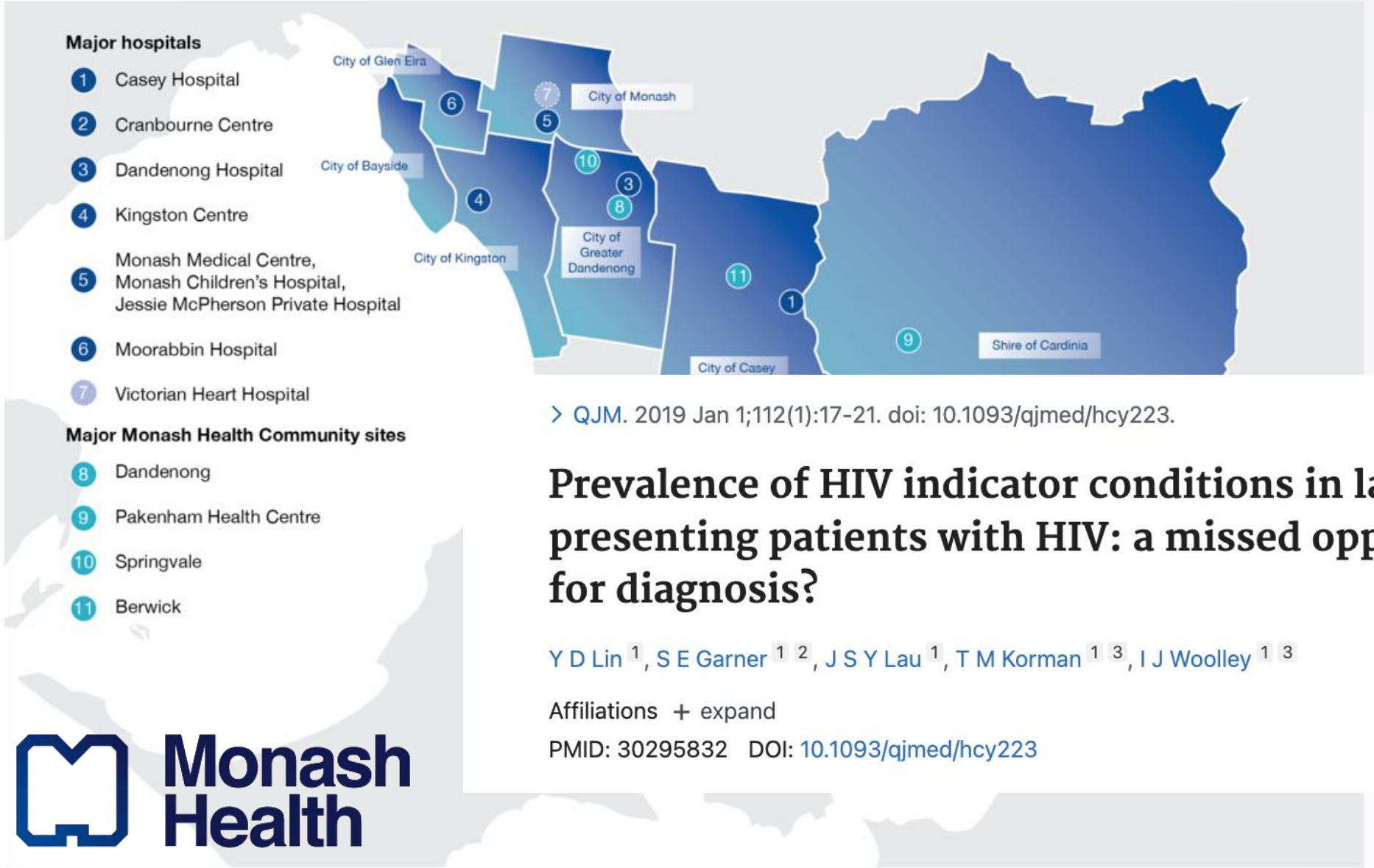
[5]ASHM, 2024



QJM. 2019 Jan 1;112(1):17-21. doi: 10.1093/qjmed/hcy223.

Prevalence of HIV indicator conditions in late presenting patients with HIV: a missed opportunity for diagnosis?

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Affiliations + expand

PMID: 30295832 DOI: 10.1093/qjmed/hcy223

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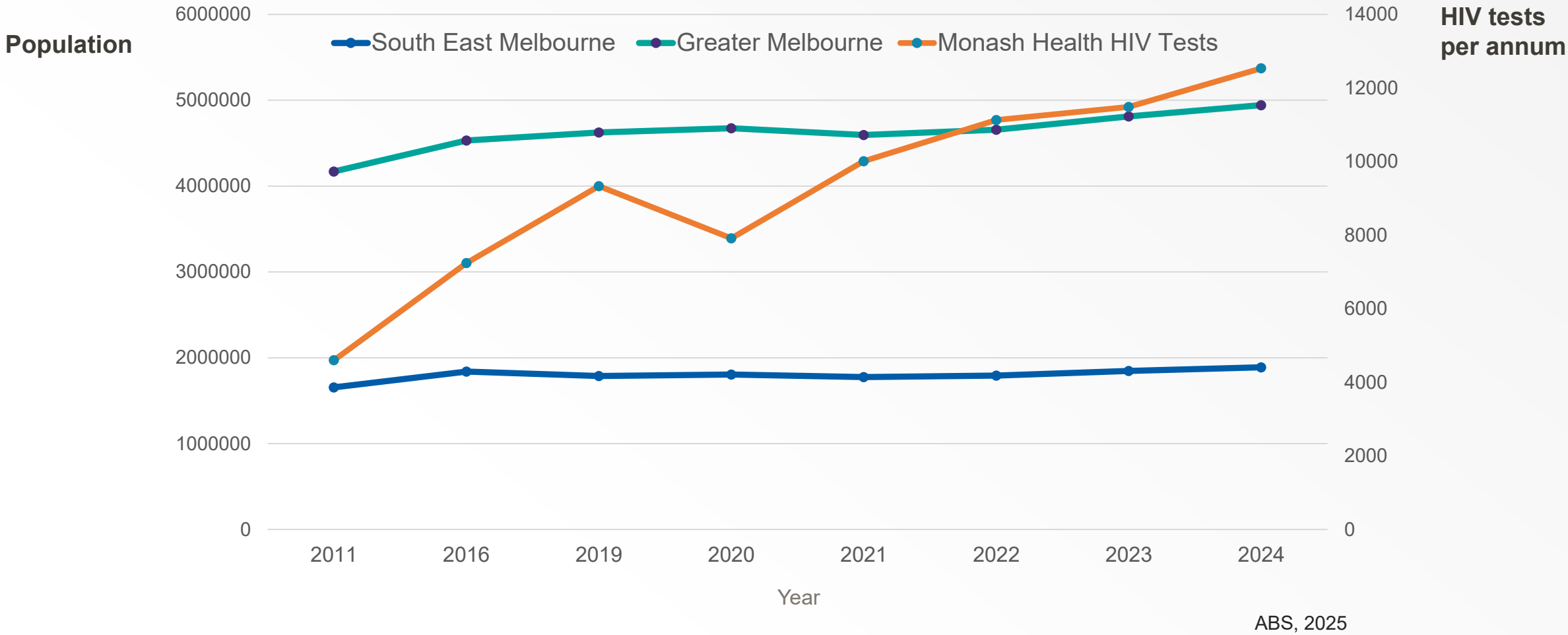
[6]Lin et al, QJM, 2019

Monash HIV testing 2011-2024, compared to ABS population data



ABS, 2025

Study Aims –
Are we *still* missing opportunities for earlier care?

- This study aimed to evaluate progress in provider-initiated, indicator-based testing over the last 10 years at Monash Health
- Analyse prevalence of indicator conditions in people living with HIV
  - In those with CD4 count <350 cells/μL at diagnosis, was there an opportunity for earlier diagnosis?
- Compare data from 2000-2014 study to recent results 2015-2025

Method

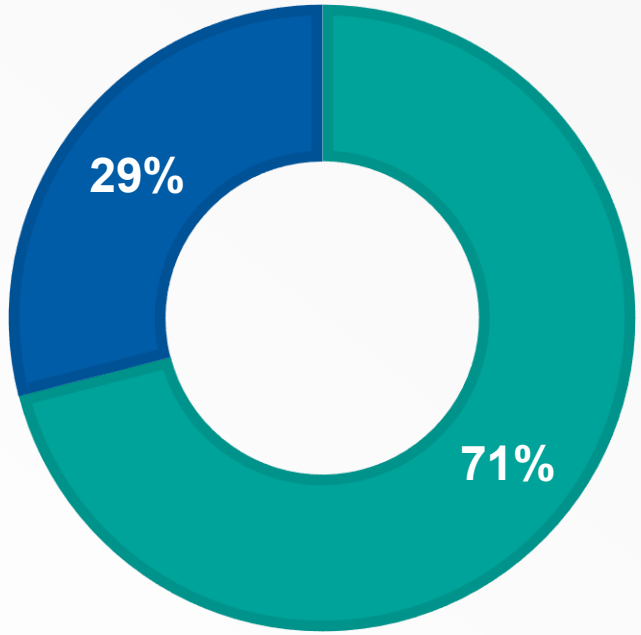
- Retrospective cohort study: 1st January 2015 – 1st January 2025
  - Study group: Individuals with late diagnosis HIV (defined by CD4<350cells/μL)
  - Control: Individuals with CD4≥350 at first presentation

- European AIDS Clinical Society guidelines used to identify indicator conditions in electronic health records
  - “Missed opportunity” defined as ≥3 months

- Outcomes: Demographics, diagnostic setting and presence of indicator conditions.
- Statistical analysis: Chi-squared testing and two-proportion z-tests.

Results

HIV Diagnoses Monash Health 2000-2025



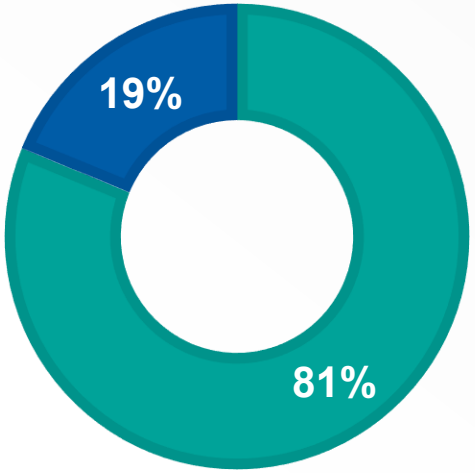
Total new, n = 676 New dx CD4 <350cells/µL, n = 196

New cases per annum (mean) = 27

Results

HIV Diagnoses Monash Health 2000-2025

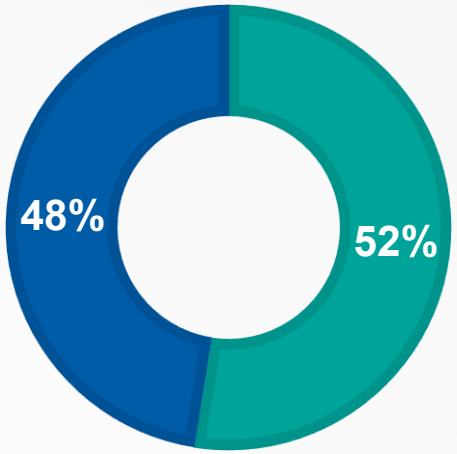
2000-2015



total, n = 436 CD4 <350cells/µL, n = 82

Mean per annum = 29

2015-2025

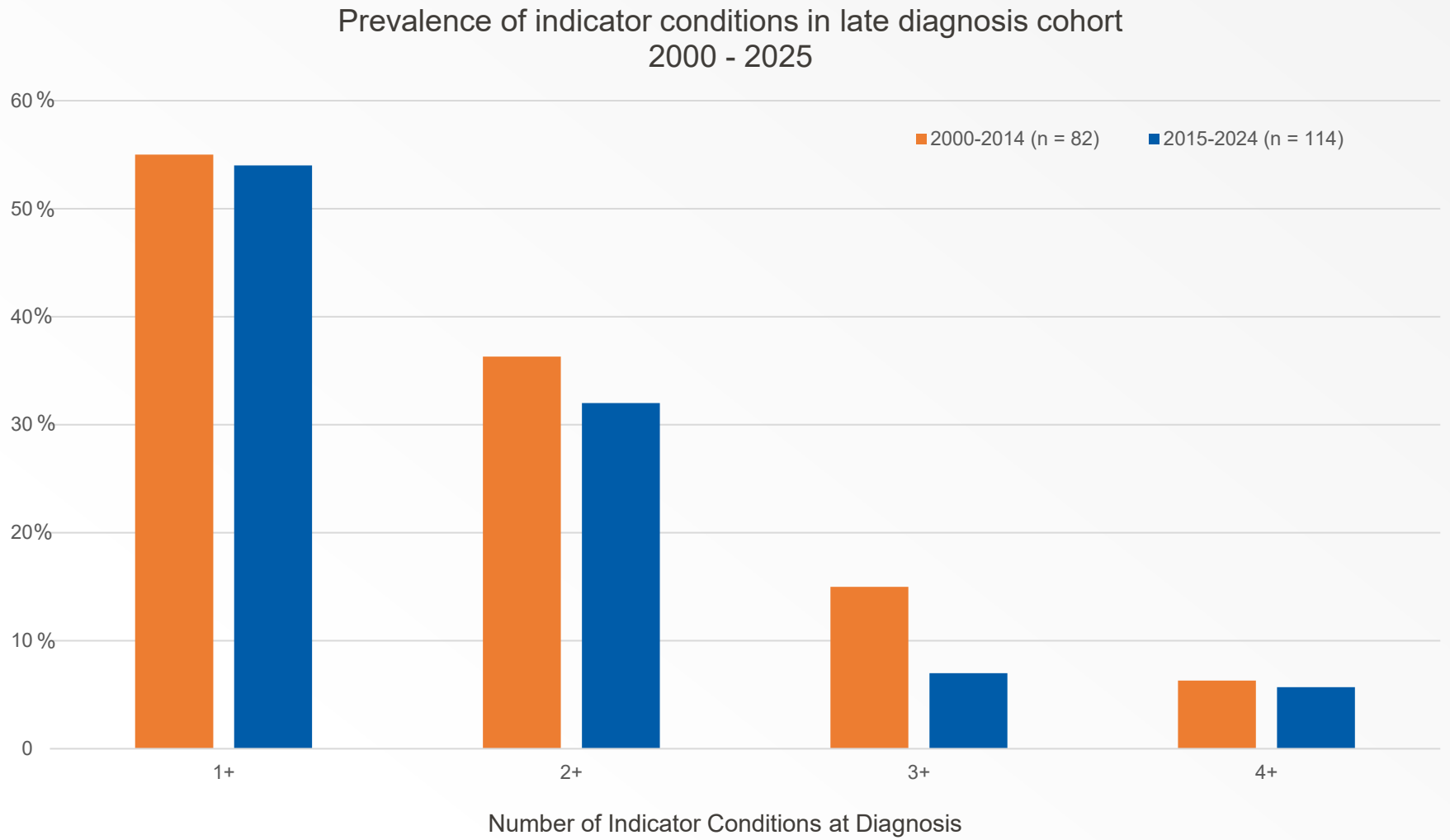


total, n = 240 CD4 <350cells/µL, n = 114

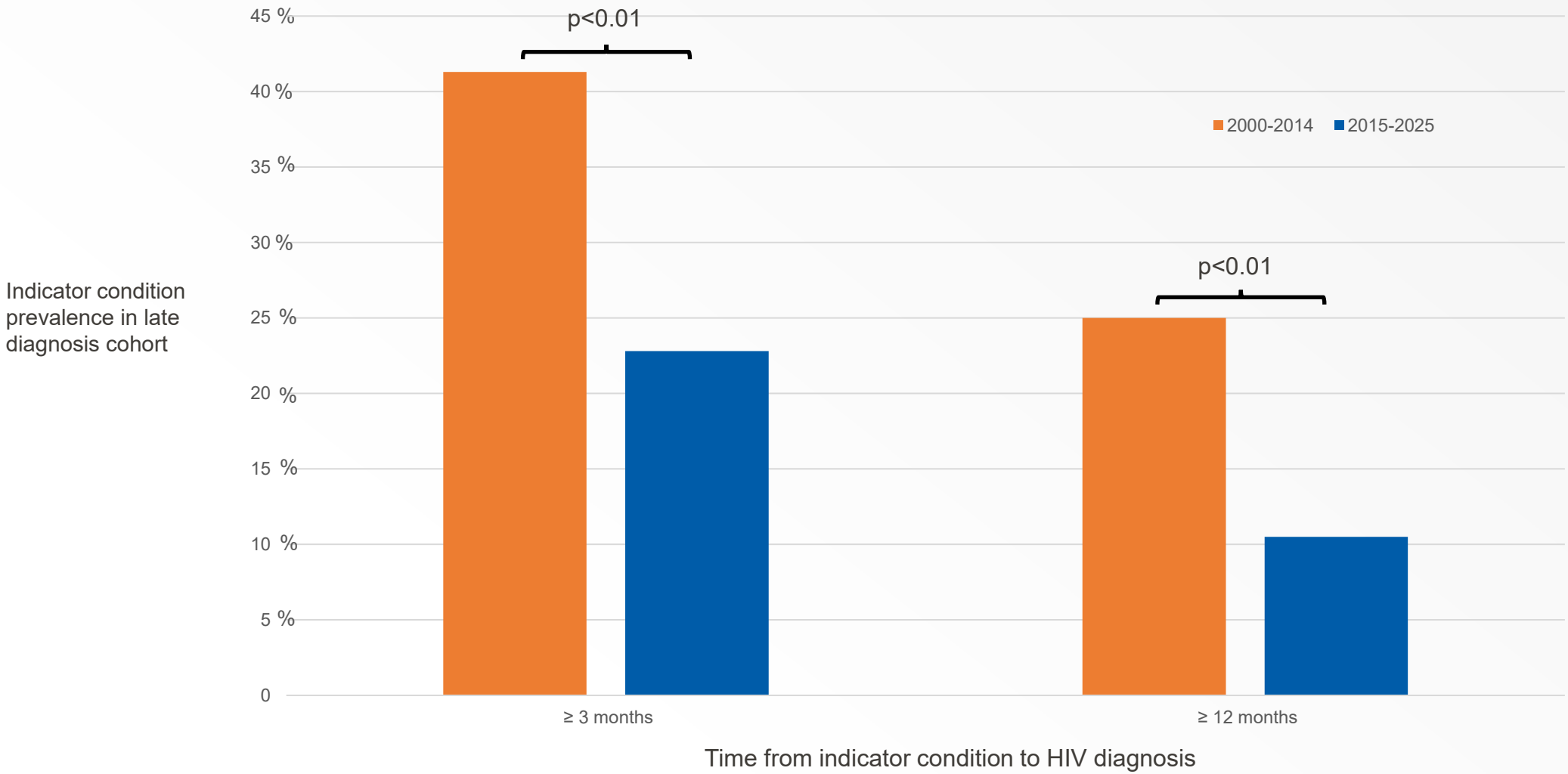
Mean per annum = 24

Results: Demographics 2000-2025

Demographics; Late Diagnosis			
	2000-2014	2015-2025	p value
Age (mean, years)	45	41.9	
Sex			0.096
Male	68 (83%)	83 (73%)	
Female	14 (17%)	31 (27%)	
Born Overseas	50 (61%)	83 (73%)	0.08
Total	82 (19%)	114 (48%)	p<0.005


Prevalence of indicator conditions in late diagnosis cohort
2000 - 2025
60 %
50 %
40 %
30 %
20 %
10 %
0
2000-2014 (n = 82)
2015-2024 (n = 114)
1+
2+
3+
4+
Number of Indicator Conditions at Diagnosis

Proportion of individuals diagnosed late, who had an opportunity for earlier diagnosis



Results: 2015-2025

	Individuals with indicator conditions diagnosed prior to HIV diagnosis		
HIVIC	**0-3 months**	**3-12 months**	**12 months or longer**
Unexplained weight loss	25	15	6
Hep B	16	0	0
STI	15	3	0
Candidiasis	15	7	3
HSV	9	2	2
Community Acquired Pneumonia	7	4	2
Unexplained lymphadenopathy	6	3	1
Unexplained leukocytopenia/ thrombocytopenia >4 weeks	4	1	1
Unexplained diarrhoea >4 weeks	3	2	1
Pregnancy	2	0	0
Cervical dysplasia	2	1	1
Total	**104**	**38**	**17**

Discussion: Limitations

- Retrospective, single-centre design
- Causality cannot be inferred
- Analysis limited to cohort CD4 <350 cells/μL
- Reliance on medical records that may be incomplete / inaccurate
- Unmeasured confounders

Key Messages

- Proportion of late diagnosis remains unacceptably high
- Within this cohort, clinician testing behaviour appears to have improved

- Next steps:
  - Continue to normalise HIV testing amongst colleagues, until it is routine
  - Integration of testing into guidelines is effective (pregnancy, hepatitis)
  - Scope for improvement: weight loss

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