Health issues of refugees attending an infectious disease refugee health clinic in a regional Australian hospital

Peta J Masters, Penelope J Lanfranco, Emmy Sneath, Amanda J Wade, Sarah Huffam, James Pollard, Jane Standish, Kate McCloskey, Eugene Athan, Daniel P O'Brien, N Deborah Friedman

Background and objective
Refugees in Australia present with conditions different to those of the general population. The aim of this study was to review the reasons for referral, prevalence of conditions and treatment outcomes for refugee patients attending a specialist referral clinic in regional Victoria.

Methods
A retrospective review was undertaken of patients attending the refugee health clinic at University Hospital Geelong from January 2007 to December 2012.

Results
Two hundred and ninety-one refugee patients attended the clinic over the six-year period. Latent tuberculosis infection (LTBI) (54.6%), vitamin deficiencies (15.8%), hepatitis B (11%) and schistosomiasis (11%) were the most common diagnoses. Less than two-thirds of the patients completed LTBI treatment; 35.4% of patients attended all scheduled clinic appointments.

Discussion
LTBI, vitamin deficiencies, parasitic infections and hepatitis B were the most common diagnoses among refugees referred to the University Hospital Geelong (UHG) Refugee Health Clinic from January 2007 to December 2012. General practitioners play an important role in the care of refugees, guiding referral to specialist services when necessary and recognising the potential implications of suboptimal clinic attendance and treatment completion.

BETWEEN 2007 AND 2012, Australia accepted 12,000–13,750 refugees each year under the Humanitarian Program.[1] This has since risen to 17,555 refugees per year in 2016–17.[2] Approximately 4000 of these refugees settle in Victoria annually and, of this number, 10–15% settle in rural and regional Victoria.[3] Of all regional areas in Victoria, the greater Geelong region had the largest refugee settlement between January 2007 and December 2012.[3]

Prior to departure for Australia, all refugee entrants applying for permanent visas are required to undergo a pre-departure health assessment, including a physical examination, chest X-ray (those aged ≥11 years), and syphilis and human immunodeficiency virus (HIV) screening (those aged ≥15 years).[4,5] Dependent on visa subclass, empirical treatment for intestinal helminths with a single dose of albendazole is offered, as is the measles, mumps and rubella vaccination (for those aged nine months to 54 years, unless pregnant).[6] Polio and yellow fever vaccines are given on the basis of location of residence before departure.[6]

A comprehensive primary health assessment is recommended within one month of arrival in Australia.[6] Medicare-funded initial health checks are available for refugees and humanitarian entrants who have been in Australia for less than 12 months.[6–8] Standard refugee health assessments in Australia include testing for latent and active tuberculosis (TB) infections, parasitic infestation, iron deficiency, abnormal lipid profiles, blood-borne viruses, sexually transmitted infections and vitamin deficiencies. Individual risk factors, source and transit countries, and history and examination findings then guide tailored investigations.[6] The assessment is intended to proactively focus on preventive health, catch-up immunisations, as well as diagnosis and treatment of any unmanaged chronic conditions, including mental health issues.[6,7] General practitioners (GPs) typically provide the first point of access to healthcare for newly arrived refugees.

Studies of refugee populations throughout Australia show that latent tuberculosis (LTBI), and parasitic and vector-borne diseases tend to be the most common infectious diseases among refugees, with vitamin deficiencies also commonly seen.[6,7,9,10] These studies, largely on African refugees, have primarily highlighted the prevalence of infectious diseases screened in general practice or specialist migrant health units.[11–14]

The University Hospital Geelong (UHG) Refugee Health Clinic at Barwon Health is one of two centres to offer specialised refugee infectious disease healthcare in Western Victoria and receives referrals for refugees residing west of Melbourne, in Greater

Geelong and from south-western Victoria. The weekly clinic is staffed by infectious disease (ID) physicians, paediatric consultants and registrars, and a clinical nurse consultant, assisted by foreign language interpreters. Most patients are referred by their GPs after positive screening or suspicion of other infections. Intra-hospital and inter-hospital referrals, as well as referrals from the Victorian Department of Health and Human Services, are also accepted. Patients requiring other services, including mental health services that are not available in the clinic, are referred on from the Refugee Health Clinic.

A clinical audit of refugees attending the UHG Refugee Health Clinic between 2007 and 2012 was undertaken. The aims were to:

- determine the most common reasons for referral
- ascertain the most common conditions present among refugees
- analyse treatment outcomes with the objective of improving future patient management.

Methods

A retrospective review of patients' medical records between 1 January 2007 and 31 December 2012 was undertaken. Patients were identified by iPIMs coding software and patient data were extracted from the UHG electronic medical record.

Data collected included age at first visit, gender, country of origin, language, interpreter use, year of migration to Australia, last country of residence, and time spent in a refugee camp. The reason for referral, investigations performed, confirmed diagnoses, missed clinic appointments, treatment and the outcome of treatment were also collected. Patients were considered paediatric if aged <16 years. The Mantoux tuberculin skin test (TST), blood interferon gamma release assay (IGRA) test or acid-fast bacilli (AFB) smear were performed for investigation of LTBI and active TB. In accordance with recommendations by the Australasian Society for Infectious Diseases,[6] a positive TST was defined as induration ≥10 mm in adults and children from refugee-like backgrounds (Table 1).

Data analysis involved descriptive statistics. Comparisons between categorical variables were performed using the chi-squared test and odds ratios calculated using the Mantel-Haenszel test. Data was analysed using STATA 12 (StataCorp, Texas, US).

The Barwon Health human research and ethics committee reviewed and approved this study (reference 13/113)

Table 1. Recommendations for screening and treatment of LTBI[6]

Screening	Test interpretation	Treatment
All people from a refugee-like background aged ≤35 years, including children, should be screened for LTBI Use either the tuberculin skin test (TST) or blood interferon gamma release assay (IGRA) to screen for LTBI	A positive TST is induration of ≥10 mm in adults and children from refugee-like backgrounds; or ≥5 mm in the setting of severe malnutrition, HIV infection, immunosuppression, or in children who are recent contacts of active TB cases	All children with LTBI (where active TB has been excluded) should be offered preventive treatment for LTBI The first-line preventive treatment of LTBI is 6–9 months of isoniazid (10 mg/kg up to 300 mg daily, pregnancy category A); concomitant administration of pyridoxine (6.25–25 mg/day, by age, not per kg) prevents peripheral neuropathy
TST is preferred over IGRA for children. New pre-departure TB screening protocols for children applying for humanitarian visas were introduced at the end of 2015	People with a positive TST or IGRA should have a repeat CXR (for radiological signs of current or past TB), unless there is a recent (within three months) CXR available for review	Shorter course regimens, particularly those including rifamycins (pregnancy category C), are also effective
Ensure that a CXR has been performed during the migration process for those aged ≥11 years. If so, a post-arrival CXR is not required unless TST or IGRA are positive, or there are respiratory symptoms suggestive of active pulmonary TB disease		People receiving LTBI treatment should be reviewed regularly to encourage adherence and to monitor for side effects. Routine periodic laboratory testing including liver function testing should be performed
If active TB is suspected, refer for urgent specialist assessment and ensure appropriate infection control precautions. Neither TST nor IGRA should be used to exclude active TB in adults or children		Advise patients not receiving LTBI treatment to seek early review for symptoms of active TB, and consider CXR 6–12-monthly for two years if there is a high index of suspicion of recent exposure (within two years)

CXR, chest X-ray; HIV, human immunodeficiency virus; LBTI, latent tuberculosis infection; TB, tuberculosis
Adapted with permission the Australasian Society for Infectious Diseases, from Denholm J, Bailes M, Francis J. Tuberculosis. In: Chaves NJ, Paxton G, Biggs BA, et al; on behalf of the Australasian Society for Infectious Diseases and Refugee Health Network of Australia Guidelines writing group. Recommendations for comprehensive post-arrival health assessment for people from refugee-like backgrounds. 2nd edn. Surry Hills, NSW: Australasian Society for Infectious Diseases and Refugee Health Network of Australia, 2016.

without the requirement of obtaining informed consent from the retrospective de-identified patient cohort.

Results

Two hundred and ninety-one patients were seen in the Refugee Health Clinic over the six-year period. The median age of clinic patients was 33 years, 53% were male, and one-third were from Myanmar (Table 2). GP referrals accounted for 251 (86%) of clinic attendees (Table 3). The remaining patients were referred from the UHG emergency department, Victorian Department of Health and Human Services, and other hospitals.

The majority of clinic patients (83.2%) required interpreter services. Eighty-nine patients (29.9%) were diagnosed with two or more conditions. Analysis of attendance outcomes revealed that 35.4% of patients attended all scheduled appointments, and 32.7% missed three or more scheduled appointments (Table 2).

Tuberculosis

GP referrals of patients with positive or equivocal TST results were the most common reasons for referral (136 of 251 referrals). Of these, 116 patients had a confirmed diagnosis of LTBI made in the clinic. There were six confirmed diagnoses of active TB in the patient cohort; all six patients completed treatment according to Australian guidelines.[15]

The most common diagnosis at the clinic was LTBI (54.6%; Table 3). Of patients offered treatment, 63.5% completed a full course of LTBI therapy, 10.7% ceased treatment because of hepatotoxicity, and 11.4% of those suitable for LTBI treatment were lost to follow-up (Table 4). There was a significant association between the diagnosis of LTBI and country of origin, with patients from Afghanistan (odds ratio [OR]: 4.63; 95% confidence interval [CI]: 2.10–10.21; P <0.001) or the Democratic Republic of Congo (OR: 2.87; 95% CI: 1.10–7.49; P = 0.02) being more likely to have a diagnosis of LTBI when compared with patients from other countries of origin. Eighty-six of 133 patients (64.7%) who had lived in a refugee camp developed either active or latent TB.

Vitamin deficiencies

Vitamin deficiencies (A, B or D) were the second-most common conditions (15.5%; Table 3). Over half of these patients (52.2%) were from Africa. GPs referred 20 patients (including 18 paediatric patients) for management of vitamin D deficiency (Table 3). Forty of 45 patients (88.9%) with a diagnosis of vitamin deficiency received treatment according to standard treatment protocols.

Hepatitis B

A total of 32 patients (11.0%) were diagnosed with chronic hepatitis B (CHB) infection (Table 3), with the largest number being among refugees from Myanmar (43.7%). Fifty per cent of CHB cases were diagnosed in refugees who had migrated from Asia, while 40.6% were diagnosed in refugees of African origin. Two cases of acute hepatitis B infection (IgM+ to hepatitis B core antigen [Anti-HBc]) were detected. Ongoing follow-up of these patients was conducted in the UHG Liver Clinic.

Schistosomiasis

Schistosomiasis was diagnosed in 32 patients (11.0%) on the basis of positive serology (Table 3); 50.0% were from Africa and 37.5% from Myanmar. Praziquantel therapy was administered to 29 patients (90.6%) in two doses of 20 mg/kg, four hours apart, orally.[6,15]

Discussion

This study provides comprehensive data on the reasons for referral, predominantly from general practice, to a refugee health clinic at a tertiary hospital in regional Victoria between 2007 and 2012.

LTBI was the most common diagnosis, in over half of the patients, which is comparable to 55% of referrals in Gibney's study of African immigrants attending an infectious diseases clinic in Melbourne.[11] An analysis of African refugees attending the UHG clinic revealed that 51% were diagnosed with LTBI, accounting for 31.4% of those diagnosed with LTBI in the entire cohort. Other studies conducted within the primary healthcare setting found a lower percentage of LTBI (25%) among newly arrived refugees.[12,13] The higher percentage in this study is likely

Table 2. Characteristics of patients reviewed in the Refugee Health Clinic

	Number of patients
Year	
2007	21
2008	39
2009	43
2010	66
2011	73
2012	49
Age	
≥16 years (adult)	165 (56.7%)
<16 years (paediatric)	126 (43.3%)
Sex	
Male	154 (53%)
Female	137 (47%)
Country of birth	
Myanmar	96 (33%)
Sudan	52 (17.8%)
Afghanistan	49 (16.8%)
Democratic Republic of Congo	25 (8.6%)
Australia	20 (6.8%)
Thailand	15 (5.2%)
Ethiopia	9 (3.1%)
Liberia	7 (2.4%)
Other countries of origin	19 (6.5%)
Attendance outcomes	
Attendance at all scheduled appointments	103 (35.4%)
One missed appointment	51 (17.5%)
Two missed appointments	42 (14.4%)
Three or more missed appointments	95 (32.7%)

Table 3. GP referrals to the refugee health clinic and diagnostic outcomes of all patients

Reason for GP referral	Number of patients			
Suspicion of active or latent TB	175			
Positive schistosomiasis screening	22			
Positive hepatitis B serology	19			
Vitamin D deficiency	20			
Suspicion of syphilis	13			
Other reason for referral	2			
	Total = 251			
Diagnosis		**Total cohort (%)**	**Paediatric cohort (%)**	**Adult cohort (%)**
LTBI	159	54.6	46.0	61.2
	(58 paediatric, 101 adults,	Male 31.3	24.6	36.4
	91 male, 68 female)	Female 23.4	21.4	24.8
Mode of diagnosis				
TST	85			
IGRA	31			
AFB	4			
TST + IGRA	24			
TST + AFB	5			
TST + IGRA + AFB	1			
IGRA + AFB	9			
Vitamin deficiencies (vitamins A, B, D)	45	15.5	27.7	6.1
	(35 paediatric, 10 adults,	Male 7.6	12.7	3.6
	22 male, 23 female)	Female 7.9	15.1	2.4
Hepatitis B infection	32	11.0	10.3	11.5
	(13 paediatric, 19 adults,	Male 5.5	5.6	5.5
	16 male, 16 female)	Female 5.5	4.8	6.1
Schistosomiasis	32	11.0	9.5	12.1
	(12 paediatric, 20 adults,	Male 5.8	4.0	7.3
	17 male, 15 female)	Female 5.2	5.6	4.8
Iron deficiency	25	8.6	16.7	2.4
	(21 paediatric, 4 adults,	Male 3.8	7.9	0.6
	11 male, 14 female)	Female 4.8	8.7	1.8
Strongyloidiasis	8	2.7	0.8	4.2
	(1 paediatric, 7 adults,	Male 1.4	0.0	2.4
	4 male, 4 female)	Female 1.4	0.8	1.8
Helicobacter pylori	8	2.7	2.3	3.0
	(3 paediatric, 5 adults,	Male 1.4	1.6	1.2
	4 male, 4 female)	Female 1.4	0.8	1.8
Active TB	6	2.1	2.4	1.8
	(3 paediatric, 3 adults,	Male 0.7	0.8	0.6
	2 male , 4 female)	Female 1.4	1.6	1.2
Hepatitis C infection	3	1.0	0.8	1.2
	(1 paediatric, 2 adult,	Male 1.0	0.8	1.2
	3 male)	Female 0.0	0.0	0.0

AFB, acid-fast bacilli; GP, general practitioner; IGRA, interferon gamma release assay; LBTI, latent tuberculosis infection; TB, tuberculosis; TST, tuberculin skin test

Table 4. Outcomes of patients with a confirmed diagnosis of latent tuberculosis

Latent tuberculosis outcomes	Number of patients (%)
Full course of treatment completed (isoniazid: adults, nine-month course; paediatric, six-month course)	101 (63.5%)
Confirmed latent tuberculosis but treatment not offered due to age	20 (12.6%)
Treatment commenced but ceased by physician due to liver function test derangement (alanine aminotransferase levels ranging 2–8 times the upper limit of normal)	17 (10.7%)
Commenced treatment but lost to follow-up before full course of treatment completed	13 (8.2% of those diagnosed with LTBI, or 11.4% of those suitable for LTBI treatment) (7 adults, 6 paediatric)
Patients in the process of completing treatment at the time of data collection (ongoing management at the clinic)	5 (3.1%)
Treatment commenced but patients relocated with treatment referred to another centre	2 (1.3%)
Patient unable to receive treatment due to comorbities or a contraindication to medication	1 (0.6%)
	Total: 159

to be a reflection of local adherence of GPs to guidelines, which recommend referral of patients with positive TB screening to a specialist TB centre.[6,10] While the prevalence of active TB in this study was relatively low (2%), LTBI is recognised globally as a reservoir for active TB. Reactivation of LTBI occurs most commonly in the first five years post-migration.[6,16] In countries where the disease is endemic, rates of reactivation can remain high (approximately 10%) for many years post-arrival.[6,16,17] This has important implications, given that 63.5% of patients with LTBI who were offered treatment completed the full course of therapy, and 11.4% of those who were suitable for LTBI treatment in this study were lost to follow-up. Educating patients about symptoms of reactivation and the need for prompt medical assessment are priorities to reduce the spread of active TB. This study also found that 64.7% of patients with refugee camp exposure were diagnosed with either active TB or LTBI. The World Health Organization recognises the significant burden of TB infections within refugee camps, and estimates that each person with active TB will infect, on average, 10 to 15 people per year if left untreated.[17] Prior refugee camp residents are a group in which early post-arrival TB screening should be expedited.

The second-most common diagnosis in this study was vitamin deficiency (affecting 15.5%), considerably lower than the 20–80% found in other studies.[9,12,13] This lower prevalence may be attributed to appropriate management of vitamin deficiencies in general practice, resulting in fewer referrals. Of 20 referrals made by GPs to the clinic for vitamin deficiency, 18 were for paediatric patients, probably reflecting an inability to access the recommended higher dose vitamin D therapy[18] in the community. The smaller African population in this study (33.6%) may have contributed to the lower rate of vitamin deficiency when compared to other studies.[12,13]

CHB accounted for 11.0% of diagnoses in this study population. Of 32 patients diagnosed with CHB, 19 (59.3%) were diagnosed by GPs prior to referral to the Refugee Health Clinic. The rate of CHB in African patients (12.6%) in this study is substantially lower than reported rates of 56.7% found in sub-Saharan African refugees attending a primary care Migrant Health Unit in Western Australia,[13] but is comparable to the 8% found in African patients attending general practice clinics throughout Melbourne,[12] and 19% in African immigrants at a referral ID unit.[11] The rate of CHB among refugees is considerable compared to the Australian prevalence estimate of 1%,[19] highlighting the importance of detection of infection and vaccination of the non-immune in the initial refugee health assessment.

Schistosomiasis was present in 11.0% of referred patients, which is similar to the 6–12% found in African migrants in the primary healthcare setting[12,13] and the 17% found in a study involving refugees from various origins.[9] The lower prevalence in this study, compared with the 41% detected among African immigrants attending an ID unit,[11] may be explained by the UHG clinic's smaller African population, in which schistosomiasis is endemic.[6] Blood testing for schistosomiasis in general practice should be offered to patients who have lived in, or travelled through, endemic countries (including Africa, parts of South-East Asia and the Middle East).[6]

Attendance rates at the UHG clinic were poor: 35.4% of patients attended all scheduled appointments, and nearly half of patients missed two or more scheduled appointments (Table 2). This is significantly lower than the 81% attendance rate at the Migrant Health Unit in Western Australia.[13] However, the Migrant Health Unit is a primary healthcare service, while the UHG Refugee Health Clinic operates on a referral basis. Non-attendance rates may be due, at least in part, to problems such as competing priorities, unstable housing, poor health literacy, distance, and a lack of transport, especially for patients living in remote areas of South-Western Victoria.

This underscores the important role of GPs in the provision of care closer to home, potentially in a shared care arrangement with specialists, and use of Telehealth. Language barriers, cultural responsiveness, appointment waiting times and cost are additional factors that have been shown to influence access and attendance of refugees.[20] Further local research into reasons for poor clinic attendance and solutions to this challenge are required.

Nearly 30% of patients attending the clinic were diagnosed with two or more conditions, demonstrating the complex variety of health conditions among newly arrived refugees. This highlights the need for comprehensive pre-departure and post-arrival health assessments and the important role of GPs in ongoing patient care. Comprehensive guidelines on refugee screening and management of common conditions are a useful resource.[6] Ongoing patient care must focus on those needs of refugees unmet in the UHG clinic, including cancer screening, psychological support, improving health literacy, and referrals for dental and allied health.

Possible limitations of this study include reliance on the accuracy of information in medical records, potentially resulting in ascertainment bias. Incomplete screening and subjective practitioner evaluation may have also resulted in selection bias. Notwithstanding these limitations, the electronic record system used provides an accurate record of attendance, reasons for referral, and medical review.

This study confirms that LTBI, vitamin deficiency, parasitic infestation and hepatitis B are common among newly arrived refugees in Australia referred to a tertiary centre. In addition, this study uncovers the challenges of poor attendance at scheduled clinic appointments, suboptimal completion of treatment for LTBI, and a concerning loss to follow-up among refugees. In particular, awareness of potential LTBI reactivation is critical. Future research is required to understand the barriers to clinic attendance, adherence to LTBI treatment and how to best integrate services and follow-up in general practice for refugee patients in the Greater Geelong region.

Authors

Peta J Masters BMBS, Senior House Officer, Department of General Medicine, Isle of Wight Hospital, NHS Trust, UK; Barwon Health, Geelong, Vic. peta.j.masters@gmail.com

Penelope J Lanfranco BMBS. General Practice Registrar, Cambourne Clinic, Warnnambool, Vic

Emmy Sneath BMBS. Medical Registrar, Department of General Medicine, Barwon Health, Geelong, Vic

Amanda J Wade MBBS (Hons), FRACP, PhD student, Department of Infectious Diseases, Barwon Health, Geelong, Vic; Centre for Population Health, Burnet Institute and School of Population Health and Preventive Medicine, Monash University, Melbourne, Vic

Sarah Huffam MBBS, MPH&TM, FAChSHM, FRACP, Department of Infectious Diseases, Barwon Health, Geelong, Vic

James Pollard MBBS, FRACP, Department of Infectious Diseases, Barwon Health, Geelong, Vic

Jane Standish MBBS, FRACP, Department of Paediatrics, Barwon Health, Geelong, Vic

Kate McCloskey MBBS, FRACP, PhD, Department of Paediatrics, Barwon Health, Geelong, Vic

Eugene Athan MBBS, FRACP, MD, MPH, Director, Department of Infectious Diseases, Barwon Health, Geelong, Vic

Daniel P O'Brien MBBS, FRACP, DMedSc, DipAnat, Deputy Director, Department of Infectious Diseases, Barwon Health, Geelong, Vic; Department of Medicine and Infectious Diseases, Royal Melbourne Hospital, Melbourne, Vic

N Deborah Friedman MBBS, FRACP, MD, MPH, Department of Infectious Diseases, Barwon Health, Geelong, Vic

Competing interests: None.

Provenance and peer review: Not commissioned, externally peer reviewed.

References

1. Refugee Council of Australia. Statistics on Australia's current refugee and humanitarian program: Permanent additions to the resident population by eligibility category, 2003–04 to 2012–13. Surry Hills, NSW: Refugee Council of Australia, 2014. Available at www.refugeecouncil.org.au/getfacts/seekingsafety/refugee-humanitarian-program/statistics [Accessed 12 December 2017].
2. Department of Home Affairs. Department of Immigration and Border Protection Annual Report 2016–17. Canberra: Department of Home Affairs, 2017. Available at www.homeaffairs.gov.au/about/reports-publications/reports/annual/annual-report-2016-17 [Accessed 12 February 2018].
3. Department of Health and Human Services. Victorian refugee and asylum seeker health action plan 2014–2018. Melbourne: DHHS, 2014. Available at www2.health.vic.gov.au/about/publications/policiesandguidelines/Victorian-refugee-and-asylum-seeker-health-action-plan-2014-2018 [Accessed 12 February 2018].
4. Royal Australasian College of Physicians. Policy on refugee and asylum seeker health. Sydney: RACP, 2015. Available at www.racp.edu.au/docs/default-source/default-document-library/policy-on-refugee-and-asylum-seeker-health.pdf [Accessed 6 March 2016].
5. Department of Home Affairs. Immigration health requirements. Canberra: DHA, [date unknown]. Available at www.homeaffairs.gov.au/trav/visa/heal [Accessed 12 February 2018].
6. Chaves NJ, Paxton G, Biggs BA, et al. Recommendations for comprehensive post-arrival health assessment for people from refugee-like backgrounds. 2nd edn. Surry Hills, NSW: Australasian Society for Infectious Diseases, 2016. Available at https://www.asid.net.au/documents/item/1225 [Accessed 16 May 2017].
7. Benson J, Smith MM. Early health assessment of refugees. Aust Fam Physician 2007;36(1–2):41–43.
8. Department of Health. Medicare Benefits Schedule (MBS), Health Assessments, MBS Items 701, 703, 705 and 707 & 10986: Fact Sheet. Canberra: DoH, 2015. Available at www.health.gov.au/internet/main/publishing.nsf/Content/169E5ECAFE157951CA257BF0001D242D/$File/Hlth%20Ass%20items.pdf [Accessed 16 August 2017].
9. Johnston V, Smith L, Roydhouse H. The health of newly arrived refugees to the Top End of Australia: Results of a clinical audit at the Darwin Refugee Health Service. Aust J Prim Health 2012;18(3):242–47.
10. Foundation House, The Victorian Foundation for Survivors of Torture Inc. Promoting refugee health guides: A guide for doctors, nurses and other health care providers caring for people from refugee backgrounds. 3rd edn. Brunswick, Vic: VFST, 2015. Available at www.foundationhouse.org.au/promoting-refugee-health-guides [Accessed 12 February 2018].
11. Gibney KB, Mihrshahi S, Torresi J, Marshall C, Leder K, Biggs BA. The profile of health problems in African immigrants attending an infectious disease unit in Melbourne, Australia. Am J Trop Med Hyg 2009;80(5):805–11.
12. Tiong AC, Patel MS, Gardiner J, et al. Health issues in newly arrived African refugees attending general practice clinics in Melbourne. Med J Aust 2006;185(11–12):602–06.
13. Martin JA, Mak DB. Changing faces: A review of infectious disease screening of refugees by the Migrant Health Unit, Western Australia in 2003 and 2004. Med J Aust 2006;185(11–12):607–10.
14. Trauer JM, Krause VL. Assessment and management of latent tuberculosis infection in a refugee population in the Northern Territory. Med J Aust 2011;194(11):579–82.
15. Expert Group for Antibiotic. Antibiotic: Gastrointestinal tract infections: helminths (worms). In: eTG complete [Internet]. Melbourne: Therapeutic Guidelines Limited, 2016.
16. Frothingham R, Stout JE, Hamilton CD. Current issues in global tuberculosis control. Int J Infect Dis 2005;9(6):297–311.
17. World Health Organization. Tuberculosis: Fact sheet. Geneva: WHO, 2018. Available at www.who.int/mediacentre/factsheets/fs104/en [Accessed 12 February 2018].
18. Royal Children's Hospital Melbourne. Clinical practice guidelines: Vitamin D deficiency. Parkville, Vic: RCH Melbourne, [date unknown]. Available at www.rch.org.au/clinicalguide/guideline_index/Vitamin_D_deficiency/#dosing [Accessed 6 December 2017].
19. MacLachlan AH, Allard N, Towell V, Cowie BC. The burden of chronic hepatitis B virus infection in Australia, 2011. Aust N Z J Public Health 2013;37(5):416–22.
20. Cheng IH, Vasi S, Wahidi S, Russell G. Rites of passage: Improving refugee access to general practice services. Aust Fam Physician 2015;44(7):503–07.