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Improving policies to mitigate HIV/AIDS in Malaysia

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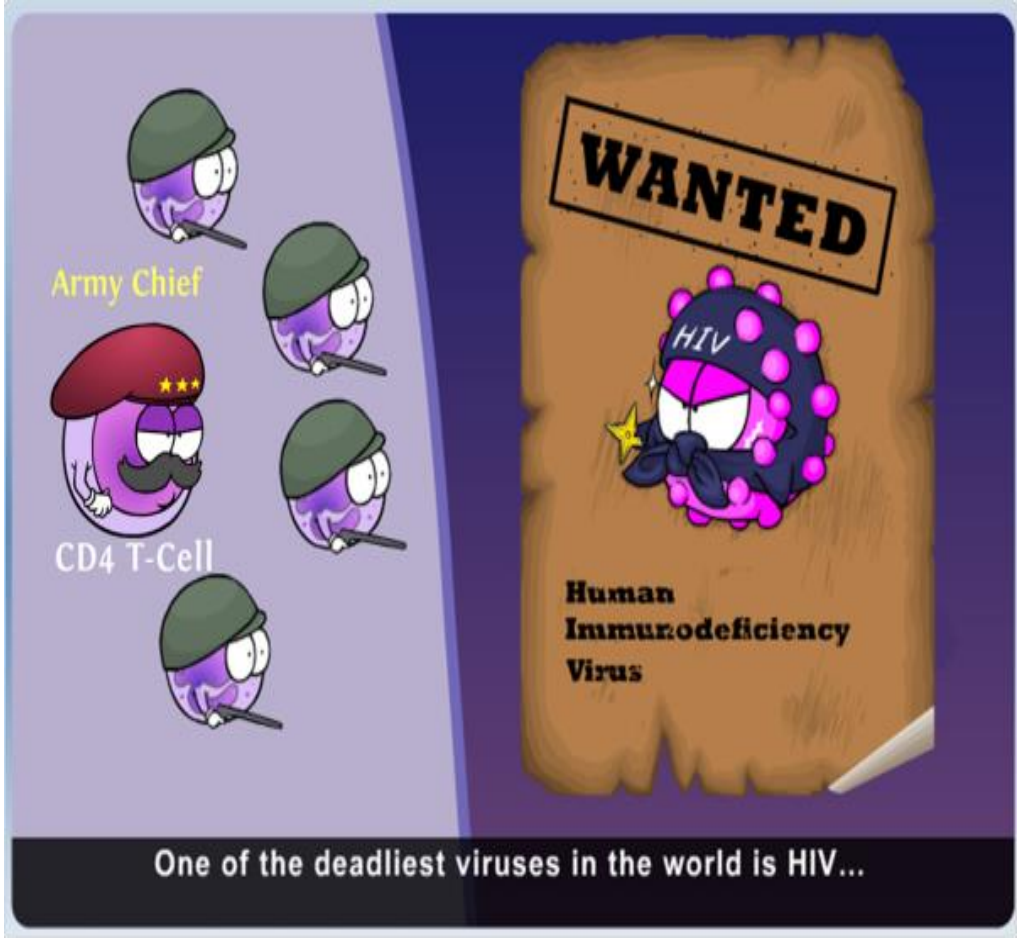
FACTS

- <0.5% of population , concentrated epidemic
- Cumulative 1986-2016 = 111, 916 reported cases
- Infection only occur by sexual transmission, vertical mother-to-child transmission, or sharing of needles
- Mortality rate approaching similar to general population if PLHIV is on treatment ; i.e. can live with the disease

Why is it important to "solve" HIV?



- Risk of co-infection & other diseases; subsequently more costs to public health

- R&D immunology; potential innovation of new treatment for other diseases.

Image from: TeachAIDS, Stanford University

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Nation Home > News > Nation

Sunday, 23 July 2017 | MYT 11:48 AM

UN report: Malaysia among top 10 Asian nations affected by HIV

http://www.thestar.com.my/news/nation/2017/07/23/malaysia-among-top-ten-asian-nations-affected-by-hiv/

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Demographics

YOUNG, MALE, AND MALAY

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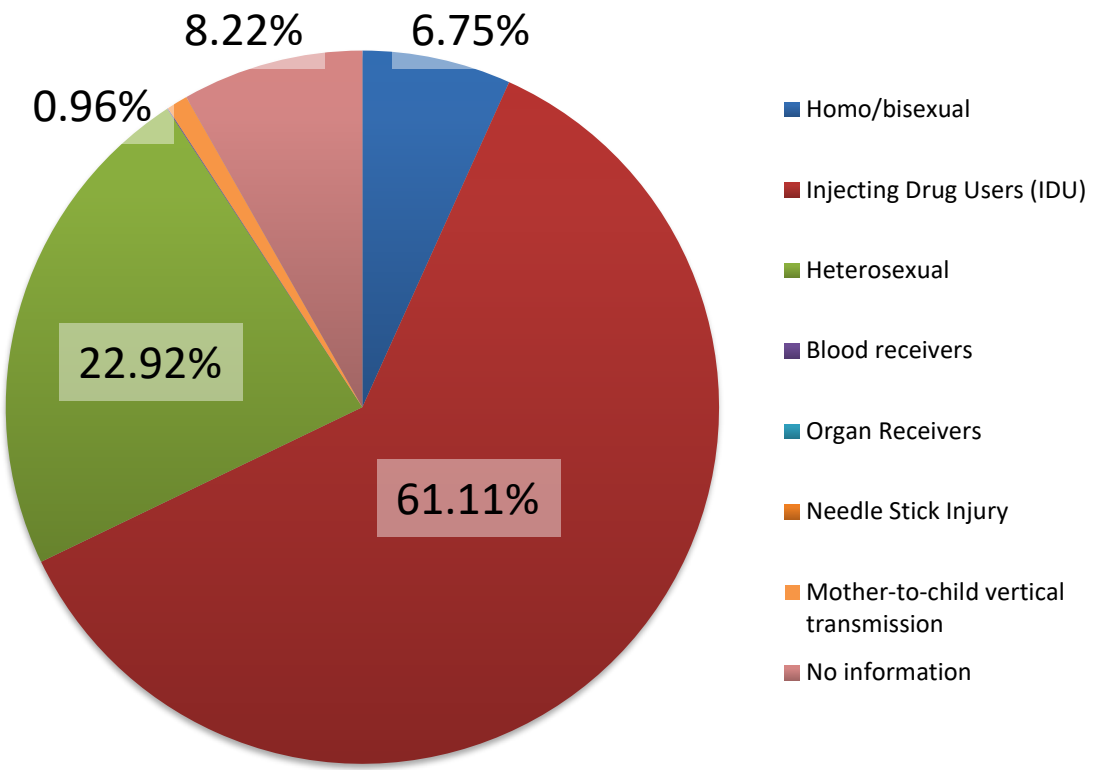
HIV in Malaysia, 1986-2016



Current PLHIV numbers = ~92,000
Total AIDS/AIDS-related death = 17,096

IDU = injecting drug users
MTC = mother-to-child

Source: HIV/STI Unit, Ministry of Health, Malaysia

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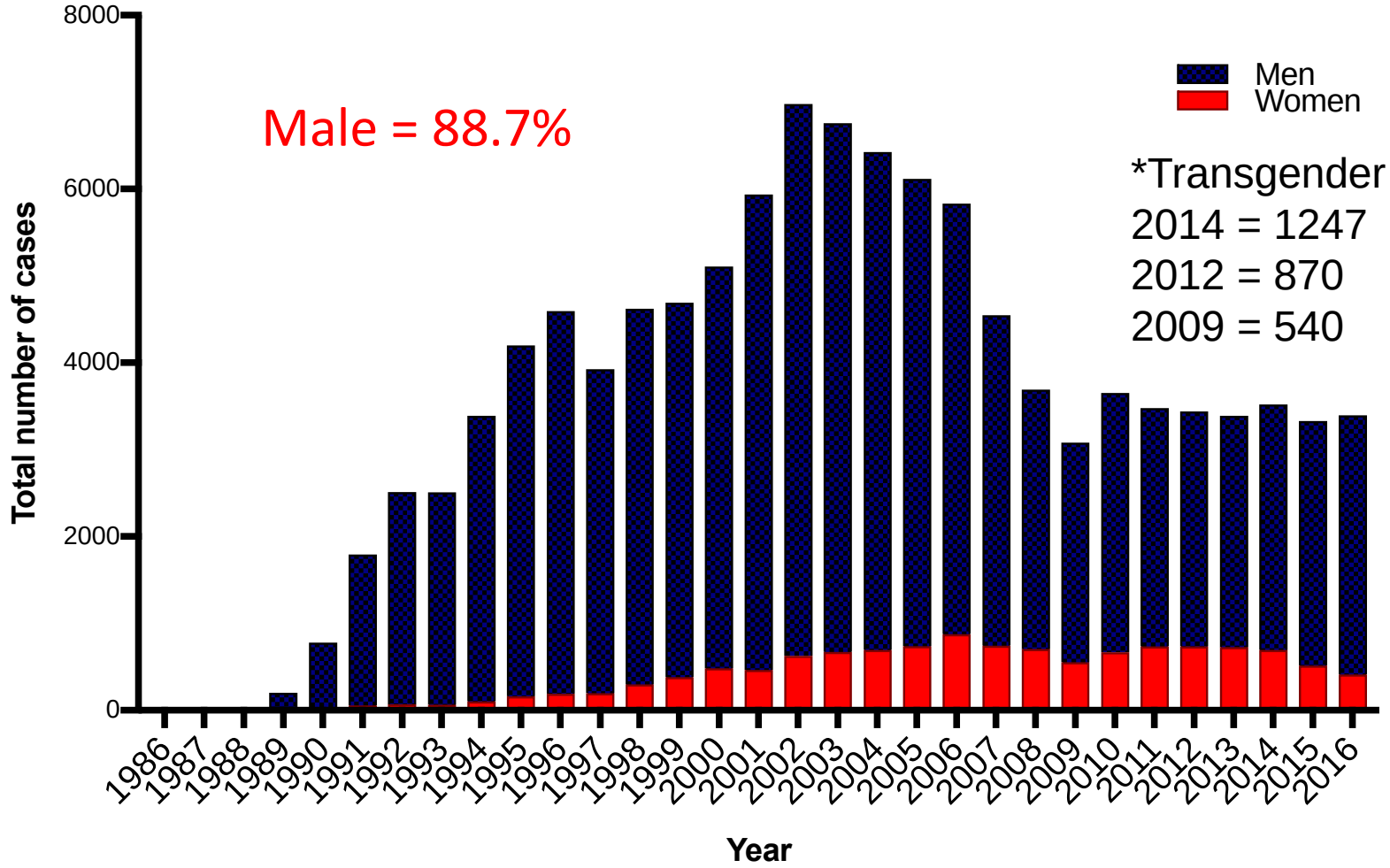
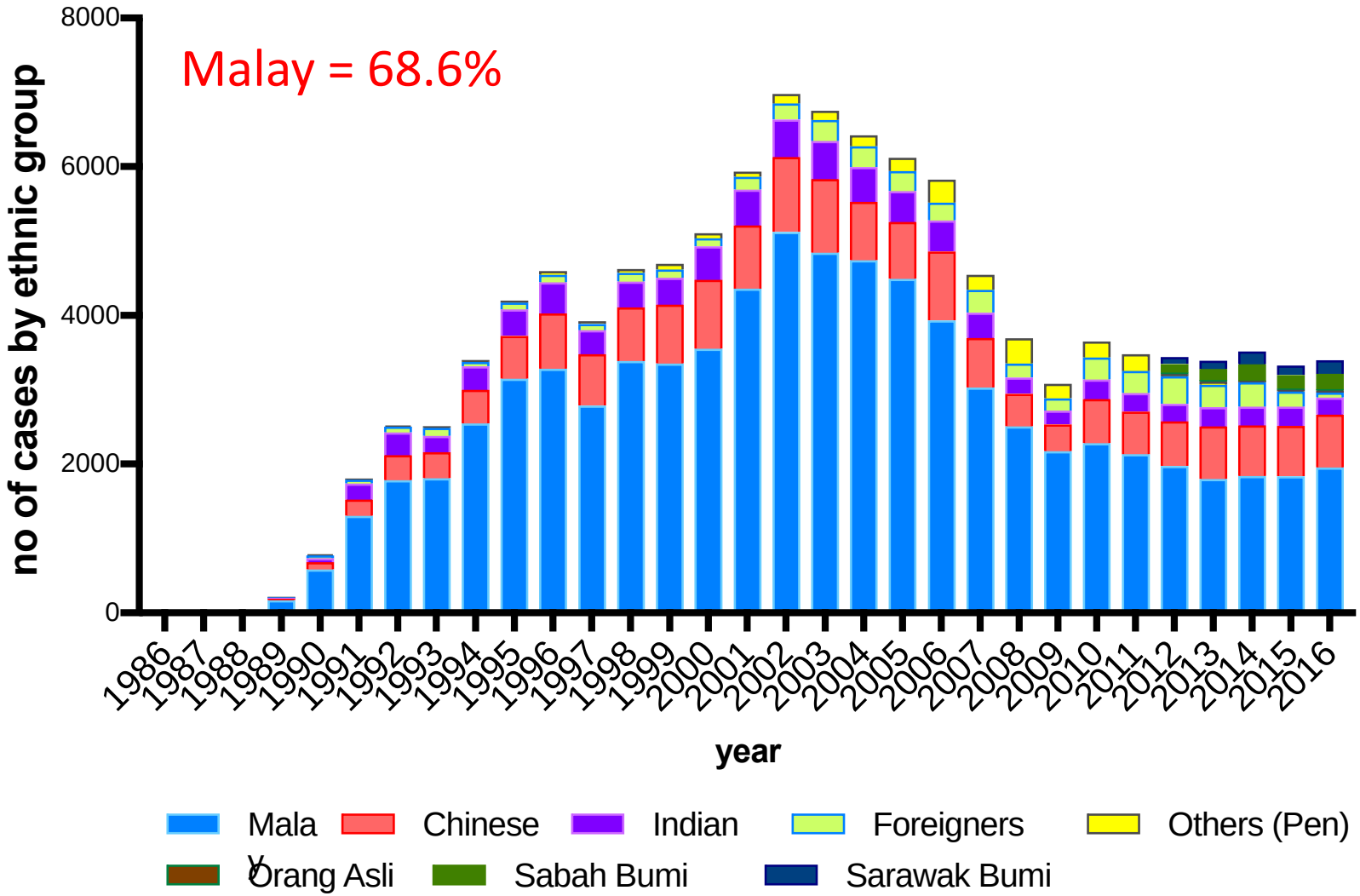
Demographics: Gender



** Transgender data from Integrated HIV Bio-Behavioural Surveillance (IBBS); respective years*

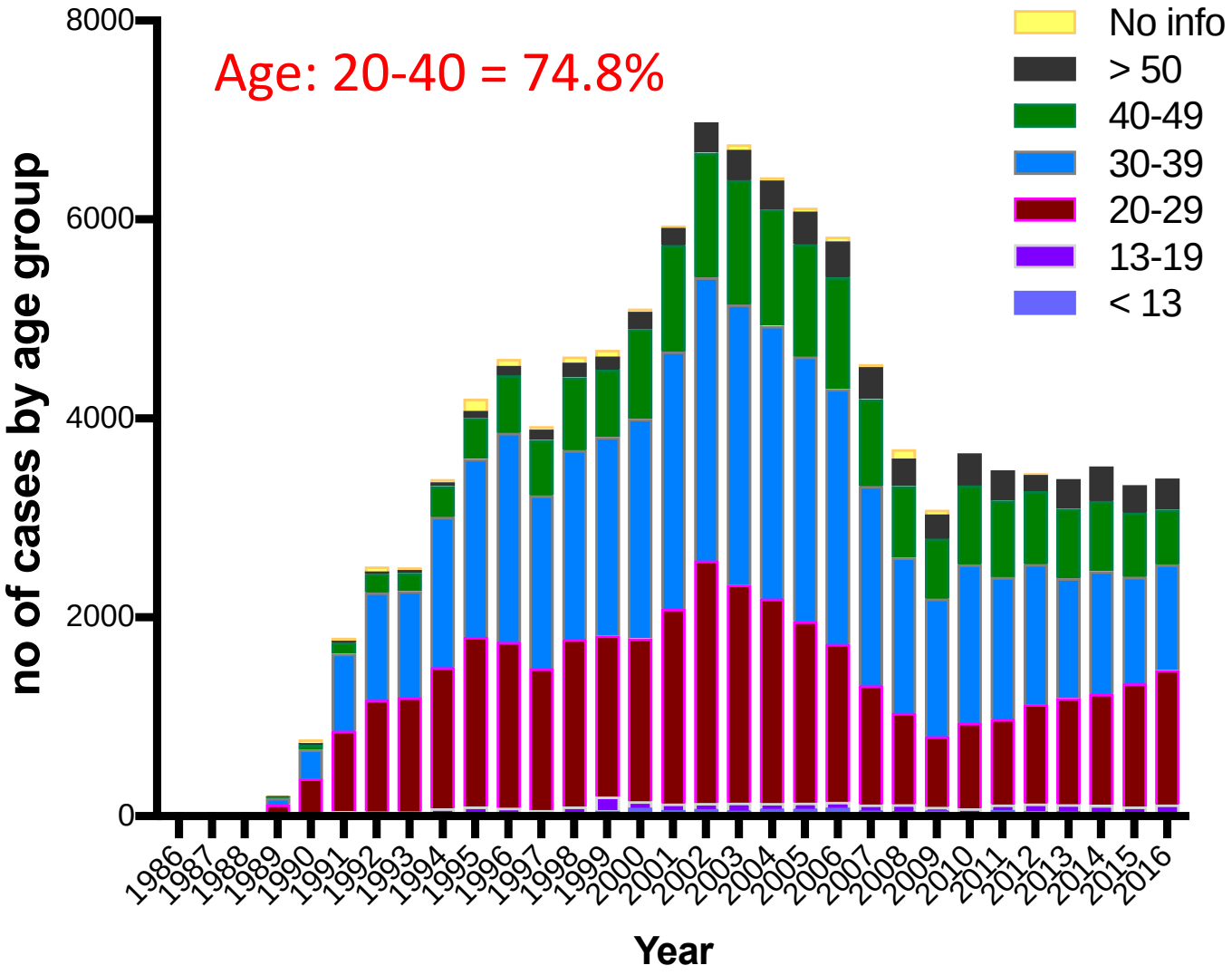
Source: HIV/STI Unit, Ministry of Health, Malaysia

Demographics: Ethnicity



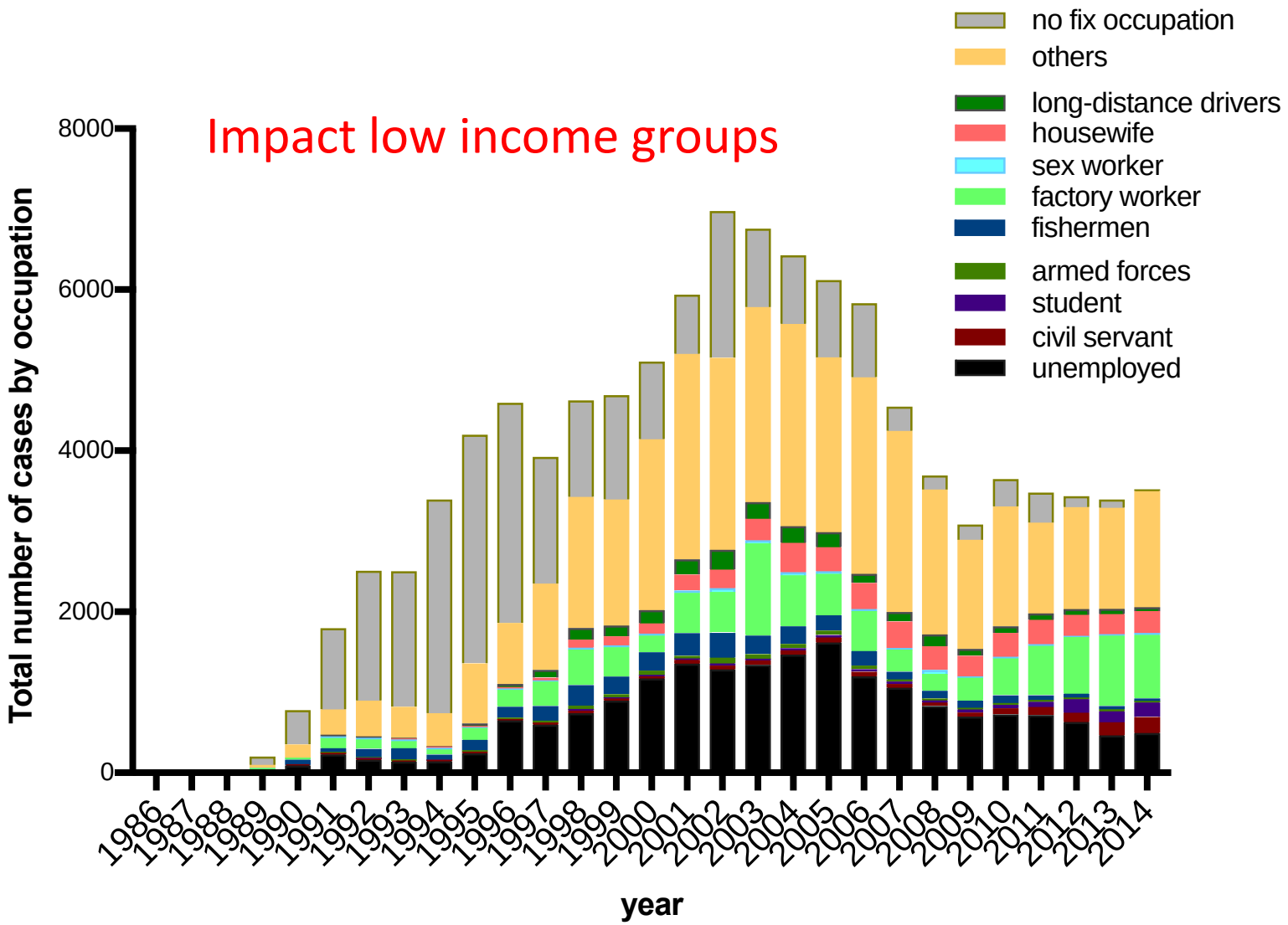
Source: HIV/STI Unit, Ministry of Health, Malaysia

Demographics: Age Group



Source: HIV/STI Unit, Ministry of Health, Malaysia

Demographics: Occupation



Source: HIV/STI Unit, Ministry of Health, Malaysia

Demographics: Risk Groups

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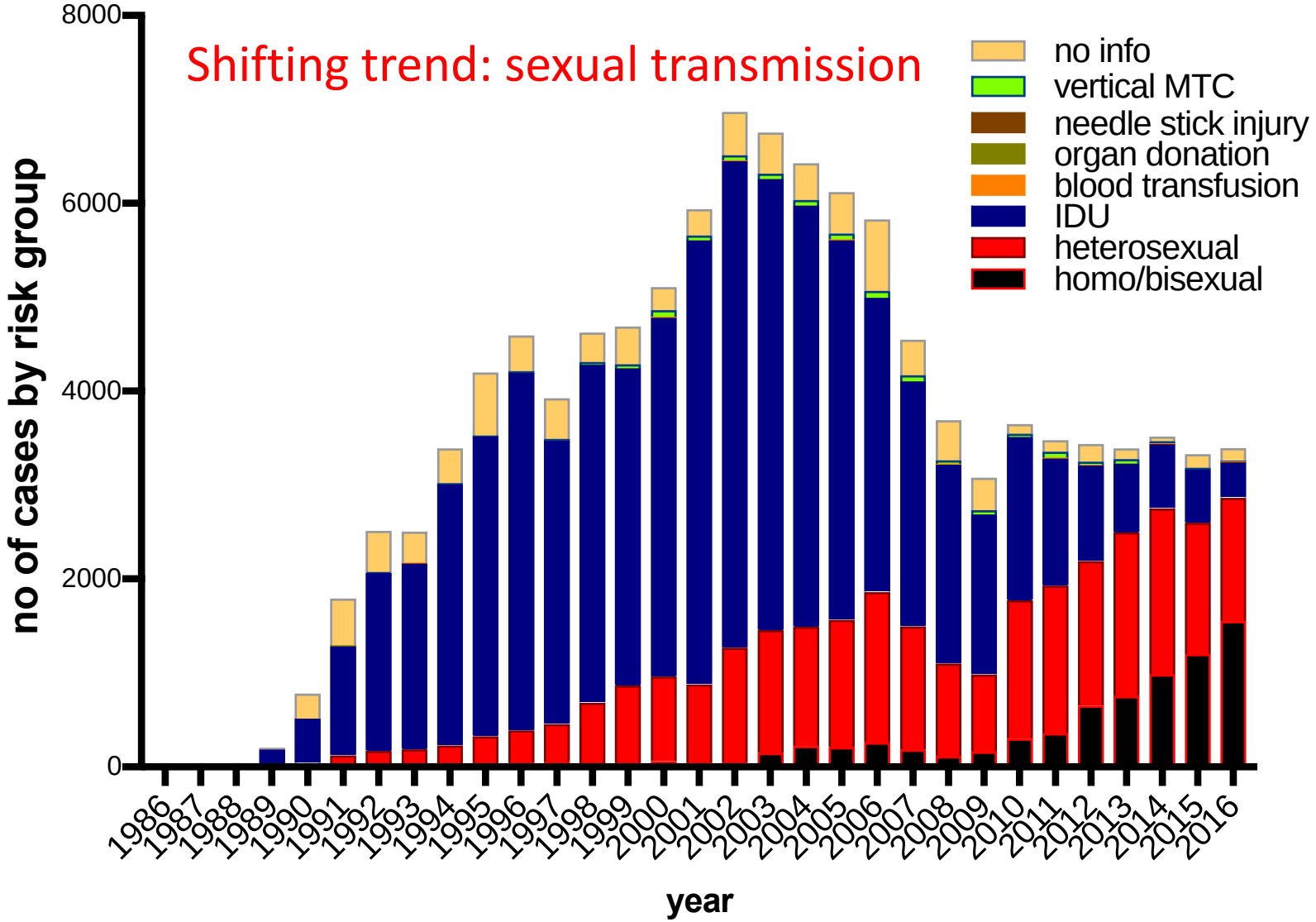
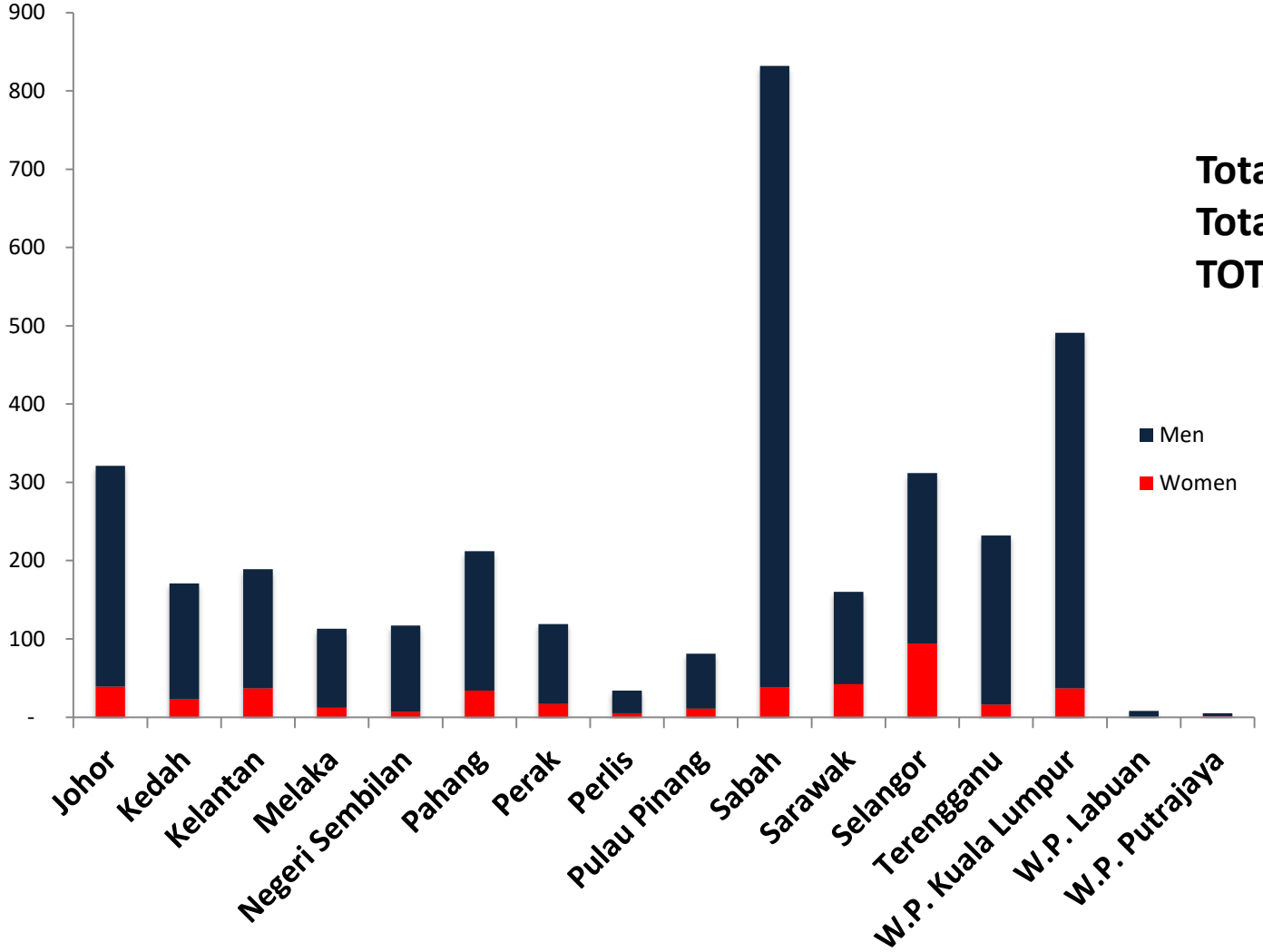


Source: HIV/STI Unit, Ministry of Health, Malaysia

Demographics: by state (2016)



Total Men: 2,984
Total Women: 413
TOTAL: 3,397

Source: HIV/STI Unit, Ministry of Health, Malaysia

There are an estimated 92,895 people living with HIV (PLHIV) at the end of 2015 in which 90,603 (97.5%) have been notified through the surveillance system (table 2). Five (5) states – Johor, Selangor, Kelantan, Pahang and Terengganu account for almost two thirds (62%) of all PLHIV in Malaysia (figure 1). In general, PLHIV in this country is predominant among males (89%) but over time, this pattern progressively shifted towards increasing infection rates in female with male/female ratio declining from 9.6 in 2000 to 5.5 in 2015.

In IBBS 2014 the prevalence among PWID, while nationally slowly declining, was highest in Kelantan (44.7%), Terengganu (30.0%), Johor (27.1%) and Kuala Lumpur (21.3%), and lowest in Melaka (1.7%) and Penang (1.6%). Among FSW the prevalence was highest in Kuala Lumpur (17.1%) and Pahang (14.5%) and lowest in Perak (0.6%), but had been increasing rapidly in Sabah (from 1.1% in 2012 to 6.7% in 2014) and Sarawak (from 0.7% to

6.7%). Among MSM and TG, the HIV prevalence was highest in 2014 in Kuala Lumpur for MSM at 22.0% (up from 10.2% in 2012), and for TG at 19.3% (up from 4.8% in 2012); and in Johor for MSM at 15.7% and for TG at 10.6%.

Source: Malaysia Global AIDS Response Progress Report 2016

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2016

- IDU = 11.9%
- Sexual transmission = 84.9%
- Of 3,387 new HIV infections (2016), 1,553 are men-who-have-sex-with men; 1,311 are heterosexual (84.5%)
- Estimated number of PLHIV eligible for treatment= 82,572 ; estimated PLHIV on treatment =26,144
- Only **31.7%** of those diagnosed are on treatment

Source: HIV/STI Unit, Ministry of Health, Malaysia

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Current situation

- Overall decline in cases, plateau*
- Ending HIV/AIDS by 2030?
- Sexual transmission
- Aging PLHIV **

*Past and current efforts, especially Harm Reduction Programme has worked to mitigate HIV among injecting drug users.

**Access to ART has decreased mortality rate, where PLHIV now face the same challenges of aging as general population

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Ending AIDS by 2030

IS COST AN ISSUE?

ART

- Following diagnosis, anti-retroviral therapy (ART) started when CD4 count hit ≤350 cells/mm^3 (WHO recommendations)
- Once on treatment, lifetime on treatment
- Non-adherence to treatment result in viral load not suppressed thus need to change treatment regiment
- Adverse side effects

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Cost ART

FIRST LINE

Combination	Name	Other names/generic	Cost per month (RM)
1	Zidovudine + Lamivudine	Combivir/Zovilam/Lamizido	383.4
	Efavirenz	Efamat/Efavir/Stocrin/Sustiva	
2	Zidovudine + Lamivudine	Combivir/Zovilam/Lamizido	450
	Nevirapine	Viramune/Hirapine	
3	Tenofovir Disoproxil Fumarate + Emtricitabine	Tenvir-EM/Ricovir-EM/Truvada	115.2
	Efavirenz	Efamat/Efavir/Stocrin/Sustiva	
4	Tenofovir Disoproxil Fumarate + Emtricitabine	Tenvir-EM/Ricovir-EM/Truvada	115.2
	Emtricitabine	Tenvir-EM/Ricovir-EM/Truvada	
	Nevirapine	Viramune/Hirapine	
Single tablet regimens	Tenofovir Disoproxil Fumarate + Emtricitabine	Atripla/Viraday	115.2
	Emtricitabine		
	Efavirenz		

Source: MSMPOZ, cross referred with price provided by hospital pharmacies and https://www.eximpulse.com/export-product-Isoniazid-country-MALAYSIA.htm

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SECOND LINE

Combination	Name	Other names/generic	Cost per month (RM)
1	Zidovudine + Lamivudine	Combivir/Zovilam/Lamizido	780
	Lopinavir + Ritonavir	Kaletra/Alltera	
2	Tenofovir Disoproxil Fumarate + Emtricitabine	Tenvir-EM/Ricovir-EM/Truvada	115.2
	Lopinavir + Ritonavir	Kaletra/Alltera	

Source: MSMPOZ, cross referred with price provided by hospital pharmacies and https://www.eximpulse.com/export-product-Isoniazid-country-MALAYSIA.htm

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Projection cost of lifetime ART

	Per month	Per Year	estimate lifetime*
LOW	115	1380	69,120
MIDDLE	417	5004	250,020
HIGH	780	9360	468,000

* Own calculation. All amount in RM, calculated as per person; lifetime estimated as 50 years (first diagnose and treatment around 20 years old with life expectancy as per general population, Malaysia male = 72 years old, female = 77 years old)

**Calculation does not include cost of CD4 + viral load lab tests, medication for other co-morbidities as well as consultation and/or hospital administrative fees

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Discussion

- Malaysians have available access to public and private health systems
- Non-citizens more dependent on private health system or pay higher fees for public health access than citizens
- While HIV burden is still low, aging PLHIV present significant cost burden on public health sector
- Malaysia can afford to End AIDS – public funding available and being spent in the right sectors (i.e. treatment and prevention efforts)

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Expenditure HIV/AIDS

Table 3. Approximate total expenditure from Domestic (Public and Private) and International Sources by AIDS spending category, Malaysia 2013-2014

AIDS Spending Category	2012 (RM)	2013 (RM)	2014 (RM)
Prevention	26,390,256.14	32,011,097.15	29,939,632.08
Care and treatment	123,026,700.28	118,612,712.05	127,395,654.84
Orphans and vulnerable children	3,550.00	2,688,638.34	2,842,117.00
System strengthening and programme coordination	26,553,621.16	28,210,162.38	30,446,995.42
Incentives for Human Resources	2,013,434.70	1,826,443.69	1,994,167.68
Social Protection and Social Services including Orphans and Vulnerable	2,394,000.00	2,060,800.00	2,000,000.00
Enabling Environment	521,219.95	462,134.06	697,914.50
Research	363,300.00	0.00	388,351.50
TOTAL	**181,266,082.23**	**185,871,987.67**	**195,704,813.03**

Source: National Strategic Plan for Ending AIDS (NSPEA), 2016

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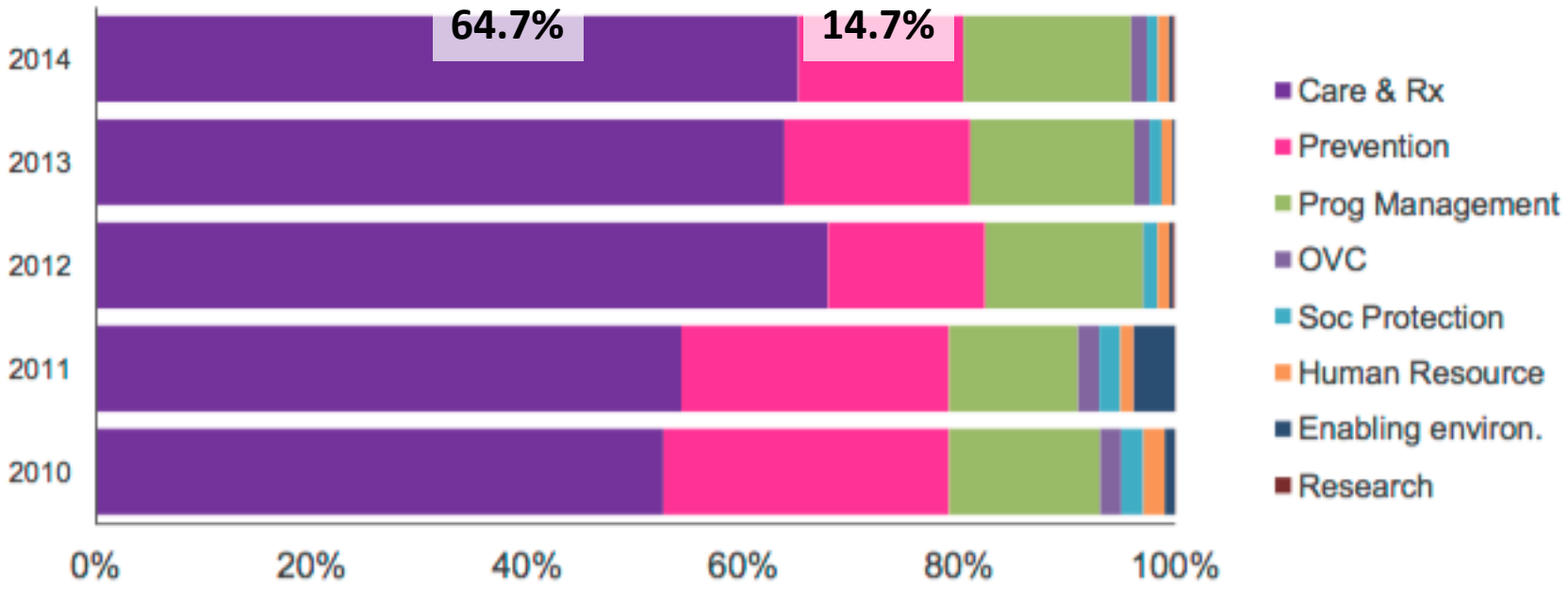
Significant amount invested in care and prevention

Figure 12. AIDS spending by function, Malaysia 2010-2014



Source: National Strategic Plan for Ending AIDS (NSPEA), 2016

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Public funding is major contributor to HIV/AIDS expenditure

Table 4: Source of approximate AIDS expenditure, Malaysia 2012-2014

Source of Funding	2012 (RM)	%	2013 (RM)	%	2014(RM)	%
Domestic Public	173,083,236.10	95	176,705,624.34	95	184,902,731.22	94
Domestic Private	2,853,763.20	2	2,427,169.63	1	1,835,679.81	1
International	5,329,082.93	3	6,739,193.70	4	8,966,402.03	5
Total	**181,266,082.23**	**100**	**185,871,987.67**	**100**	**195,704,813.06**	**100**

Source: National Strategic Plan for Ending AIDS (NSPEA), 2016

Reality

- Public hospitals provide treatment for FREE yet, treatment gap remains high! – stigma hinders access
- Issue with adherence to treatment
- Most PLHIV have co-morbidities (STI, cancer)
- NGOs face funding difficulties due to current economy; low international funding due to Malaysia's GDP as upper middle income country
- Cost of medication – trade agreements and patent laws play a role
- Investing in Ending HIV/AIDS would reduce public health burden in the long run

Table A5. Total annual resource need for 'Ending AIDS', Malaysia 2015 – 2050

		Prevention (thousands, USD)	Treatment (thousands, USD)	Total (thousands, USD)
Invest now	**2015**	9,603.01	37,712.80	47,315.81
	2016	10,235.63	43,111.03	53,346.67
	2017	10,826.34	47,744.67	58,571.00
	2018	11,383.30	51,702.61	63,085.91
	2019	11,913.32	55,063.60	66,976.92
	2020	12,426.93	57,852.18	70,279.11
	2021	12,155.47	57,364.74	69,520.21
Ending AIDS (2015-2021)		**78,544.00**	**350,551.63**	**429,095.63**
Future savings	**2030**	9,859.81	34,828.19	44,687.99
	2040	7,464.09	20,219.52	27,683.60
	2050	5,540.05	11,706.14	17,246.19

Source: Malaysia Global AIDS Response Progress Report 2016

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Investing in Ending AIDS initiatives is cost effective in the long run

Table A6. Summary of cost-effectiveness by different investment options, Malaysia 2013-2021

	Base-line	Business as usual	Accelerate treatment only	Scale-up prevention only	Scale-up PWID + treatment CD4<350	Scale-up PWID + treatment CD4<500	Ending AIDS
	2013	**2021**	**2021**	**2021**	**2021**	**2021**	**2021**
New infections	6,118	5,773	2,912	1,622	2,227	1,974	751
HIV averted	-	-	2,861	4,151	3,546	3,799	5,022
Death averted	-	-	4,318	902	3,717	4,135	4,676
PLHIV on ART	15,614	16,477	86,142	14,641	35,739	46,341	73,358
DALYs saved	-	-	76,000	110,000	94,000	100,000	133,000
GDP earned (million)	-	-	798	1,155	987	1,050	1,396
Resource Need (thousand)		$24,418	$91,417	$29,031	$47,794	$57,991	$85,501

Malaysia GDP per capita – $10,500 (World Bank 2015)

Source: Malaysia Global AIDS Response Progress Report 2016

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Sexual Transmission

BEYOND THE BIRDS & THE BEES

Comprehensive Sexual Education

- Public school curriculum have long been debated, but where is the implementation?
- The need to talk about consent, sexuality and gender identity and expression.
- View sex positively rather than taboo subject
- Focus on sexual health; empower youths with the knowledge on preventing HIV infection (condom use), available services

- Shift mindset on the need for annual medical checks that include sexual and reproductive health.
- Information & services available through MoH website and clinics, but are we utilizing them?
- Breaking taboo – improve adherence to treatment, too
- View HIV/AIDS as a health problem, not a moral one (https://www.thestar.com.my/opinion/columnists/naturally/2017/12/02/ending-aids-by-2030-removing-our-shame-about-the-topic-of-hiv-and-stopping-the-shaming-of-others-wou/)
- **Prevention better than cure**

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Positive Living

AGING WITH HIV

- ART has worked so well that average mortality of PLHIV is almost similar to general population
- Adherence to treatment is the major issue
- The need for PLHIV to also have the same access to health insurance (albeit with higher premiums) as general population
- The need for PLHIV to have access to jobs without stigma

UNAIDS 90-90-90 Target

POLICY RECOMMENDATIONS

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90-90-90

- UNAIDS target of 90% of people who are HIV infected will be diagnosed, 90% of people who are diagnosed will be on antiretroviral treatment (ART) and 90% of those who receive ART will be virally suppressed
- Malaysia, 2016 : >95 – **37*** – **35**
- Push for treatment adherence, subsequently result in viral suppression
- *MoH data = 31.7%

Source: http://www.unaids.org/en/regionscountries/countries/malaysia

Treatment Adherence

- Accessibility – pharmacies and/or community clinics dispensing ART after hours
- Support groups for PLHIV – current efforts by NGOs should be supported, government-backed and held nationwide ; currently concentrated in Klang Valley
- Incentivize through subsidized CD4 and viral load tests, or subsidized treatment for co-infection (cost burden on public health, though)

- On treatment = viral suppression = reduced risk of infecting others
- Pre-exposure and post-exposure prophylaxis (PrEP and PEP) – availability and accessibility. Must be done alongside safe-sex practices and backed by comprehensive sex education + empowerment on sexual and reproductive health rights

Health Insurance

- Negotiate reasonable premium between stakeholders – insurance companies with NGOs representing PLHIV, public health managers and policymakers through the proposed voluntary health insurance scheme by MoH
- UNHCR insurance scheme for refugees - RM220 a year per family of 4 ; why not similar negotiations?

- Moral hazard argument can be null if health insurance is provided with reasonably high premium, and there is comprehensive sex education available for the general population.
- Financial responsibility – "force" PLHIV to appreciate the costs associated to treatment and burden on public health
- Shift burden from public health for co-morbidities

Overcoming Stigma

- The hardest but the most important
- Policymakers to view HIV/AIDS as a medical issue, not a moral one
- Non-discrimination policies in both public and private sectors – be it for higher education, scholarship, or work
- Equality in rights to health for all

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Take-home points

- Current efforts are working in mitigating HIV/AIDS in Malaysia.
- Continue to fund, implement & tweak improvements to harm reduction programme.
- Shift funding towards advocacy and education efforts
- Sexual transmission need to be addressed through an objective, medical-based lens.
- Information and empowerment

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Acknowledgement

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