

The Nature of Asia's HIV Epidemics

Programme and Policy Implications

Tim Brown

Member, Commission on AIDS in Asia

**Leading the AIDS Response in Asia: Recommendations
from the Commission on AIDS in Asia**
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The Commission's charge

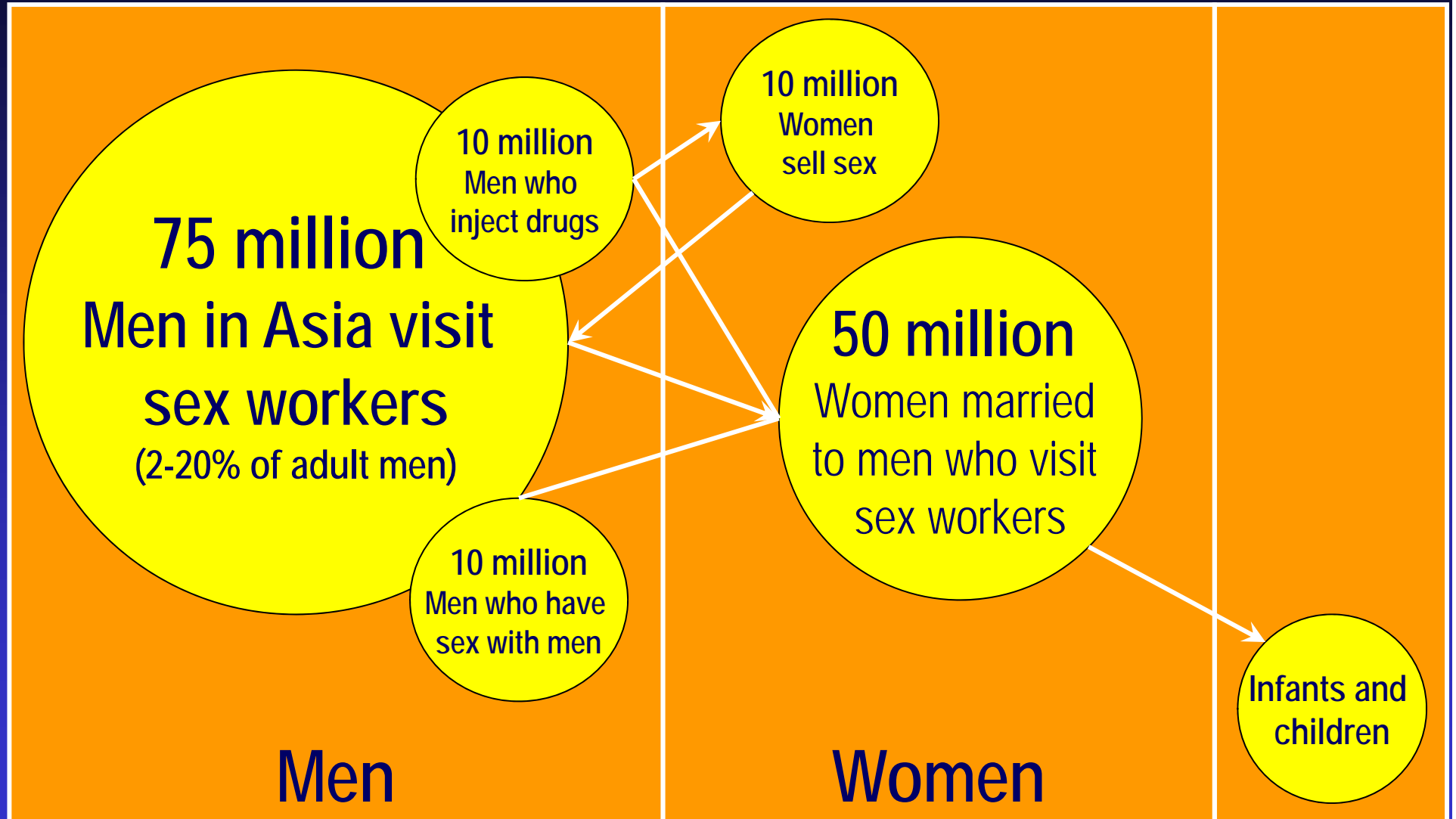
- Take a fresh look at HIV in Asia:
 - Review socio-economic dimensions of HIV
 - Assess epidemic dynamics in the region
 - Provide Asia-specific recommendations for effective strategies

Guiding principle: making sound policy requires good epidemic understanding

- Commission's charge required knowing:
 - What do Asian epidemics look like?
 - What drives them and how does this vary?
 - How do Asian epidemics evolve and how do response needs change over time?
 - What are the policy and programme implications of an understanding?

Where is the risk in Asia that fuels HIV?

Asian Population: 3.1 billion



Sex work gives epidemics their reach... but varies substantially by country

Country	% clients	Number	Year
Thailand	22% / 10%	4 / 1.8 million	1990/1997
Cambodia	13%	0.5 million	2000
Japan	11%	3.2 million	1999
Hong Kong	11-14%	0.15 million	early 2000s
Bangladesh	10%	4.0 million	2006
China	9%	34.0 million	2000
Philippines	7%	1.6 million	2000
Singapore	7.6%	0.1 million	early 1990s

3 to 20% of adult males visit sex workers

To account for local variations, the Commission generated a set of models

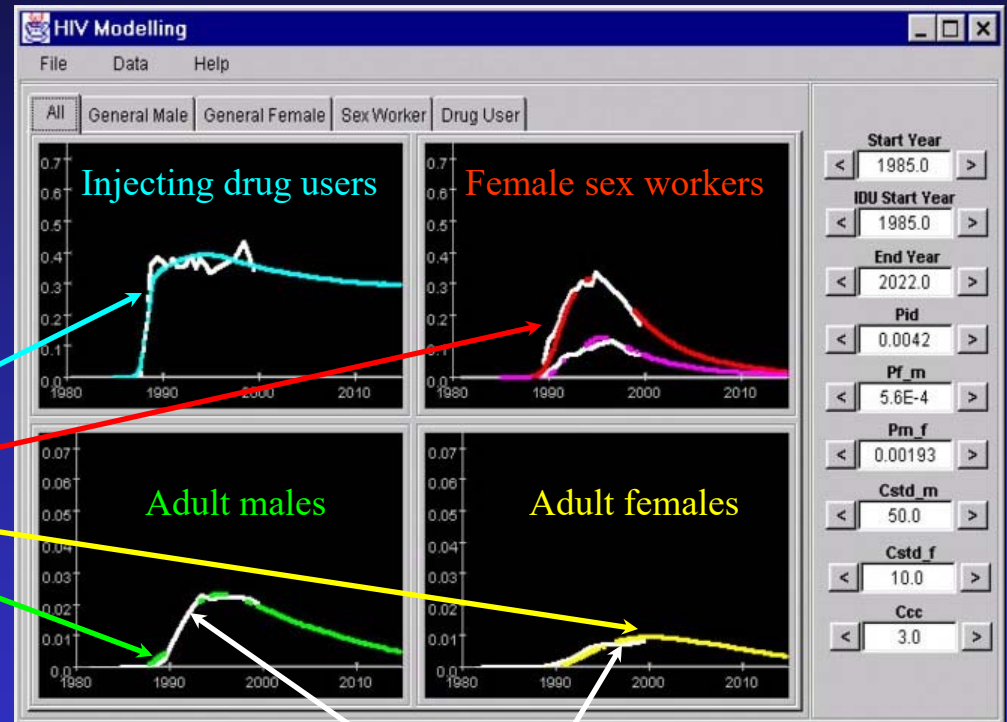
- Made specific models to understand where epidemic was going in each country
- Use these Asia-appropriate models to conduct analytic comparisons of:
 - Effectiveness of different prevention approaches
 - Cost-effectiveness of programs
 - Different prevention alternatives
- After review, chose Asian Epidemic Model

AEM takes behavioral inputs, translates them to HIV infections & compares against actual trends

Sizes & behavioral trends in clients, sex workers, injecting drug users, men who have sex with men, population at large

AEM Calculation Engine

Probabilities of transmission and start years



Observed HIV trends (white lines)

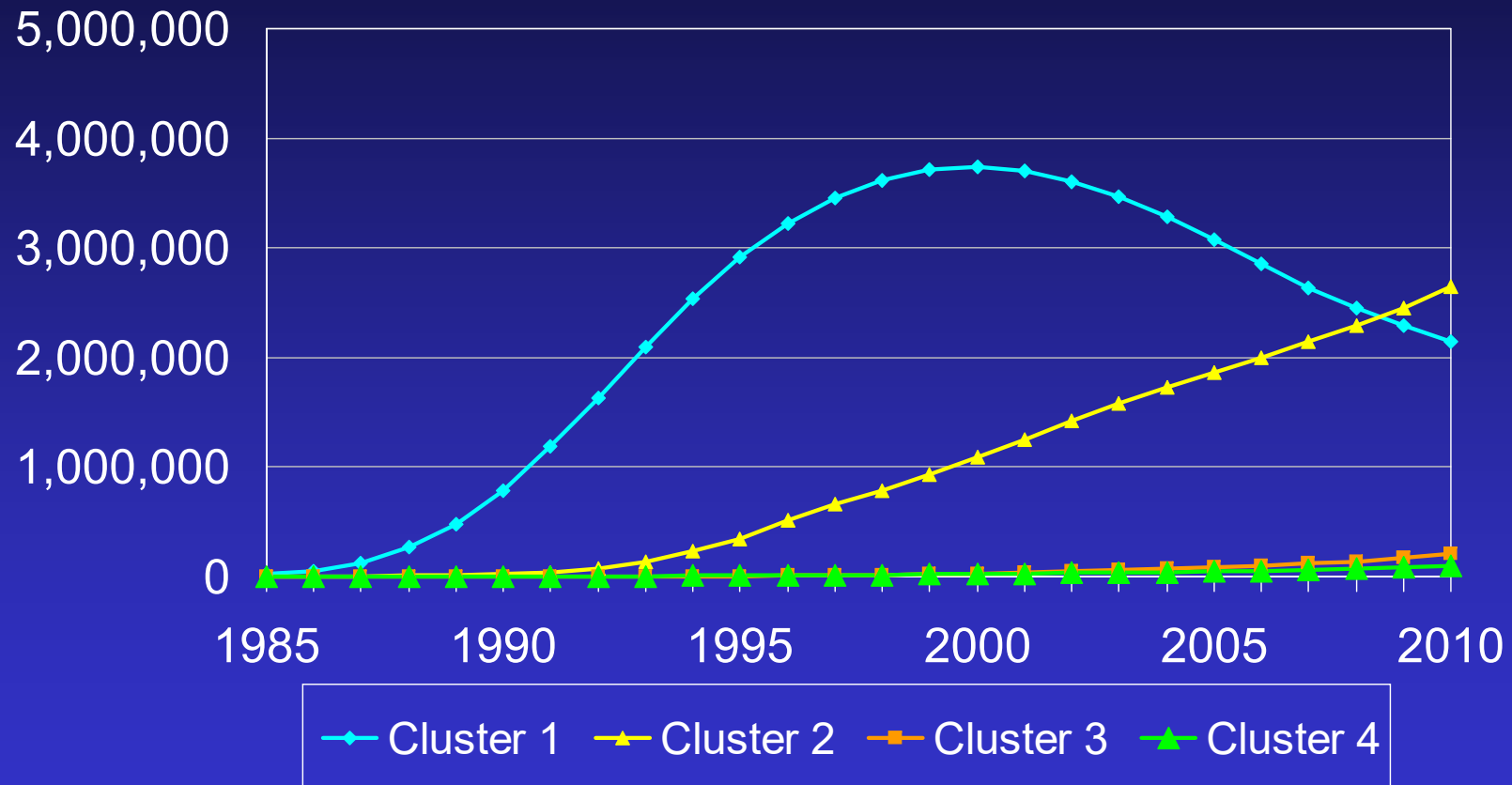
Process for preparing country models

- Collect data from published and unpublished sources
 - Over 4,500 papers and extensive data sets
- Extract behavior & HIV/STI trends by country
- Fit AEM to observed HIV in country
- Validate the model by comparison with
 - Observed prevalence trends
 - Reported HIV, AIDS and M/F ratios if available
 - Other country-specific projection work

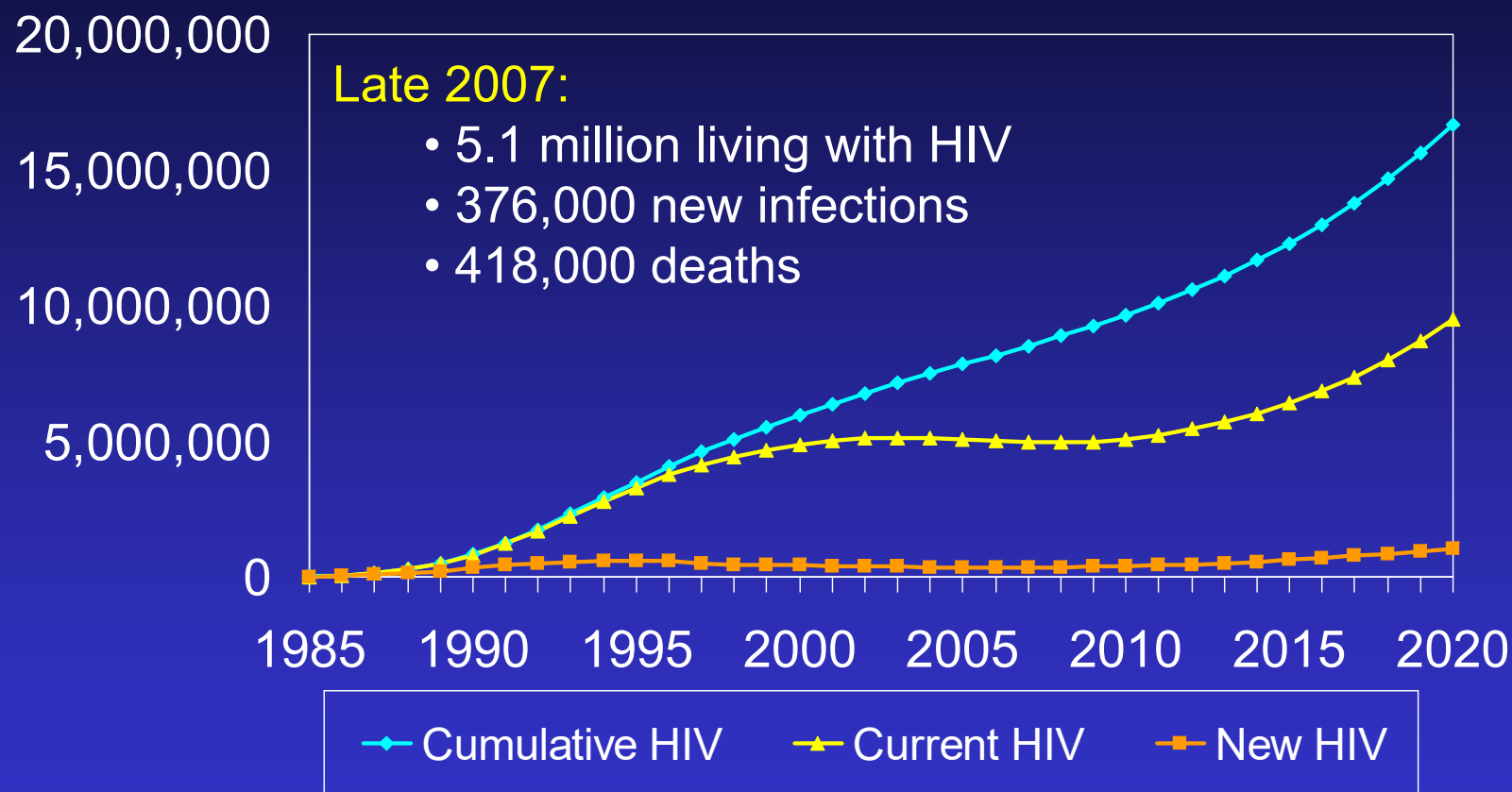
Four patterns were seen in the region

- Cluster 1 – higher risk with prevention success
 - Thailand, Cambodia, Myanmar, Tamil Nadu and high prevalence Indian states
- Cluster 2 – moderate risk with limited success
 - China, Indonesia, Malaysia, Nepal, Vietnam and low prevalence states of India
- Cluster 3 – currently low HIV, higher risk and potential
 - Bangladesh and Pakistan
- Cluster 4 – lower risk and/or successful prevention
 - Hong Kong, Japan, Lao PDR, the Philippines, Republic of Korea, Singapore, Sri Lanka

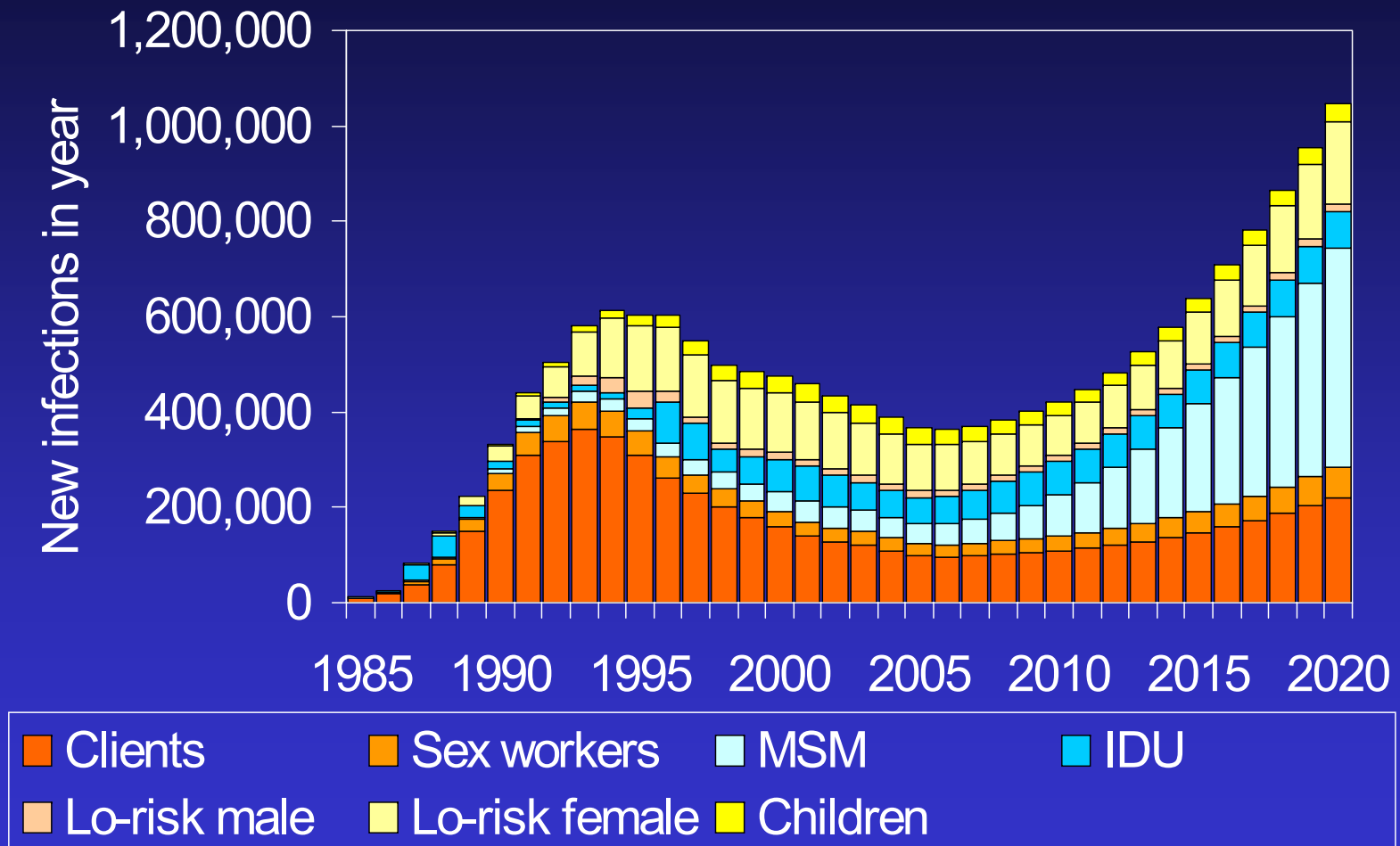
Regional patterns in the epidemic



The overall regional epidemic has slowed, but will soon accelerate again



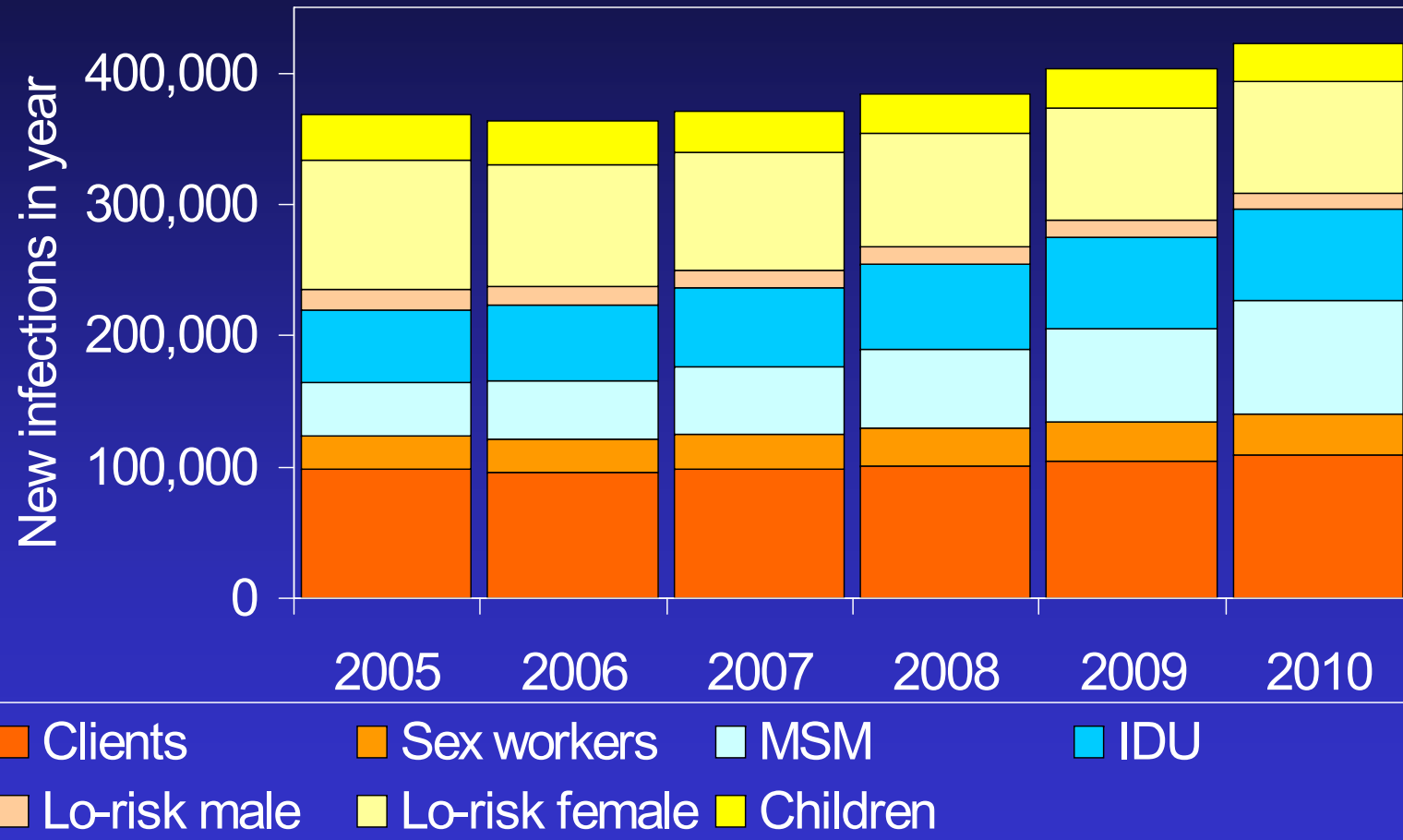
New infections in the regional epidemic



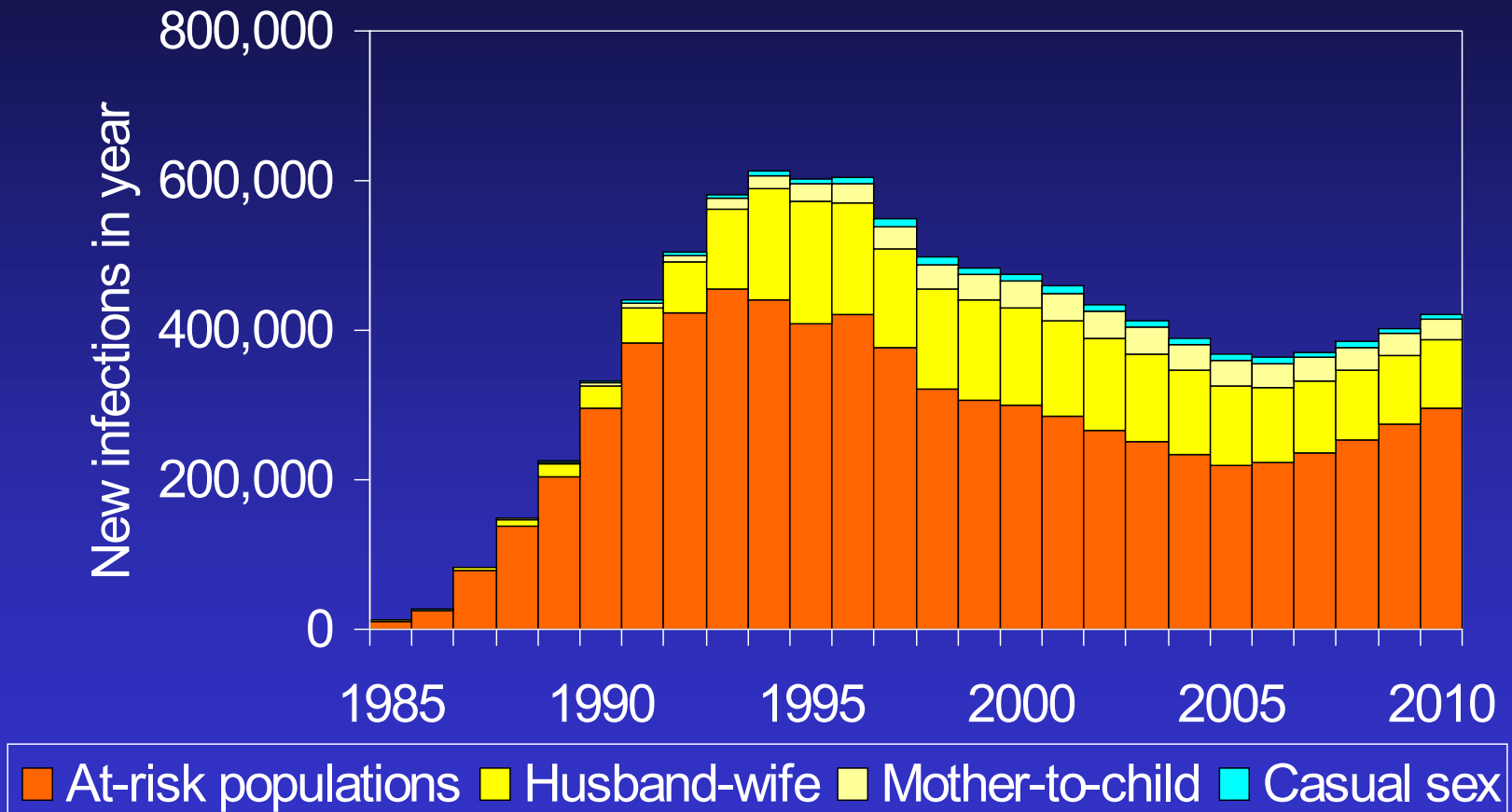
Why this pattern? The result of mixed prevention successes and failures

- For sex workers and clients
 - Early prevention successes in higher risk countries
 - Limited prevention success in moderate risk
 - Coverage 34% on a regional basis
 - But failure to address husband-to-wife transmission
- For IDUs and MSM
 - A legacy of abysmal failure
 - < 2% coverage for IDUs, < 5% coverage for MSM
 - New infections will be climbing rapidly for MSM

Today – all transmission modes in play



Casual sex does not drive Asian epidemics



At-risk population focused efforts have more impact & are more cost-effective

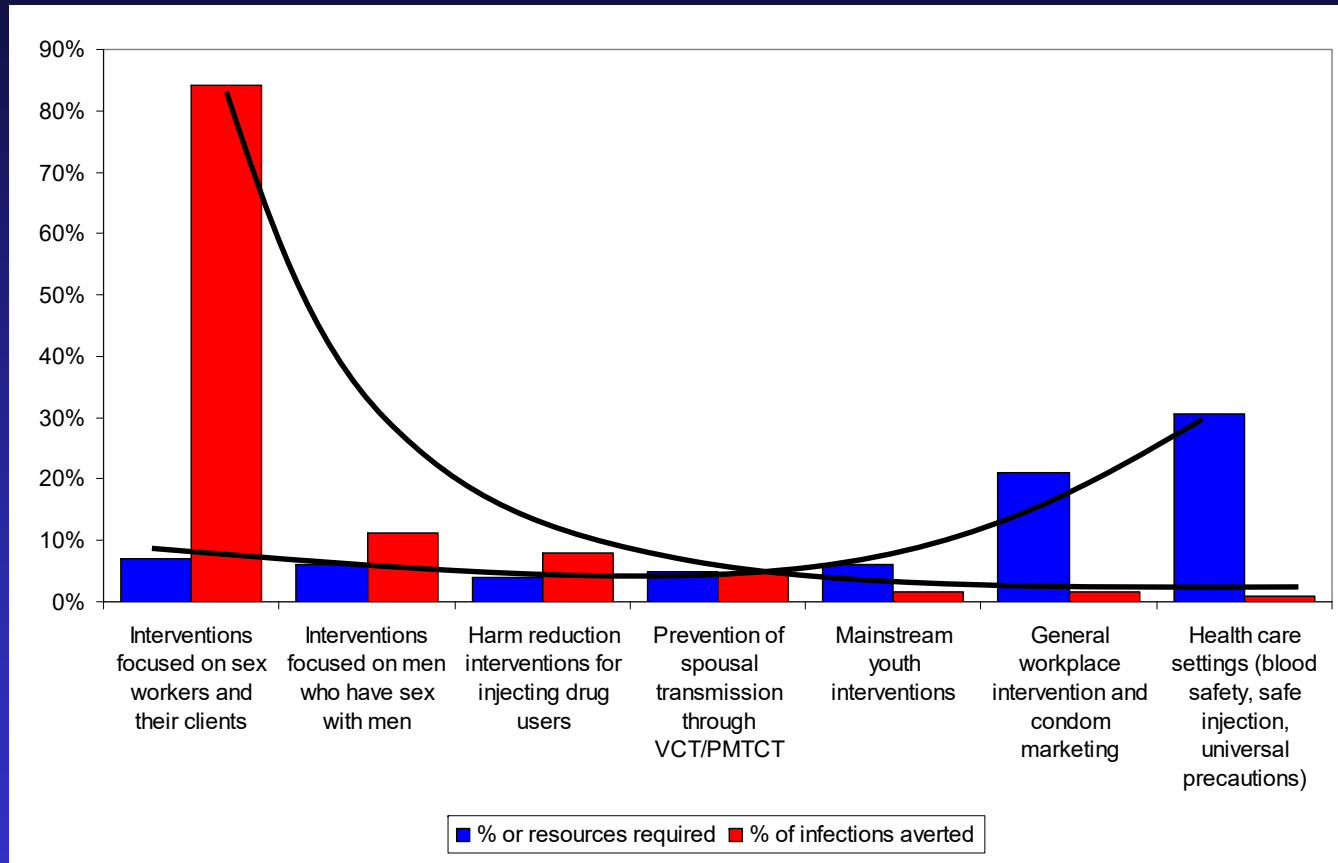


Figure 3.9: Comparison of prevention interventions, according to distribution of resources and percentage of new infections averted, 2007-2020
 Source: Redefining AIDS in Asia: Crafting and Effective Response

Prioritisation of resources: Averting new infections

	Cost of Interventions	
Effect (averting new infections)	Low-cost, High-impact (prevention among most-at-risk populations)	High-cost, High-impact (antiretroviral treatment and prevention of mother-to-child transmission)
	Low-cost, Low-impact (general awareness programmes through mass media and other channels)	High-cost, Low-impact (universal precautions and injection safety)

Cost of a Priority Response – high impact

Interventions	Total Cost (millions USD)	% of total
High-impact prevention	\$1,338	43%
Treatment by ART	\$761	24%
Impact mitigation	\$321	10%
Programme Management	\$363	12%
Creation of an Enabling Environment	\$359	11%
Total	\$3,143	100%

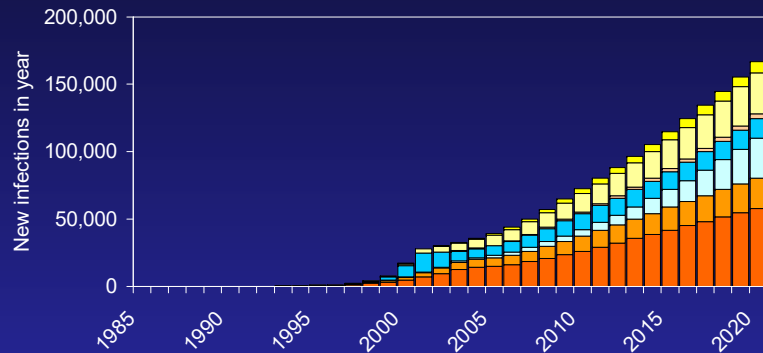
Average total cost per capita ranges from \$0.50 to \$1.70, depending on the stage of the epidemic.

Commission prevention recommendations

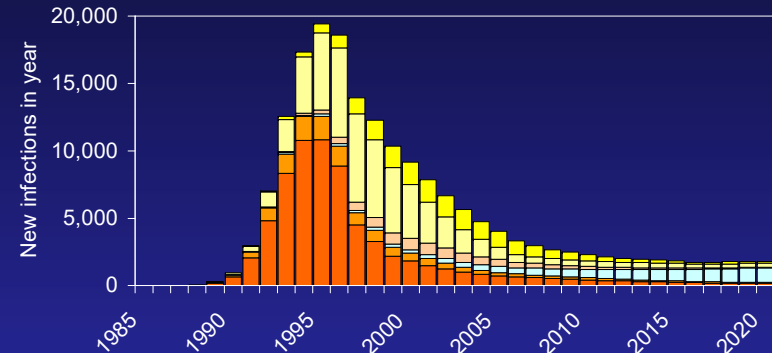
- Prioritize the most effective interventions
- Focus on high impact interventions to reverse the epidemic and lessen impacts
- Leverage other resources to address other drivers and impediments
- Increase local investments in responses
 - Return on investment is high

But new infections in every country differ

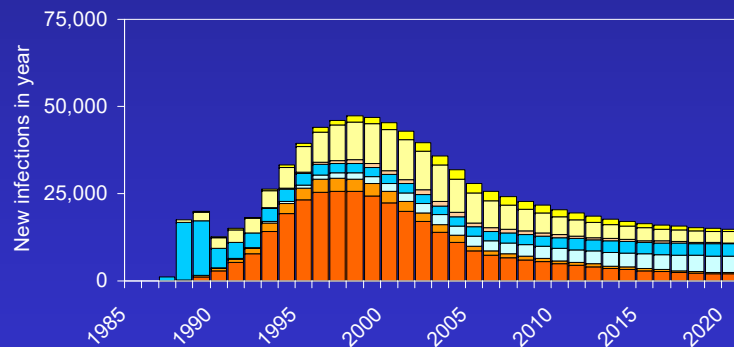
Indonesia



Cambodia



Myanmar



..and effective prevention targets new infections

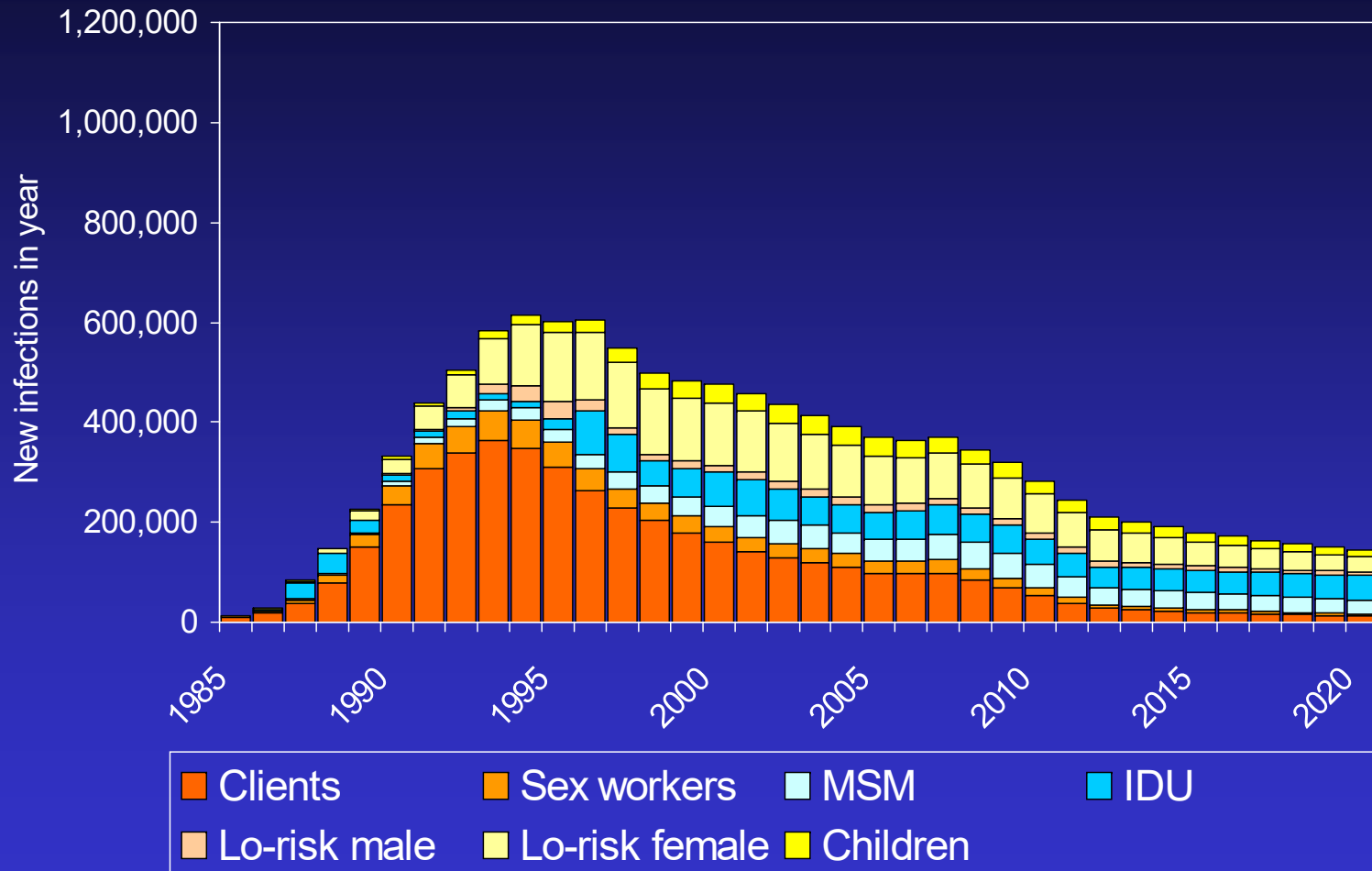


Countries must assess situation and prioritize accordingly

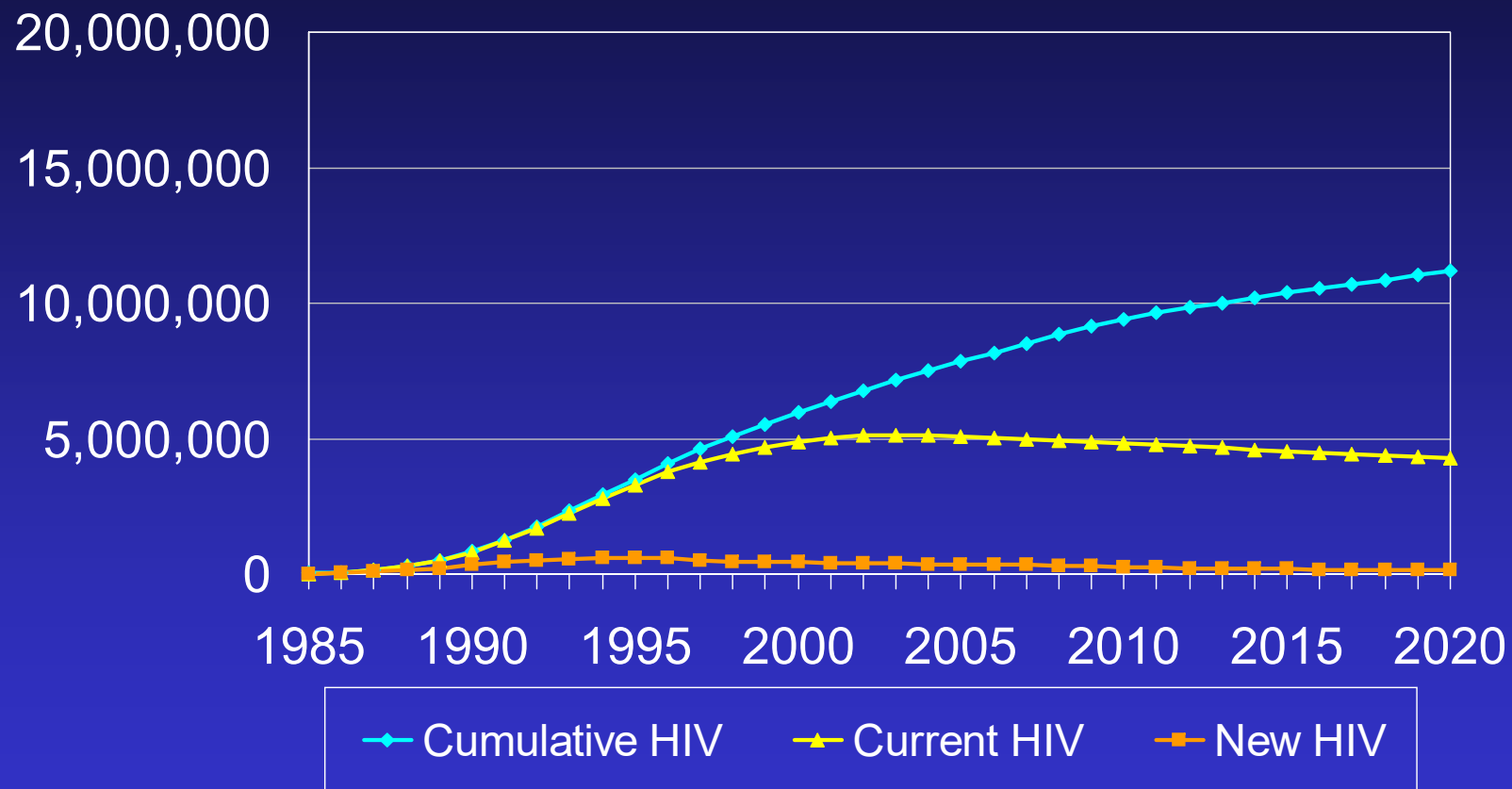
- Requires comprehensive strategic analysis capacity
 - Today data collected, but not guiding programs for maximum impact
- Each country needs an analysis unit linked into program and policy decisions
 - Able to pull data together to determine what's driving the local epidemic today
 - Strongly linked to decision making
 - Adapts the response as the epidemic evolves

What can such programs mean for
the regional epidemic?

If we make the right choices

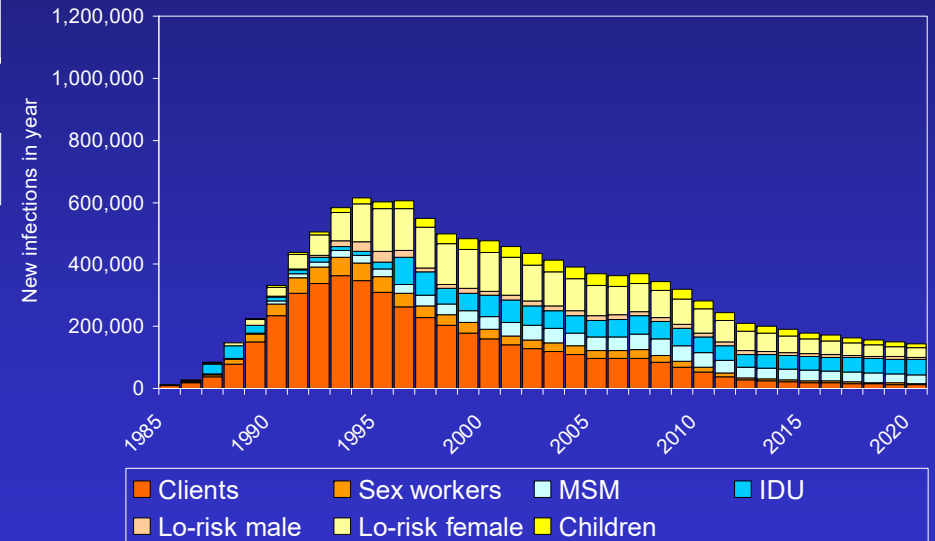
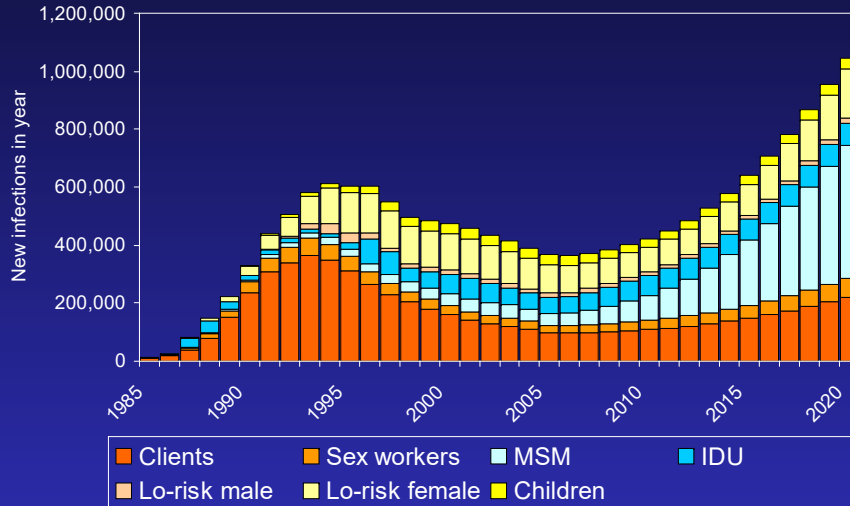


..but ART will keep overall prevalence stable



So, which will it be?

A resurgent epidemic?



Or a contained one?

The choice is ours

Supplementary slides for follow-on discussions

Causes of death 15-44 year olds in Asia

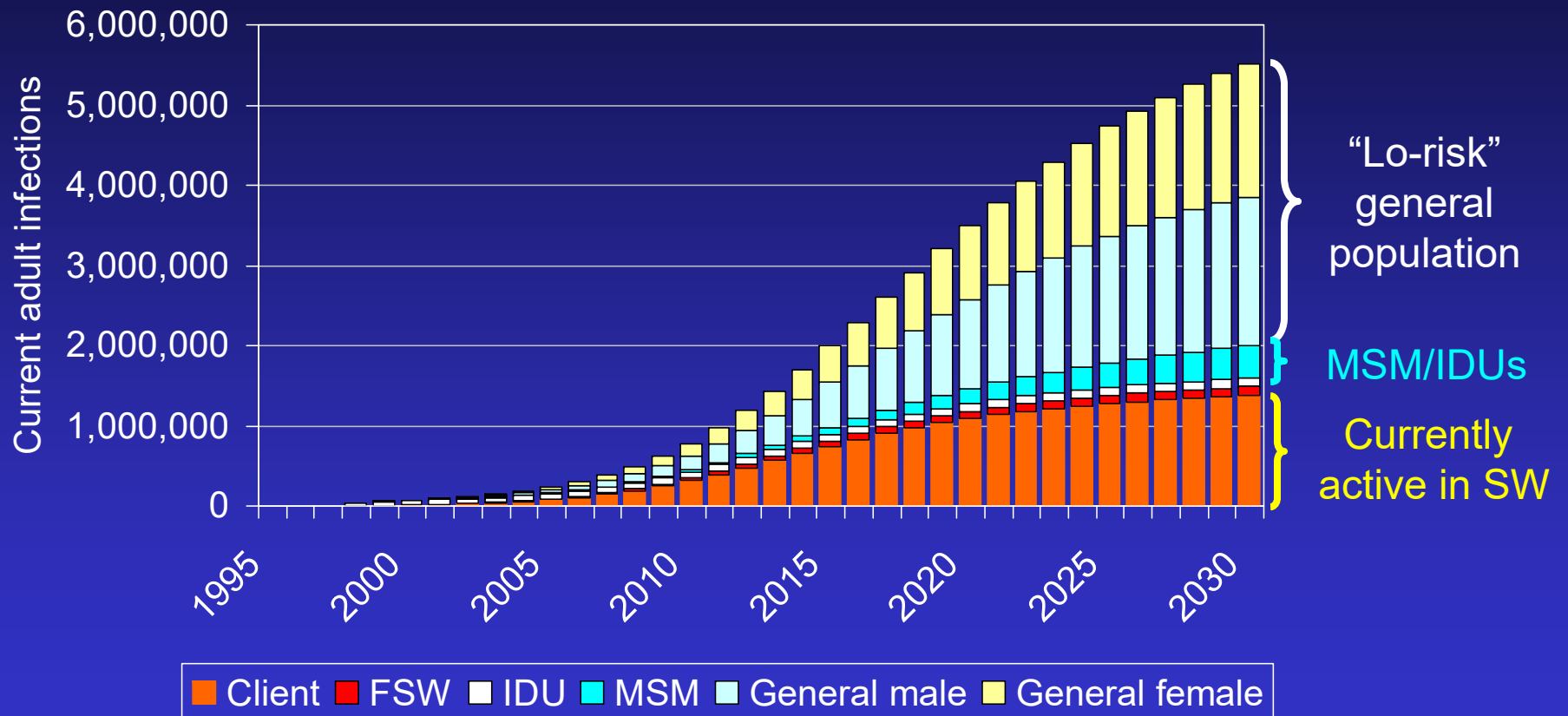
Year	TB	IHD	Diabetes	Cancer	AIDS Old WHO	AIDS Comm- ission
2005	292.1	164.1	25.9	318.6	366.4	383.9
2010	197.9	160.3	29.2	318.1	516.6	346.4
2015	140.9	155.6	30.9	307.2	882.8	319.2
2020	90.3	152.8	30.1	301.2	1207.4	369.2

Important things to understand about Asian epidemics

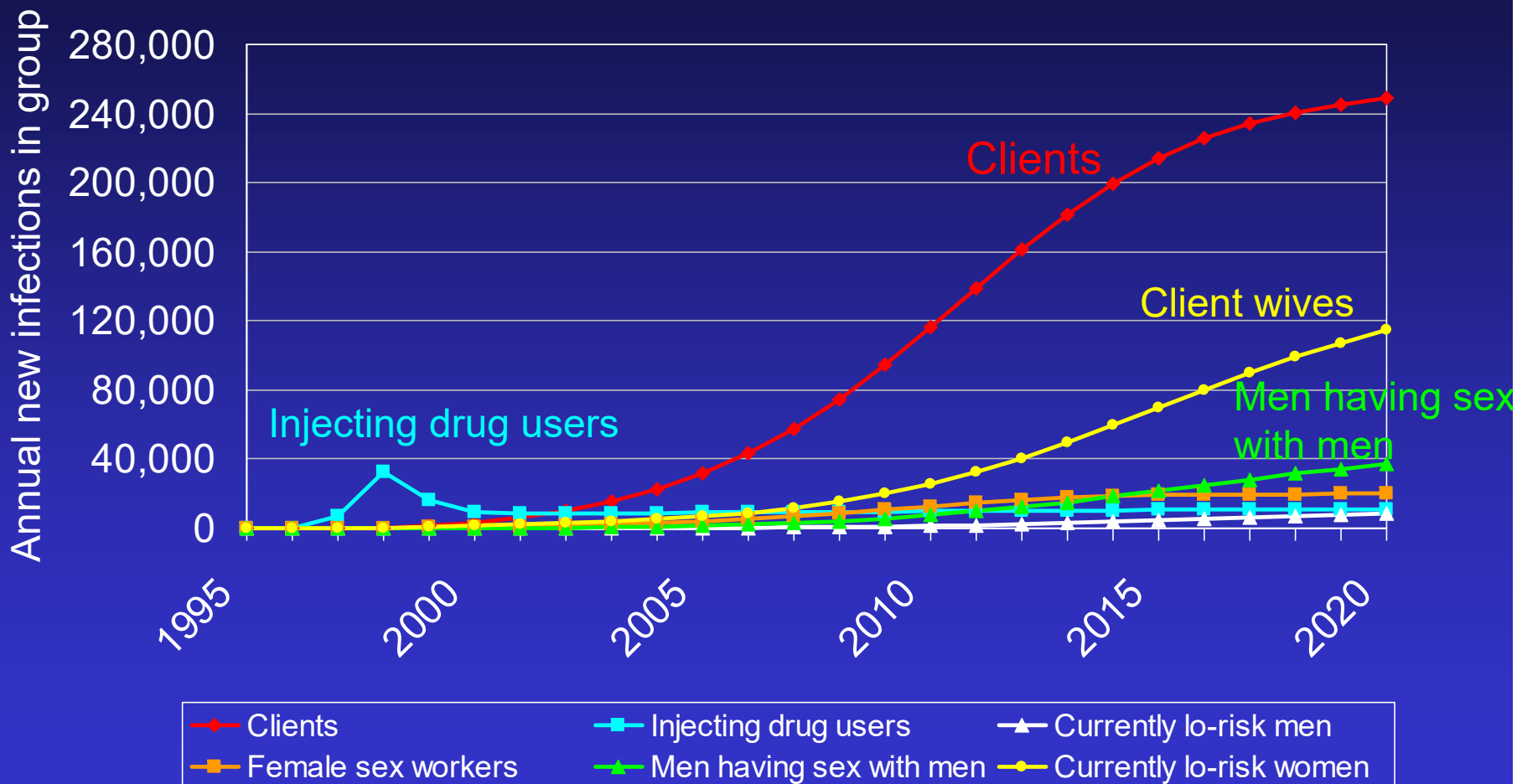
Key findings on Asian epidemic dynamics

- Sex work is the key driver of Asian epidemics with female infections primarily from husbands who are clients
- MSM epidemic proceeds in parallel and can contribute substantially to total prevalence
- Both risk and HIV are disseminated throughout the “general population”
- Asian epidemics will not go “generalized”, i.e., be driven by boyfriend-girlfriend sex
- But...
 - large number of current & past clients, MSM, IDU, and FSW creates potential for HIV to reach a few percent

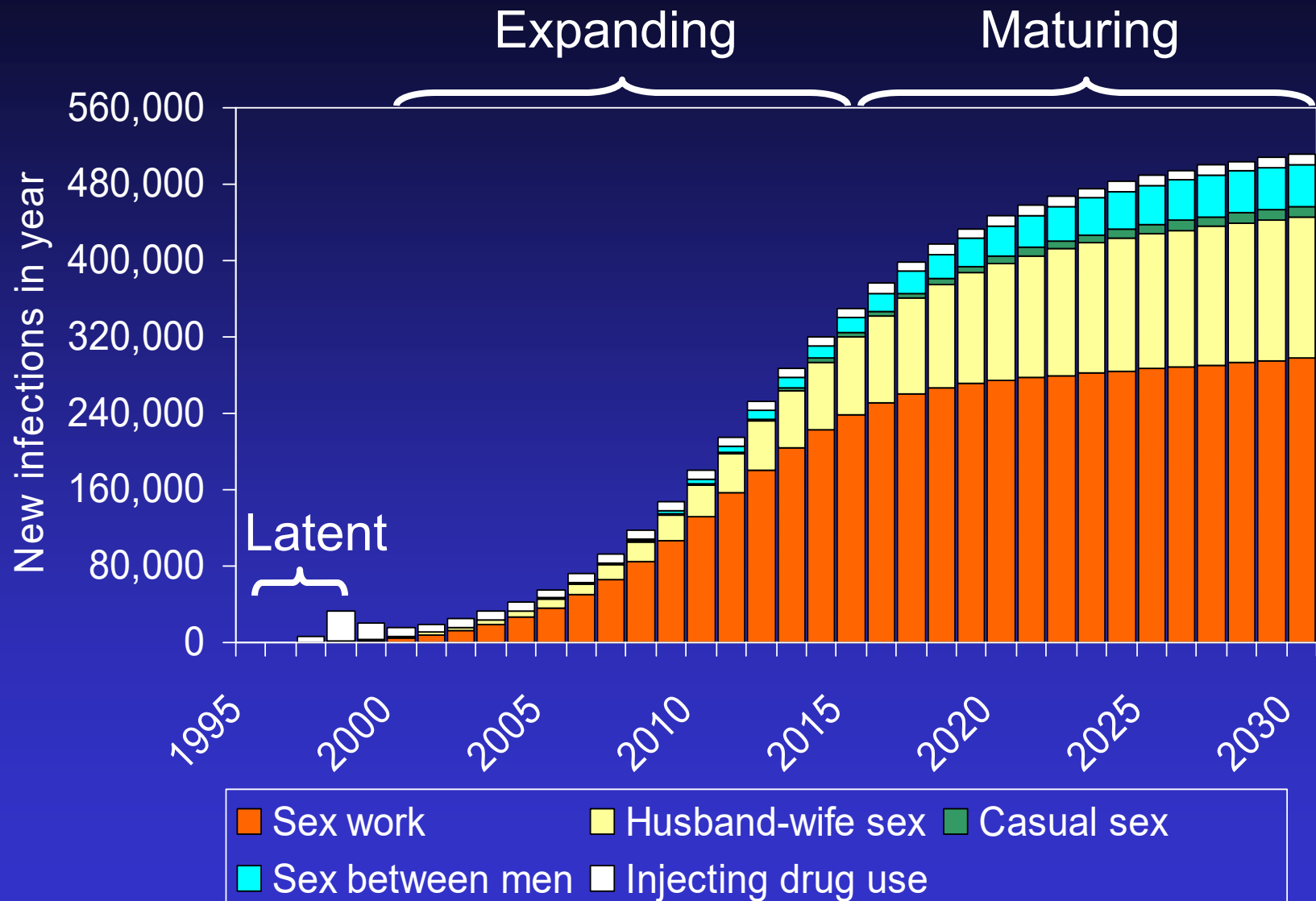
So most current infections remain in the “general population” from risk in the past



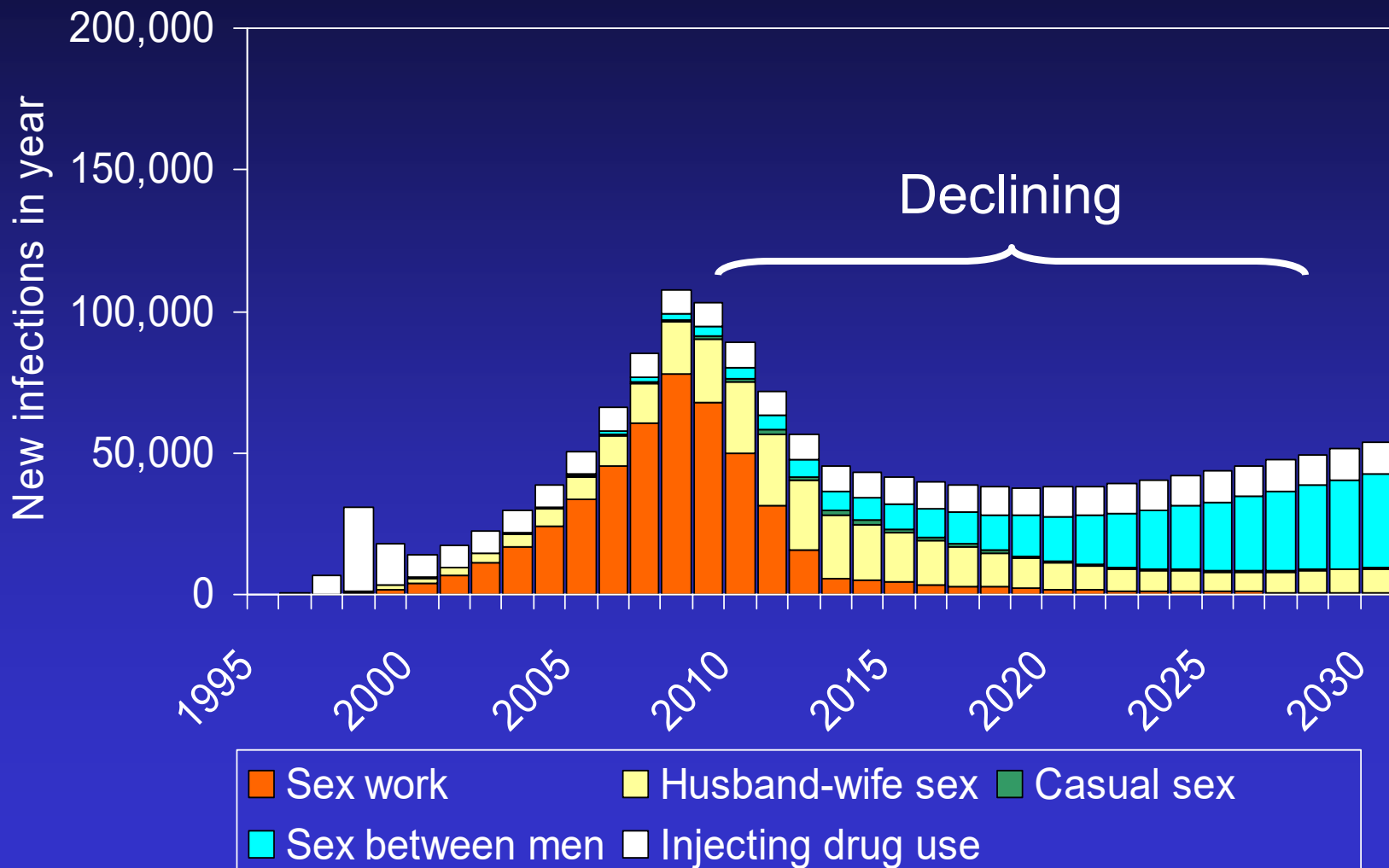
Injecting drug users kick start Asian epidemics, but clients drive them



The way Asian epidemics evolve



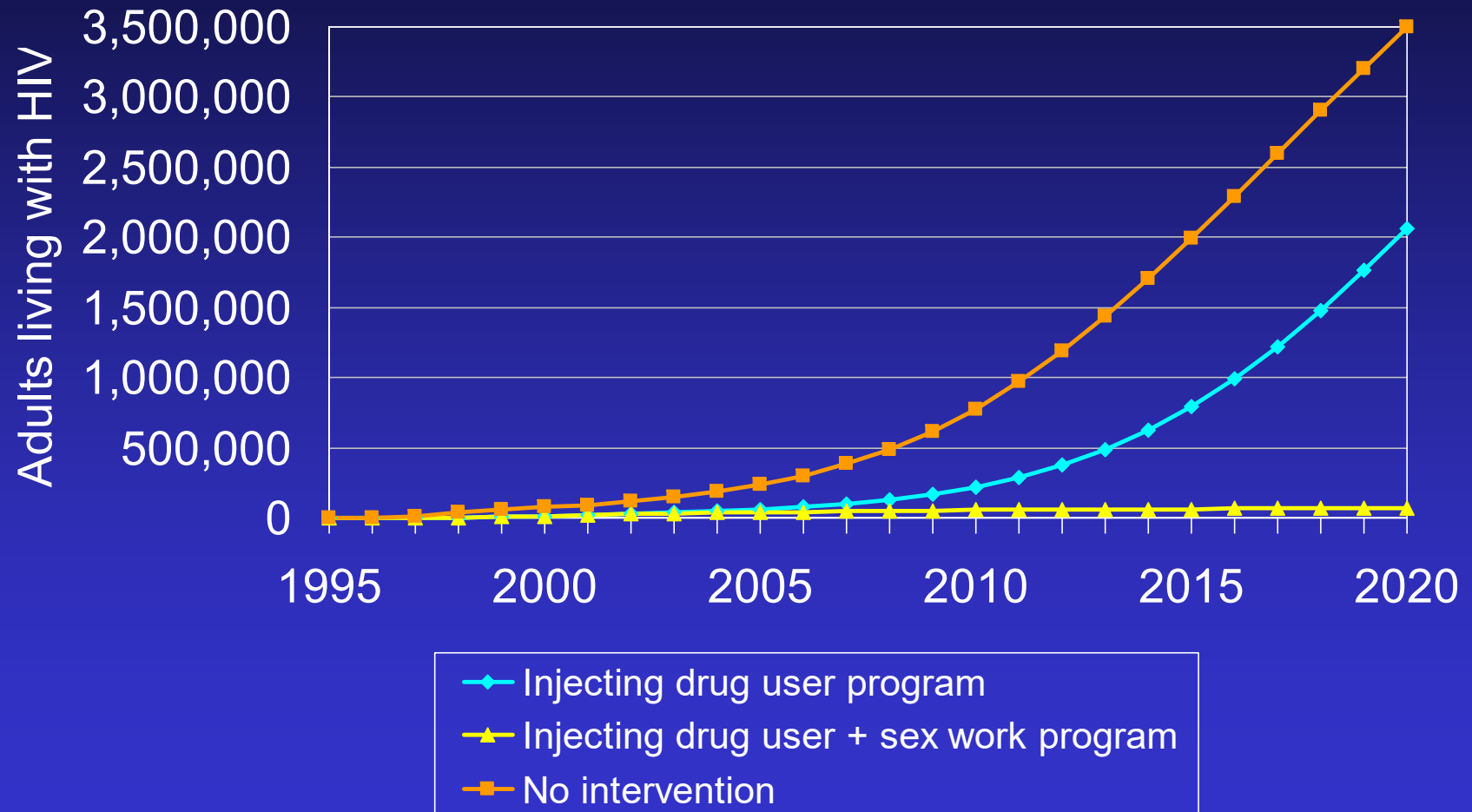
When HIV in sex work is addressed other groups become quite important



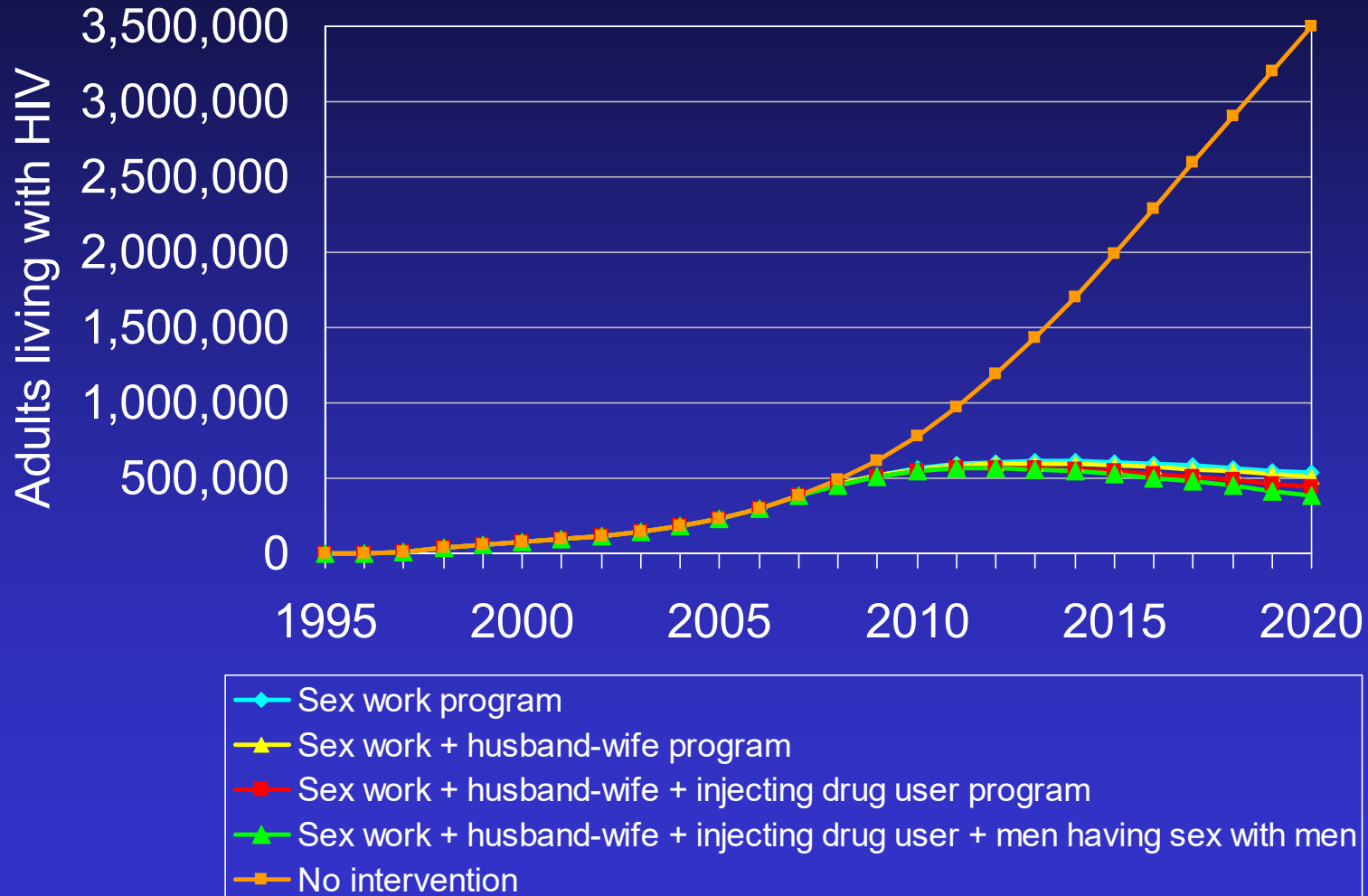
The most effective components of the response vary by epidemic stage

The source of most new infections shows where to focus for impact

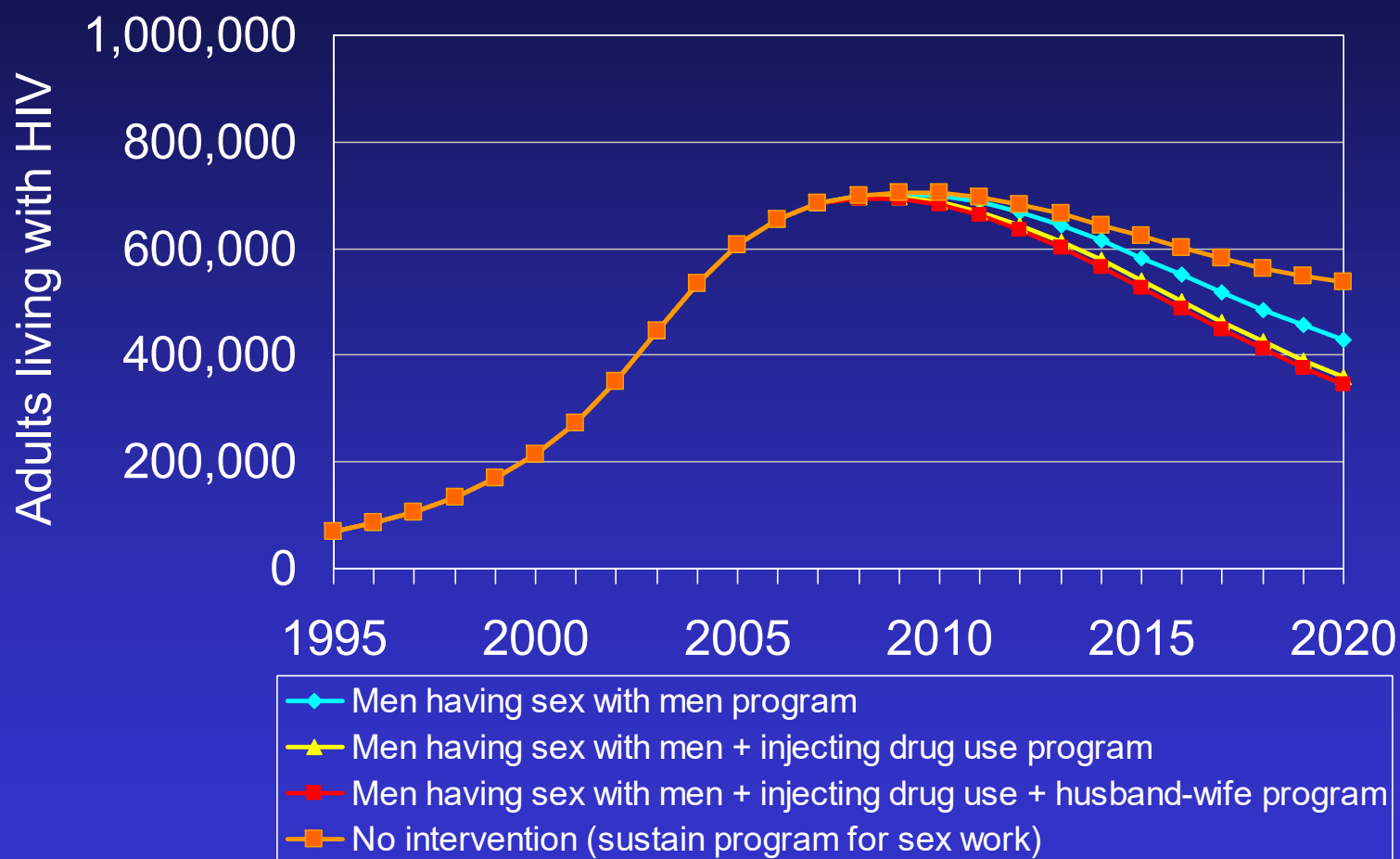
Programs for injecting drug users and sex work have maximum impact in latent stage



During expanding stage programs for sex work have maximum impact



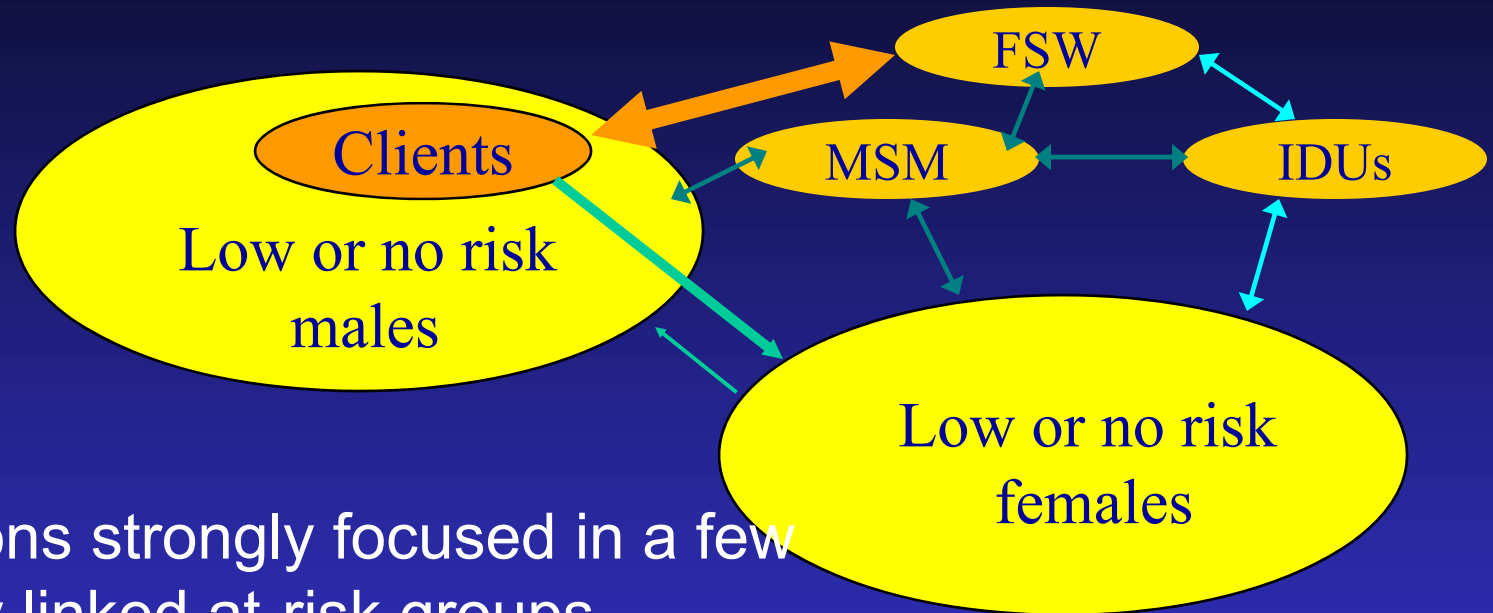
In declining phase, programs for men having sex with men and injecting drug users most effective



So prevention in Asia should stay focused in nature but adapt over time

- Programs needed for most at-risk populations:
 - sex workers & clients, MSM, IDUs, husband-wife
- But balance changes over time:
 - Latent epidemics
 - Focus on IDUs buys time for sex work prevention
 - But, must prepare for sex work epidemic
 - Expanding epidemics
 - Focus most resources on sex workers and clients
 - Declining epidemics
 - Sustain sex work programs to avoid resurgence
 - Expand programs for MSM and IDU
 - Expand to address husband-wife transmission

Asian epidemics follow similar patterns...



- New infections strongly focused in a few behaviorally linked at-risk groups
 - IDUs, clients and FSW, MSM
- And then spread to their lower-risk partners

...but the details vary from country to country

Membership of the Commission

- **Chakravarthi Rangarajan**
 - Chair, Economic Advisory Council to Prime Minister of India
- **Nerissa Corazon Soon-Ruiz**
 - Congressional Representative for Cebu, Philippines
- **Rajat Kumar Gupta**
 - Global Fund for AIDS, Tuberculosis and Malaria
- **Tim Brown**
 - Senior Fellow, East-West Center
- **Tadashi Yamamoto**
 - President, Japan Center for International Exchange
- **Wu Zunyou**
 - Director NCAIDS, China
- **Mahumuda Islam**
 - Professor of Sociology, Dhaka University
- **Frika Chia Iskandar**
 - Coordinator, Women's Working Group APN+
- **JVR Prasada Rao**
 - Director UNAIDS RST and former Director of NACO in India

The Commission on AIDS in Asia

- June 2006, UNAIDS creates Commission as independent body
- Purpose:
 - With fresh eyes, review HIV epidemic in Asia and the responses to it
 - Analyze course and impacts of the epidemic
 - Provide region-specific recommendations to improve:
 - Prevention,
 - Treatment and care, and
 - Impact mitigation
- Report was launched last week at the UN