Testing and care in the prison

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Prisoners

- 10.35 million individuals in prison at any one time (2015)
  - 144 per 100,000 worldwide
  - 698 per 100,000 in USA
  - Increasing rates of imprisonment of women (+50% since 2000)
  - Increasing rates in Oceania (driven by Australia) (+59% since 2000)
- Over-representation of ethnic minorities
- Low socioeconomic status
- Low literacy

The prison environment

- Unique physical structure, commonly overcrowded
- Predominantly short stay
- Frequent movements

- Uncontrolled exposure to violence
- Lack of purposeful activity
- Separation from family networks
- Significant risk of physical & psychological harm

- A distinct micro-society with their own rules & regulations

de Viggiani N. Unhealthy prisons: exploring structural determinants of prison health. Sociology of Health & Illness 2007;29:115-35

The health of prisoners

	Male prisoners (%)	Male general population estimates (%)	Female prisoners (%)	Female general population estimates (%)
Psychosis[11]	4%	1%	4%	1%
Depression[11]	10%	2–4%	12%	5–7%
Any personality disorder[11]	65%	5–10%	42%	5–10%
Antisocial personality disorder[11]	47%	5–7%	21%	0·5–1%
Alcohol misuse/dependence[12]	18–30%	14–16%	10–24%	4–5%
Drug misuse/dependence[12]	10–48%	4–6%	30–60%	2–3%
Intellectual disability[16]	0·5–1·5%	1%	0·5–1·5%	1%
Post-traumatic disorder[13]	4–21%	2%	10–21%	3%

*General population estimates are based on individuals of similar ages where possible.

Table 1: **Prevalence of mental disorders in prisoners in western countries in comparison with the general population***

Fazel S, Baillargeon J. Health of prisoners. Lancet 2011; 377:956-65

Blood-borne viruses and prisoners

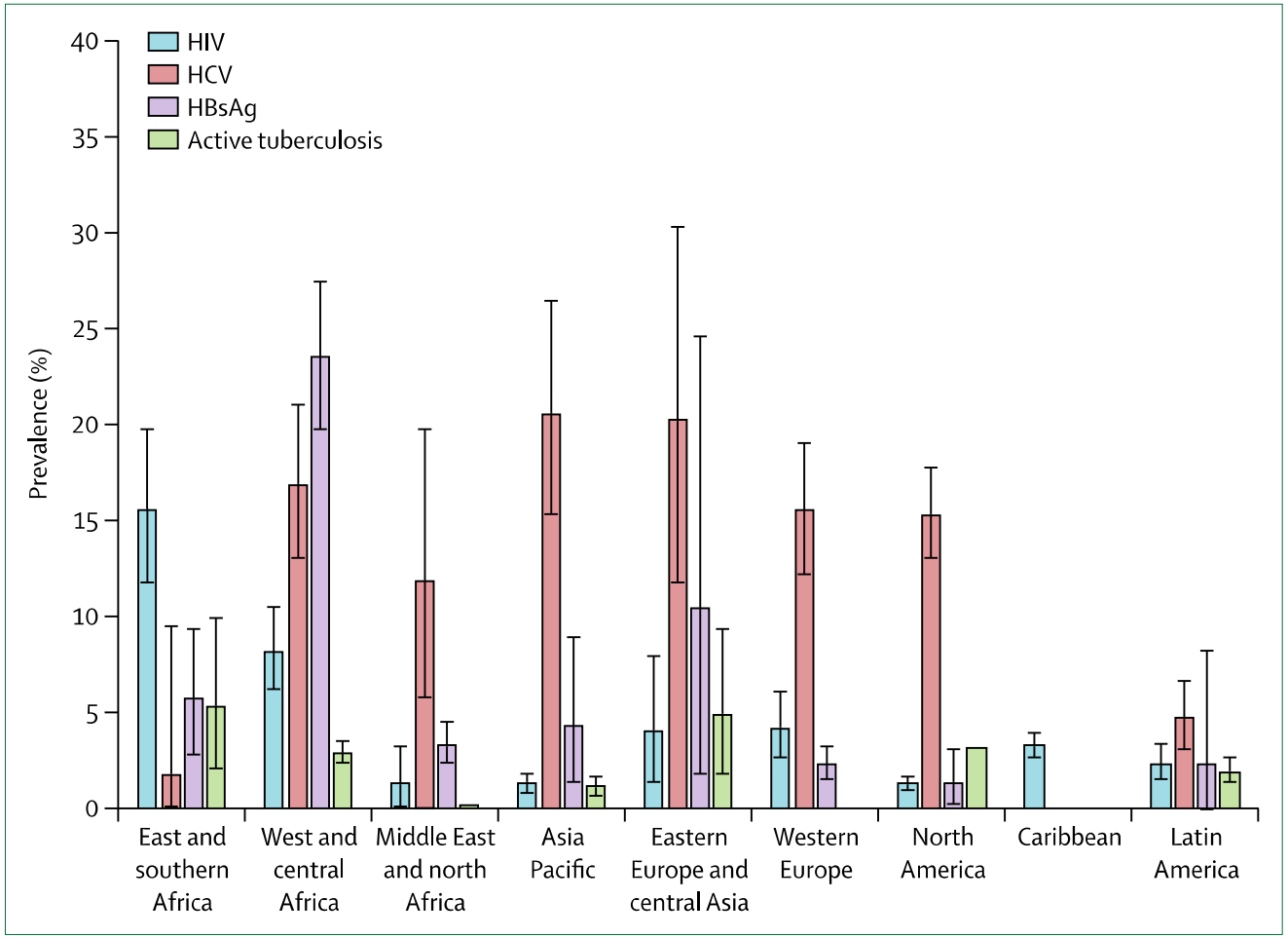

Figure 1: **Regional prevalence of HIV, hepatitis C, HBsAg, and active tuberculosis in prisoners, published between 2005 and 2015**

HCV=hepatitis C antibodies.

Dolan K et al. Global burden of HIV, viral hepatitis, and tuberculosis in priosners and detainees. Lancet 2016 (epub online July 14 2016)

Hepatitis C and prisoners

- 1.5M prisoners (15.1%) infected globally

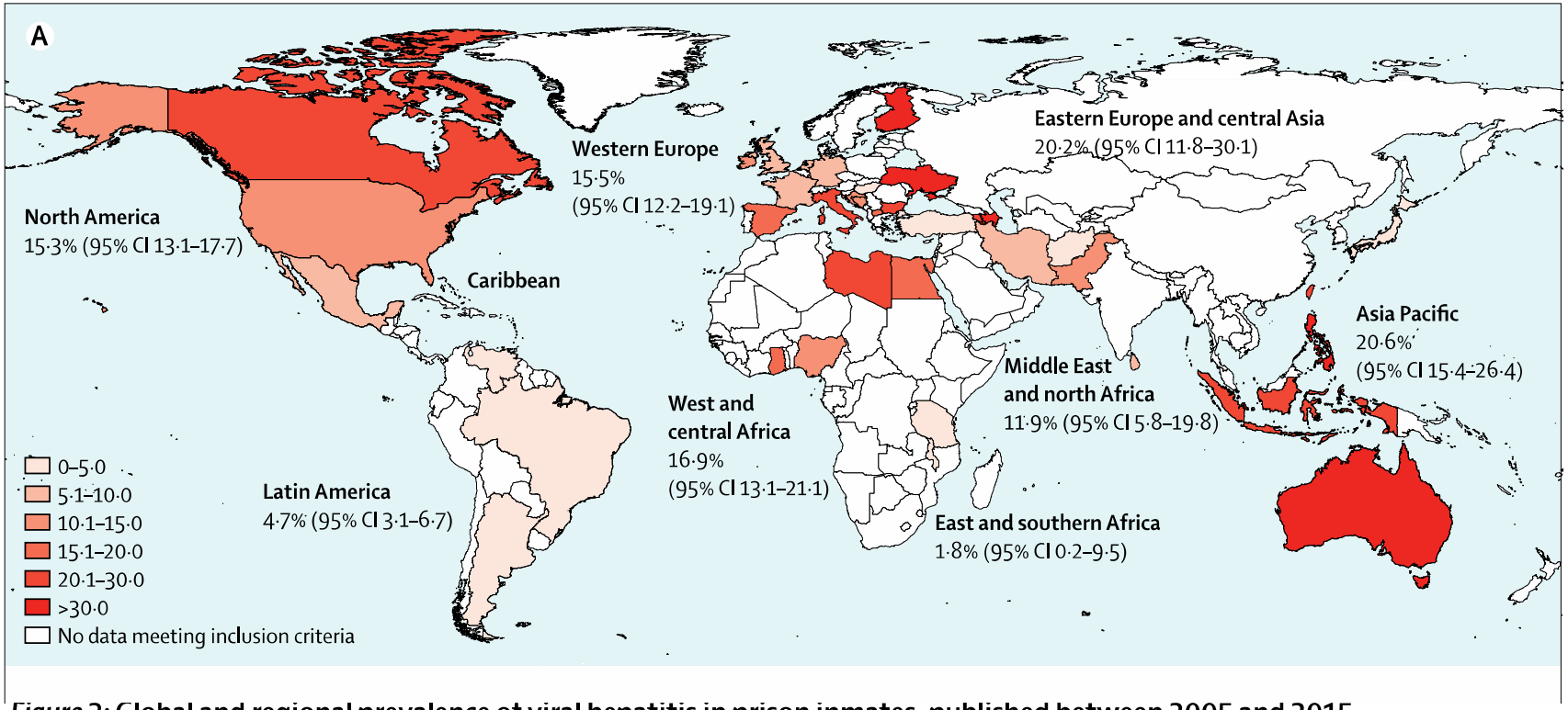

Figure 3: **Global and regional prevalence of viral hepatitis in prison inmates, published between 2005 and 2015**
(A) Prevalence of HCV antibodies.

Dolan K et al. Global burden of HIV, viral hepatitis, and tuberculosis in prisoners and detainees. Lancet 2016 (epub online July 14 2016)

Hepatitis C incidence amongst prisoners

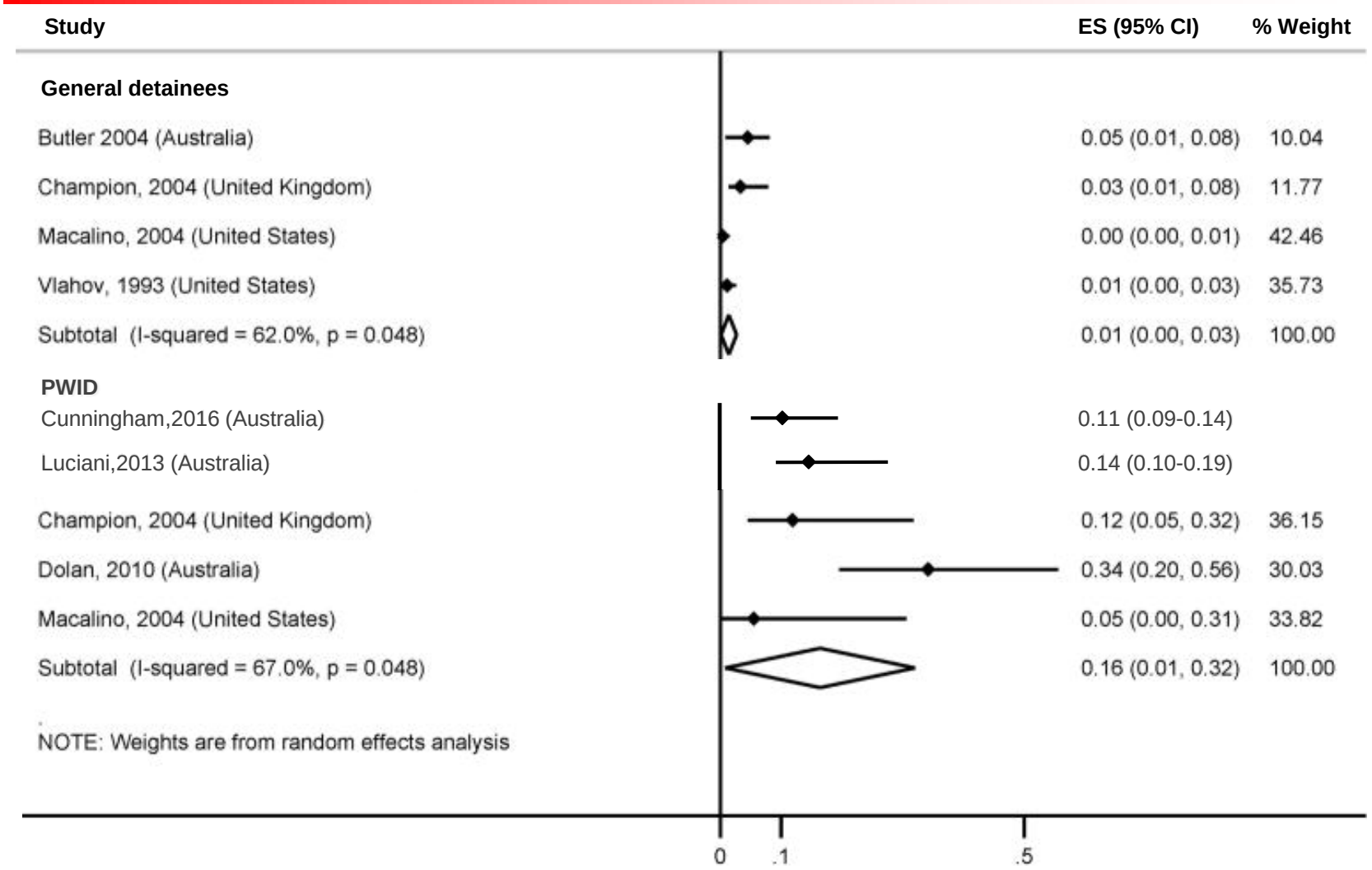

Fig. 2. Hepatitis C virus antibody incidence in general population detainees and detainees with a history of injecting drug use. ES, effect size.

Modified from: Larney S et al: Hepatology 2013; 58:1215-24

Hepatitis C treatment in the prisons

Author, Year	Country	Sample size (n)	Rx	Comment
Simonovic Babic, et al, 2016	Serbia	32	Peg-IFN/ RBV	
Mina M, et al, 2016	Australia	313	Peg-IFN/ RBV / Boc	
Marco A et al, 2015	Spain	236	Peg-IFN/ RBV	
Juan JD, et al, 2014	Spain	431	Peg-IFN/ RBV	
Saiz de la Hoya P, et al, 2014	Spain	252	Peg-IFN/ RBV	RCT of DOT
Brandolini M, et al, 2013	Italy	36	Peg-IFN/ RBV	
Post JJ, et al, 2013	Australia	420	Peg-IFN/ RBV	Indigenous vs non
Marco A, et al, 2013	Spain	119	Peg-IFN/ RBV	Reinfection
Lloyd AR, et al, 2013	Australia	108	Peg-IFN/ RBV	Nurse-led model
Arora S, et al, 2011	USA	?	Peg-IFN/ RBV	Project ECHO
Boonwaat L, et al, 2010	Australia	185	Peg-IFN/ RBV	
Martin CK et al, 2010	USA	39	Peg-IFN/ RBV	
Chew KW et al, 2009	USA	71	Peg-IFN/ RBV	
Maru DS, et al, 2008	USA	69	Peg-IFN/ RBV	
Sabbatini S, et al, 2006	Brazil	39	Peg-IFN/ RBV	
Remy AJ, et al, 2006	France	461	Peg-IFN/ RBV	
Farley J, et al, 2005	Canada	114	Peg-IFN/ RBV	
Sterling RK, et al, 2004	USA	119	IFN/RBV	
Allen SA, et al, 2003	USA	93	IFN/RBV	

Hepatitis C treatment in prisons – barriers & opportunities

Domain	Challenges	Potential solutions
Diagnosis	Short sentence length, unpredictable release (bail or release after court appearance), highly mobile population, long test turnaround times - all leading to difficulty ensuring result given to patient before release or transfer	Targeted testing (high risk individuals) and point of care testing
	Missed opportunities for HCV testing when patients come into contact with health staff	Encourage testing by primary care, public health, drug and alcohol, medical and psychiatric services.
		Ensure HCV testing offered during sexual health and other blood borne virus screening
Availability of treatment	Funding of, and access to, HCV treatment	Ensure community standard of health care in custodial system.
	Trained staff to deliver treatment	Education programs for health and custodial staff
Patient willingness for treatment	Lack of knowledge, misperceptions about HCV disease and treatment	Education – informal, formal, peer, prison corrections- specific literature, promote clinical service, ensure confidentiality
Assessment before treatment	Lack of medical staff	Task transfer to other trained staff e.g. nurses, primary care practitioners
	High rates of psychiatric co-morbidity in inmate populations and limited availability of psychiatrists and psychologists	Standardised psychiatric assessment tools and risk assessments.
	Cost and security concerns associated with transport of patients to community health facilities	Portable fibroscan and other diagnostic facilities in correctional centres with appropriately trained staff

Modified from: Post JJ, Arain A, Lloyd AR. Enhancing assessment and treatment of hepatitis C in the custodial setting. Clin Infect Dis. 2013 Aug;57 Suppl 2:S70-4.

Hepatitis C treatment in prisons – barriers & opportunities

Domain	Challenges	Potential solutions
Adherence to treatment	Highly mobile patient population – between centers and between community and custodial environment.	Medical request to keep patients in one facility to facilitate treatment.
		Ensure stock of relevant drugs kept at all centers where patients may be transferred.
		Ensure assessment of HCV treatment on reception process at new prisons (for people newly incarcerated and transferred between prisons).
	Custodial center “lock downs” affecting health staff access to patients	Ensure patients have emergency supplies of therapy.
	Release from custody	Post release medical support services, liaison with and referral to community hepatitis treatment services of patient’s choice.
		Ensure appointments made before release and sufficient drug supply and correspondence provided at time of release from custody
Monitoring	Highly mobile patient population - need to access patients in multiple locations at different times	Engage the whole health system within custody to optimize follow-up.
		Develop simple timelines/checklists to enable snapshot assessment of treatment stage, progress and necessary investigations and interventions.

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Hepatitis C treatment in prisons – barriers & opportunities

Domain	Challenges	Potential solutions
Post treatment monitoring	Maintaining treatment and follow-up compliance	Educate patients about the importance of post treatment assessment and follow-up
	Release from custody	Ensure appointments made before release with community-based hepatitis treatment services or general health services
Enabling systems	Poor engagement of parts of the health system and custodial services	Consider the assessment and management of HCV infection as “core business” of the corrections health system
Infection prevention	Risk of reinfection	Education about reinfection risk and preventive behaviours, referral to preventive services available within custody and in community after release.
		Establish and evaluate corrections-based tattooists, needle and syringe programs, opiate substitution, syringe cleaning prevention strategies.

Modified from: Post JJ, Arain A, Lloyd AR. Enhancing assessment and treatment of hepatitis C in the custodial setting. Clin Infect Dis. 2013 Aug;57 Suppl 2:S70-4.