

Is hepatitis C elimination a possibility in resource constrained settings? A case study from Myanmar

Associate Professor Mark Stoové
Centre for Population Health, Burnet Institute

Is hepatitis C elimination a possibility in Myanmar?



Is hepatitis C elimination a possibility in Myanmar?

Nuh!

(in the short to medium term at least)



Burnet Institute
Medical Research. Practical Action.

ELIMINATE
HEPC



Burnet Institute

- \$\$\$ - health infrastructure, drug costs
- Priority disease - historical focus HIV, TB, malaria by government, INGOs & donors
- Local health priorities and practices
- Coverage and acceptability of harm reduction



Burnet Institute
Medical Research. Practical Action.

ELIMINATE
HEPC



Burnet Institute

Myanmar at a glance

Geographically the largest country on mainland SEA

- 52 million people
- 70% rural

Maternal mortality rate

- 200/100,000

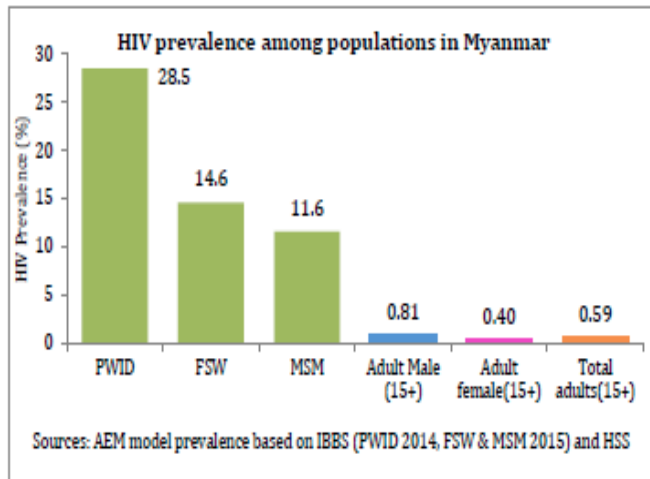
Infant mortality rate

- 43/1,000



Myanmar at a glance

Figure 1. HIV Prevalence among population groups in Myanmar, 2015



Myanmar at a glance

Hepatitis C prevalence estimates – general populations

- General population surveys
 - 2.5% to 26.2% (2000-2005)
- Blood donors
 - 3.1% to 10.1% (1992-2000)
- Antenatal care
 - 1.2% (2012)



Myanmar at a glance

Prevalence estimates – Key Affected Populations

- People who inject drugs (PWID)
 - 66.3% to 93.5%
- Multiple transfusion recipients
 - 15.3%
- HIV+ MSM (2014)
 - 5.7%
 - cf 59.7% in HIV+ PWID



Myanmar at a glance

Prevalence estimates – Proportion anti-HCV+ at Burnet
Institute Drop in Centres - 13,369 unique clients, 2015

		Thingangyun	Hledan	Mandalay	Sagaing	Pyin Oo Lwin
HIV	% tested	29.4	23.0	40.0	32.7	51.7
	% positive	13.4	9.1	7.2	5.9	11.4
HCV	% tested	14.2	8.4	2.1	3.3	3.7
	% positive	80.6	70.1	26.2	26.0	46.8
	# co-infected	57 (299)	17 (129)	4 (27)	1 (13)	5 (37)
HBV	% tested	26.2	21.7	15.1	23.3	16.6
	% positive	8.5	6.8	9.4	9.9	4.2
Syph	% tested	17.2	15.3	8.5	28.1	22.1
	% positive	8.9	8.4	1.4	4.0	6.1

Myanmar at a glance

Largest poppy producer outside Afghanistan

Part of the Golden Triangle

Shan State and Kachin State

2 billion dollars a year

83,000 PWID

~50,000+ active PWID living with HCV
(+ prevalent cases in other populations)



Burnet Institute
Medical Research. Practical Action.

ELIMINATE
HEPC



Burnet Institute

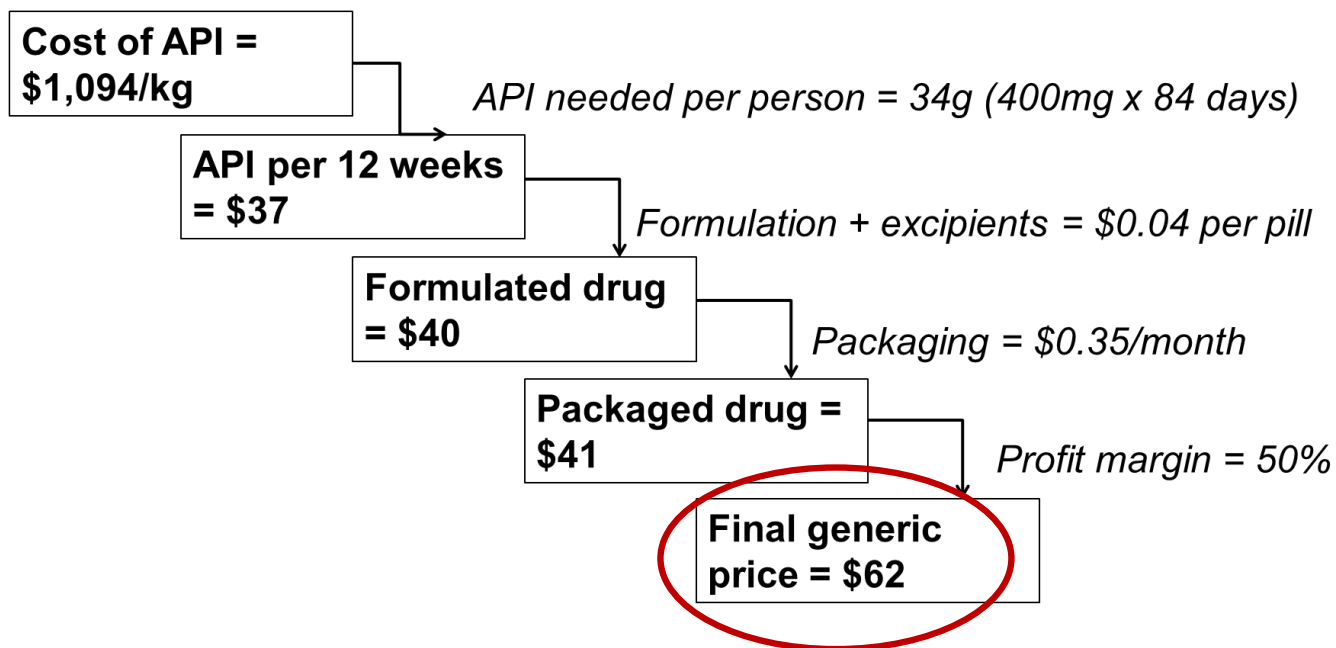
Barriers to HCV prevention in resource constrained settings like Myanmar

- Legislative
- Lack of priority attention
 - Local priorities and strategic plans
 - International donors (e.g., HIV, TB, malaria)
 - \$\$\$
- Transitioning of health systems – fragmentation between government and NGO services
- Patchy coverage of harm reduction services
- Other service access
- Stigma of disease and risk behaviour

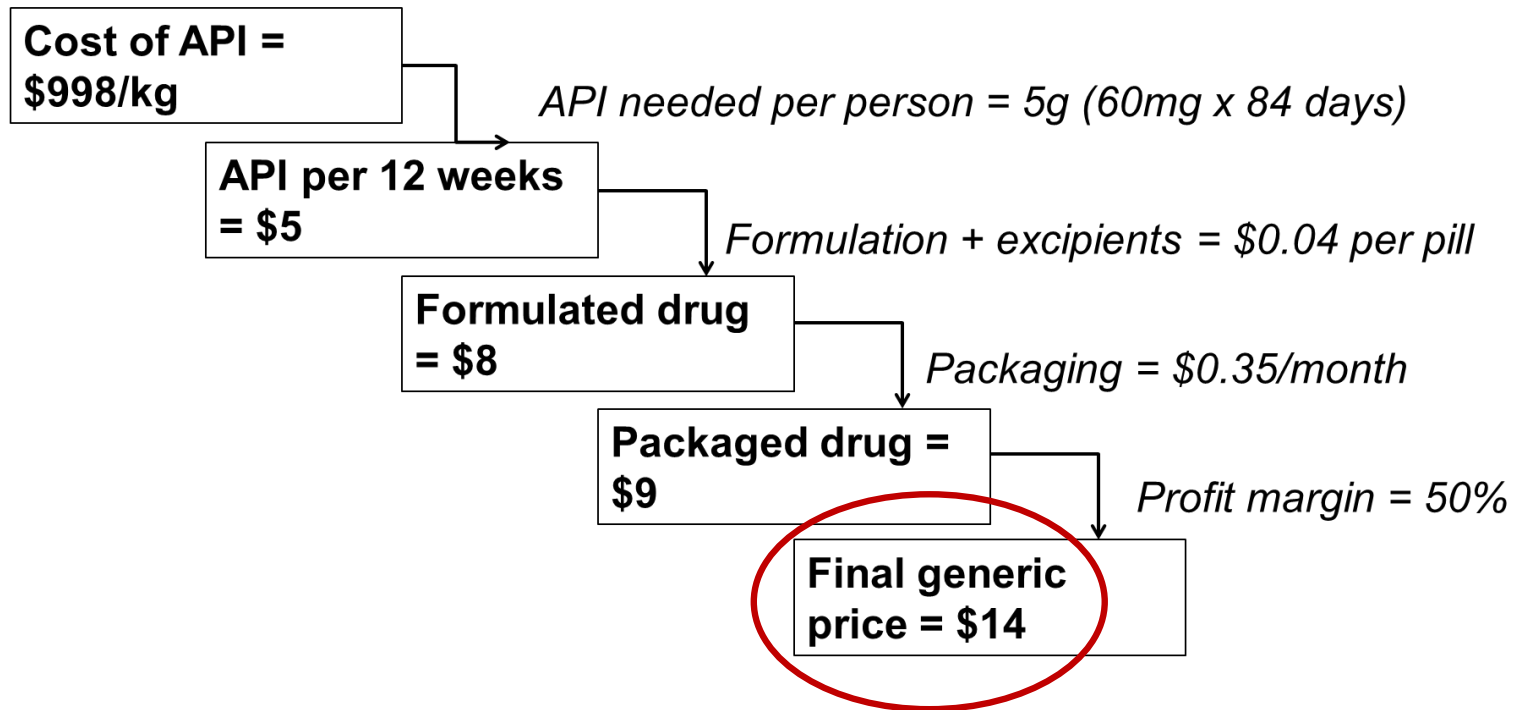
Opportunities for HCV prevention in resource constrained settings like Myanmar

- Changing policy, practice and legislation/policing practices
- Health systems decentralisation
 - Trust in NGOs to control and deliver services
- GFATM dispersement through local Ministry of Health
- International transition from MDGs to SDG
 - MDG single disease and/or priority population focus (e.g., HIV, TB, malaria, maternal health)
 - SDGs more general focus on diseases and/or health systems (e.g., end epidemics by 2030)
- Country-specific negotiations of DAA pricing

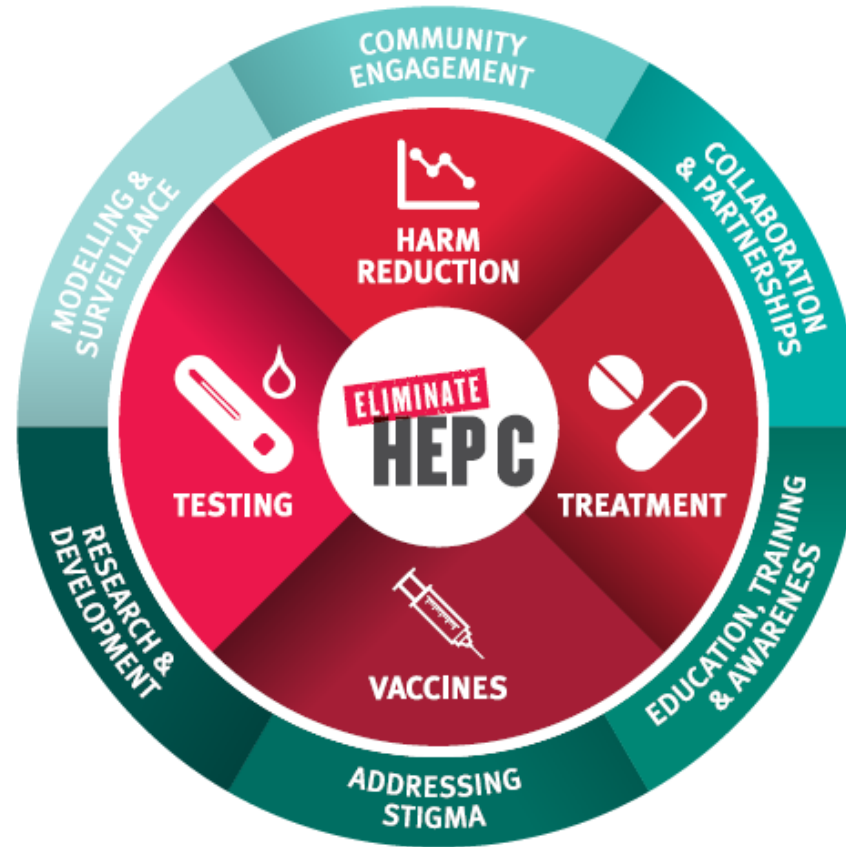
Target generic price of sofosbuvir (12 weeks)



Target generic price of daclatasvir (12 weeks)



Hepatitis C Elimination in Myanmar



Hepatitis C Elimination in Myanmar



Hepatitis C Elimination in Myanmar



Hepatitis C Elimination in Myanmar

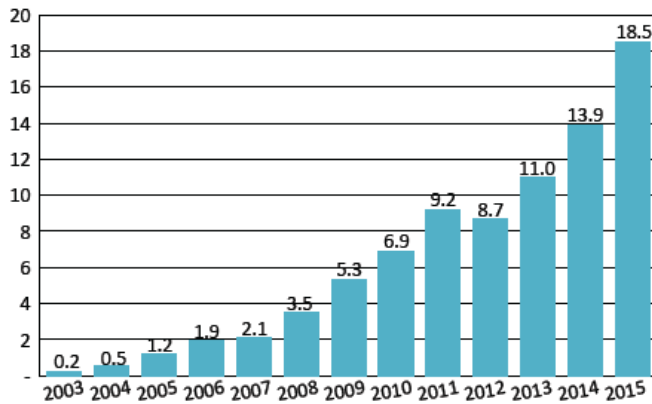


Harm Reduction Targeting PWID in Myanmar

NSP

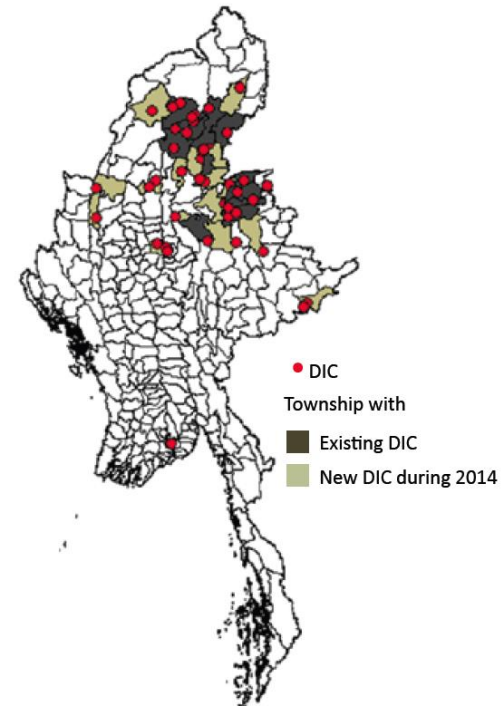
Distribution of drop-in-centres by township in 2014

Sterile needles and syringes distributed (in millions)



Source: Myanmar Global AIDS Response Progress Report 2015.

- 2014 – 2015, increased from 167 to 223 syringes per year per PWID (WHO recommend 200 syringes per PWID per year)

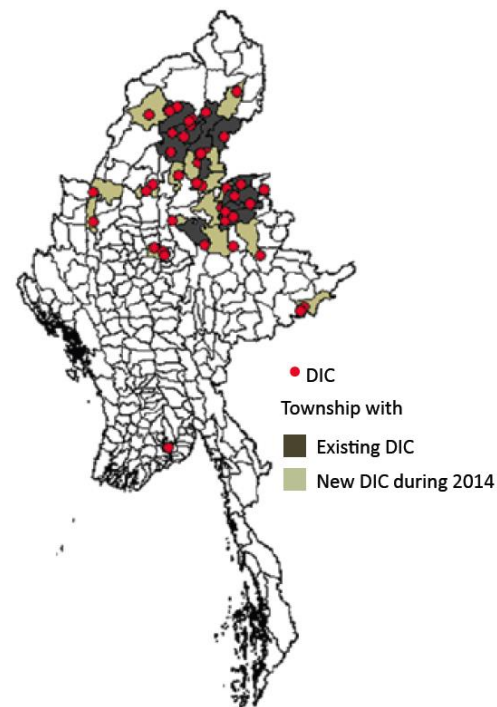


Harm Reduction Targeting PWID in Myanmar

NSP

Distribution of drop-in-centres by township in 2014

		Thingangyun	Hledan	Mandalay	Sagaing	Pyin Oo Lwin
HIV	% tested	29.4	23.0	40.0	32.7	51.7
	% positive	13.4	9.1	7.2	5.9	11.4
HCV	% tested	14.2	8.4	2.1	3.3	3.7
	% positive	80.6	70.1	26.2	26.0	46.8
	# co-infected	57 (299)	17 (129)	4 (27)	1 (13)	5 (37)
HBV	% tested	26.2	21.7	15.1	23.3	16.6
	% positive	8.5	6.8	9.4	9.9	4.2
Syph	% tested	17.2	15.3	8.5	28.1	22.1
	% positive	8.9	8.4	1.4	4.0	6.1



Harm Reduction Targeting PWID in Myanmar

NSP

Burnet Institute Myanmar – 5 DiCs

- Fixed site needle and syringe program
- Peer outreach
 - NSP
 - Harm reduction/sexual health information
- A place for clients to relax
- Clinical Services
 - HIV , syphilis, HCV & HBV VCT
 - Basic health care
 - TB screening
- Counselling services
 - HIV, HBV, HCV
 - **MMT referral & counselling**

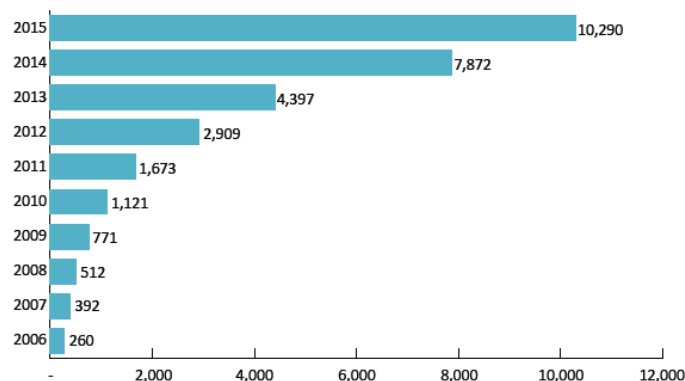


Burnet Institute
Medical Research. Practical Action.

ELIMINATE
HEPC

Harm Reduction Targeting PWID in Myanmar

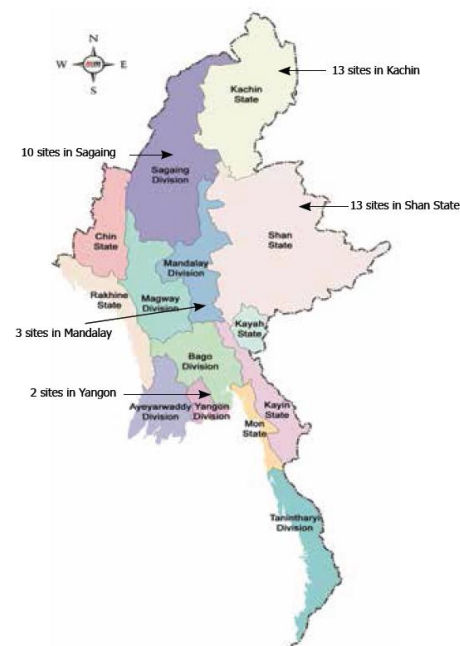
OST



Source: Myanmar Global AIDS Response Progress Report 2015

Barriers

- Remains largely government controlled
- Not low threshold:
 - Limited take away
 - Initiation centralised and monitored
- Poor/inconsistent coverage
 - Barrier to integrated care



Source: MoH/National Drug Abuse Control Programme. December 2015.

Hepatitis C Elimination in Myanmar



+



Laboratory capacity to support testing and care of hepatitis C in Myanmar

- Three systems of laboratories
 - Government
 - NGO
 - Private sector
- Increasing general capacity within government and NGO sector
 - Hepatitis-related laboratory capacity extremely limited
- Private sector can do a wide range of tests
 - No regulation
 - Unaffordable for most
 - No government or external body controlling or monitoring quality

Laboratory capacity to support testing and care of hepatitis C in Myanmar

- Diagnosis is normally limited to lab-based RPOC Ab tests
 - Not present in all hospital laboratories
 - Not present below hospital level
 - Not available at urban, rural health centres or sub-centres
- National Health Laboratory (Yangon)
 - Real time PCR for HBV diagnosis
 - One 4 module machine for HCV diagnosis
 - Molecular diagnosis is not a routine test at this stage
- Top-level specialist hospitals have Fibroscan (or planning to get it)
- Otherwise, the APRI score is used to stage disease
- No national diagnostic algorithm for HBV and HCV



Capacity in the NGO sector to support testing and care of hepatitis C in Myanmar

GFATM & 3MDG supported sites have some access to HBV and HCV RPOC tests for key population groups

- MSF (Holland and Swiss)
 - RPOC ab tests to screen for HCV and HBV
 - Genexpert in two sites (Yangon and Dawei)
 - Fibroscan in Yangon
- Medical Action Myanmar
 - RPOC Ab tests for HCV and HBV
 - Genexpert (but are not yet using it for HCV)
- Burnet Institute
 - RPOC ab tests for HCV and HBV in all sites
 - Plans for Genexpert at one site (Yangon)
 - No plans for fibroscan



Capacity in the NGO sector to support testing and care of hepatitis C in Myanmar

Local and INGO clinical capacity exists

- Requires:
 - \$\$\$
 - Compassionate access and pricing of DAAs
 - Shifts in priorities (e.g., HIV, HIV/HCV co-infection)
 - Cultural shift
 - how health services can be provided
 - who can provide them
 - who they can be provided to

Development of integrated models of care



Burnet Institute

Development of integrated models of care



Burnet Institute

Development of integrated models of care



Burnet Institute

Development of integrated models of care

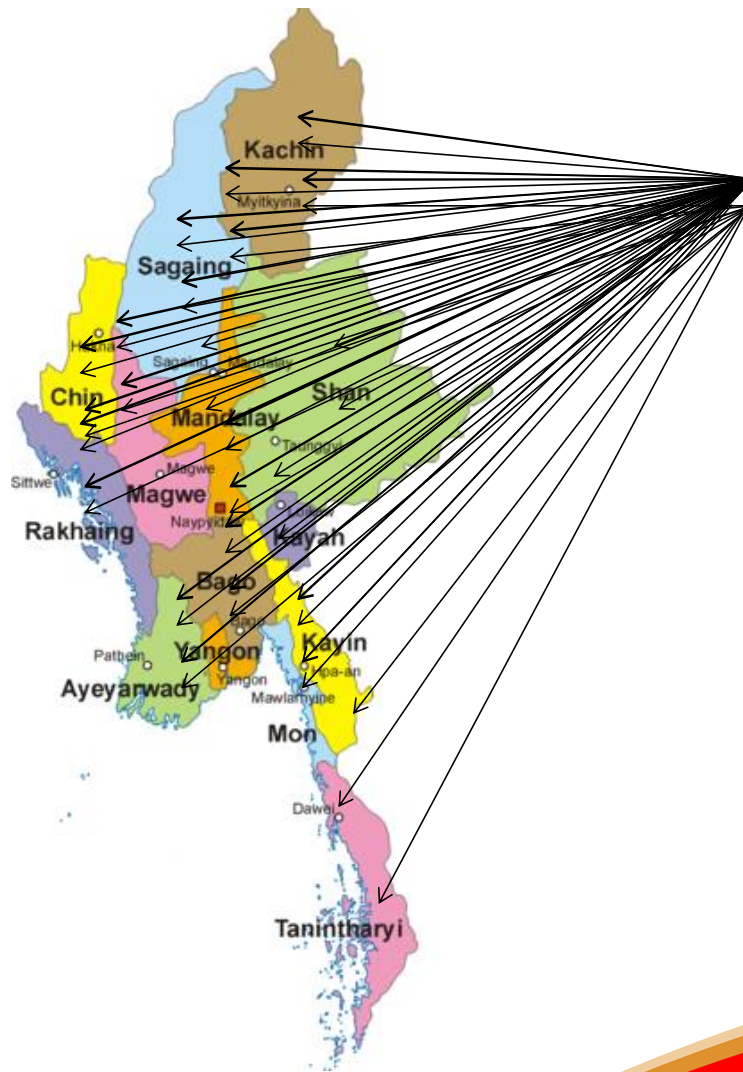


Development of integrated models of care



Development of integrated models of care





Burnet Institute

Activities currently underway to address hepatitis C in Myanmar

- HBV & HCV sero-prevalence & genotype distribution study
- MSF HIV/HCV co-infected treatment study
 - Based at mainstream MSF clinical services
- National surveillance – PWID IBBS
- Clinician training
- National Hepatitis Program quality assurance
- WHO testing & treatment guidelines

Activities currently underway to address hepatitis C in Myanmar

Significant government led policy development

- National Hepatitis Program
- National Strategic Plan & draft budget
- Clinical guidelines
- Procurement of new HCV treatments
- Working groups formed

Acknowledgments

- Chad Hughes (CPH Burnet Institute)
 - Lia Burns (CPH Burnet Institute)
 - Naanki Pasricha (CPH Burnet Institute)
 - Claire Ryan (Burnet Institute Myanmar)
 - Dr Zaw Min Oo, Dr Hla Htay and the rest of the Burnet Myanmar Harm Reduction Team
 - Drug user community in Myanmar
-
- Career support - NHMRC
Career Development
Fellowship

