

Introduction

Background

The European AIDS Clinical Society (EACS) guidelines recommend Tuberculosis (TB)/Latent TB Infection (LTBI) screening for all patients diagnosed with HIV at initial assessment with a chest X-Ray (CXR) and an interferon-gamma release assay (IGRA) or Mantoux test. Rescreening is advised following further exposures.

Aims

We sought to audit our practice of LTBI/TB screening for newly registered patients with HIV in the year 2018, and screening/documentation of prior screening results for patients with known diagnoses being transferred to our clinic.

Methods

A retrospective electronic patient record review for all HIV patients newly registered at our clinic in the year 2018 was carried out. Variables extracted included basic demographic details, documented history of prior TB/LTBI disease/treatment, baseline and nadir CD4 counts, CXR results, IGRA results, Mantoux test results, details of LTBI/TB treatment and whether the patient was seen by a clinical nurse specialist or a doctor at their first clinic visit.

Results

243 Newly Registered Patients with HIV in 2018

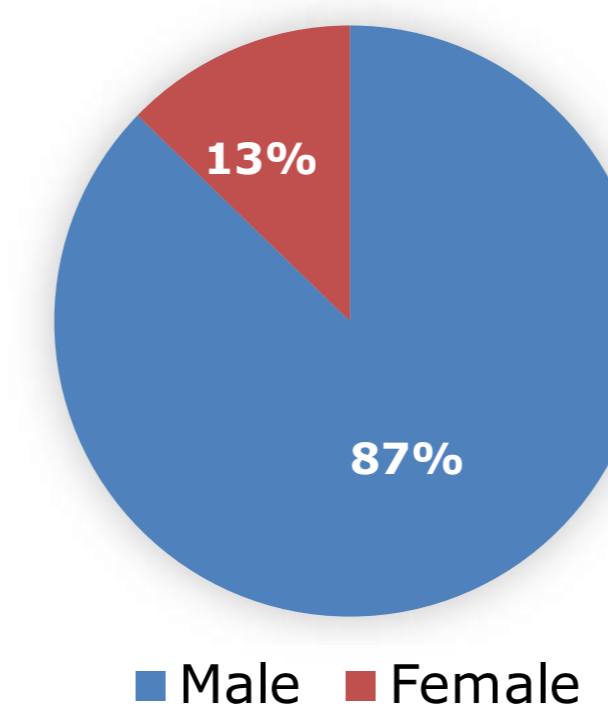


Figure 1.

Geographic Origin of Newly Registered Patients with HIV

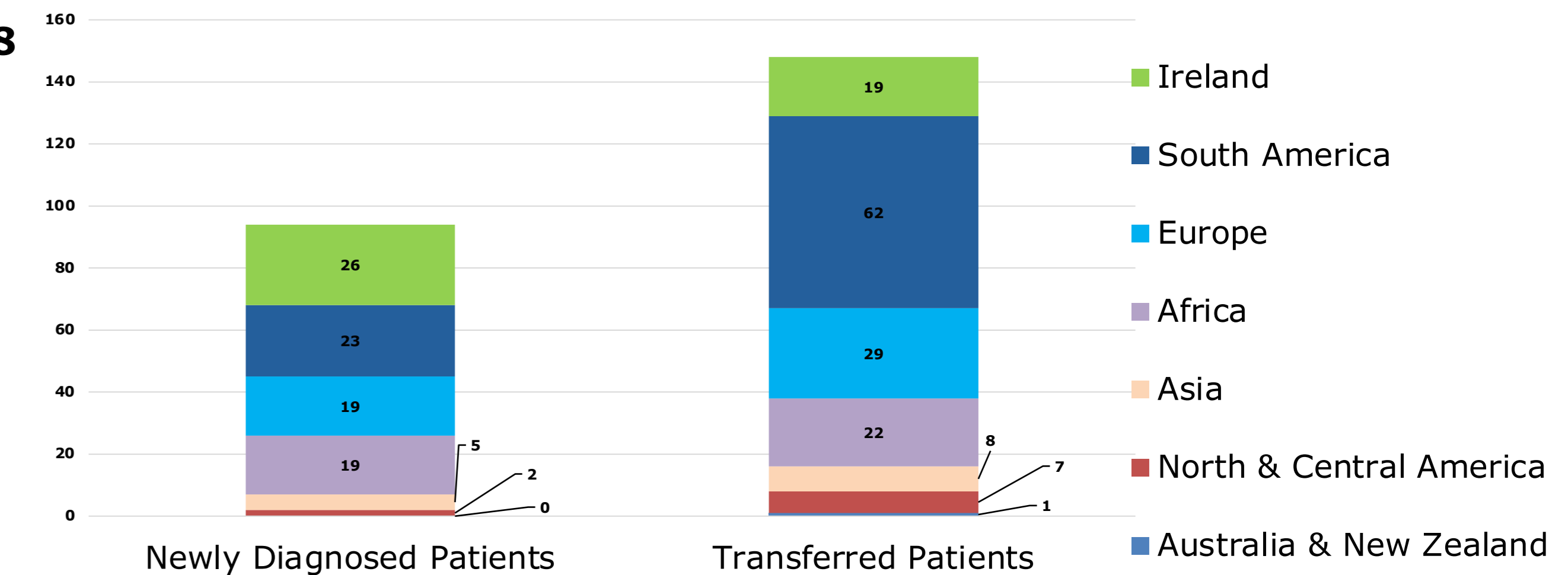


Figure 2.

Results

CD4 Count (cells/ μ L)	Newly Diagnosed Patients n=94	Transferred Patients n=149
Mean CD4 Count	430	641
Nadir CD4 Count	416	609
% with CD4 <200	20% (19/94)	6% (9/149)

Figure 3.

Key; Figure 1, Sex of Newly Registered HIV Patients, Figure 2, Geographic Origin of Newly Registered HIV Patients (divided into transferred and newly diagnosed patients), Figure 3, CD4 Counts of New Patients, Figure 4, LTBI/TB Screening Rates, Figures 5,6, CXR and IGRA Rates Among Patients seen by Doctor or Nurse at First Visit

LTBI/TB Screening	Newly Diagnosed Patients n=94	Transferred Patients n=149	P Value
IGRA	39% (37/94)	17% (26/149)	0.0002
Positive IGRA	8% (3/37)	11% (3/26)	0.6880
Mantoux Test	0	0	0
Screening CXR	71% (67/94)	52% (77/149)	0.0018
Abnormal CXR	15% (10/67)	10% (8/77)	0.3643
New LTBI/TB Diagnosis	3% (3/94)	0% (1/149)	0.2510
Previous Known LTBI/TB	0% (0/94)	1% (3/149)	0.3318
Completed LTBI/TB Treatment	67% (2/3)	75% (3/4)	0.8298
Death due to TB	33% (1/3)	0	0.2510

	Newly Diagnosed Patients n=94		P Value
	N (%)		
Seen as inpatient	3/94 (3%)	-	-
Seen as outpatient	91/94 (97%)	-	-
	First Seen by Doctor (n=14)	First Seen by Nurse (n=77)	
IGRA	6/14 (43%)	32/77 (42%)	0.9447
CXR	10/14 (71%)	56/77 (73%)	0.9206
CXR (booked but not attended)	1/14 (7%)	6/77 (8%)	0.8987

Figure 4.

	Transferred Patients n=149		P Value
	N (%)		
Seen as inpatient	5/149 (3%)	-	-
Seen as outpatient	144/149 (97%)	-	-
	First Seen by Doctor (n=67)	First Seen by Nurse (n=77)	
IGRA	11/67 (16%)	16/77 (21%)	0.5041
CXR	22/67 (33%)	50/77 (65%)	0.0001
CXR (booked but not attended)	1/67 (2%)	6/77 (8%)	0.1073

Figure 6.

Figure 5.

Conclusions

Although the majority of newly diagnosed HIV patients at our clinic come from countries with a high TB prevalence (only 28% from Ireland), over 60% were not screened for LTBI with IGRA, and 28% did not have a CXR. The majority of transferred patients, did not have LTBI screening or a documented result of LTBI screening.

Newly diagnosed patients were more likely to have a CXR and IGRA than transferred patients. Transferred patients seen at first visit by a clinical nurse specialist were more likely to have a CXR performed than those seen by a doctor. A small percentage of newly diagnosed and transferred patients had a CXR booked but did not attend for imaging.

Proposed Interventions

Improvements are needed to align our practice to the EACS guidelines. Plans to address the deficit in LTBI/TB screening at our clinic are beginning with the inclusion of IGRA and CXR in the 'HIV First Bloods' electronic ordering set. Changing the name of this order set to 'HIV First Visit Bloods' may remind service providers to book LTBI/TB screening for transferred as well as for newly diagnosed patients. Including this EACS guideline in our departmental staff induction and discussion of the rationale behind the guidelines at teaching sessions may help improve screening. Further investigation is needed into understanding why some patients, despite having imaging booked, did not attend CXR. Distance from the GUIDe department to radiology, duration of HIV clinic appointments and lack of patient understanding of the importance of testing are possible reasons for these missed screening opportunities.