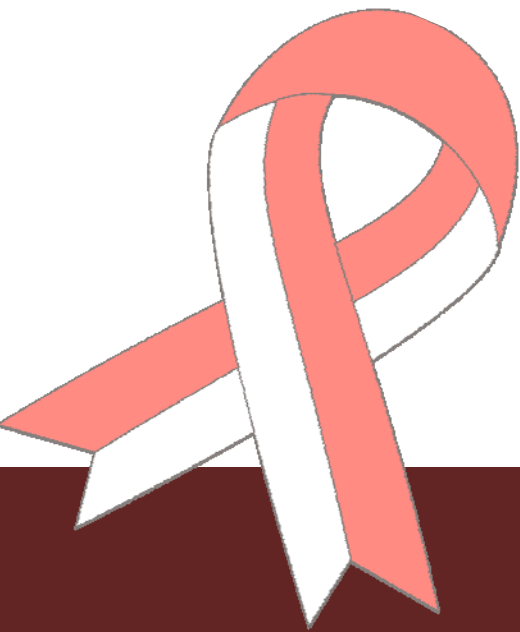


The Cost-Effectiveness of HIV Programmes Targeting Injecting Drug Users in West Sumatera, Indonesia



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Outline



- Introduction
- Background
- Problem Statement
- Methodology
- The Results
- Recommendation



Introduction



- West Sumatra, Indonesia
- I was working at the National AIDS Commission Secretariat

Background



- Injecting drug use is the major driver of the HIV Epidemic in Indonesia, and West Sumatera
- Comprehensive HIV Programmes targeting IDUs is urgently required to prevent further spread of HIV
- Indonesian Government set up the 80% coverage in order to curb the HIV Epidemic (Harm Reduction Policy, 2007 and National Action Plan 2007-2010)



Problems

- Of 193,000 estimated PLHIV in Indonesia, 78% are IDUs and 11% are IDUs sexual partners
- HIV prevalence among IDUs reaches more than 50%
- HIV coverage programmes in Indonesia are 7% (2006), 13% (2007), and 23% (2008)
- Of 3,000 estimated PLHIV in West Sumatera 79% are IDUs and 11% are IDUs sexual partners
- International funds take the majority of HIV programme supports.
- Government budget at all levels is to be advocated
- West Sumatera is on the process to develop the Provincial Strategic Plan

Problem Statement



- In accordance to the National Action Plan, the target coverage is 80%
- However, there is little evidence on the required level of coverage to substantially avert new infections within the limited amount of resource
- Objectives: To undertake a cost-effectiveness analysis to compare the cost-effectiveness ratio of different levels of coverage: 20%, 40%, 60% and 80% of the comprehensive programme targeting IDUs, compared to the no intervention scenario in West Sumatera



Methodology

- The thesis uses 2 Models:
 - Asian Epidemic Model (AEM)
 - Resource Needs Model (RNM)
- The Cost-Effectiveness analysis (CEA):
 - Cost-Effectiveness Ratio (CER) =
[Costs of specific level of intervention – Baseline cost] / [number of new infections averted (compared to baseline)]
- The Sensitivity Analysis:
 - One-way sensitivity analysis using the AEM baseline scenario
 - Identify the most important determinant(s) among the parameters in affecting IDUs HIV Prevalence

Methodology (contd)



- Data Collection Procedure
 - Secondary data review
 - Web-based literature review
- Data Analysis Procedure
 - Preparing the Asian Epidemic Model
 - Describing the HIV programme targeting IDUs
 - Setting up different levels of intervention using the Resource Needs Model
 - Carrying out the CEA to generate CER
- Study Limitation
 - Limited data available



The Scenarios

No	The Scenarios	2007 Coverage	2011 Coverage
0	The baseline scenario	0.1%	0.1%
1	The low to medium intervention scenario	0.1%	20%
2	The medium intervention scenario	0.1%	40%
3	The high intervention scenario	0.1%	60%
4	The very high intervention scenario	0.1%	80%

The Comprehensive Package

- Harm Reduction (Outreach, Peer Education, Needle/Syringe Programme, Methadone Maintenance Therapy), VCT, PMTCT, Diagnostic and Testing, Opportunity Infections Therapy, and Antiretroviral Therapy)

The Cost = Σ Programme_i X Unit Cost_i x Coverage



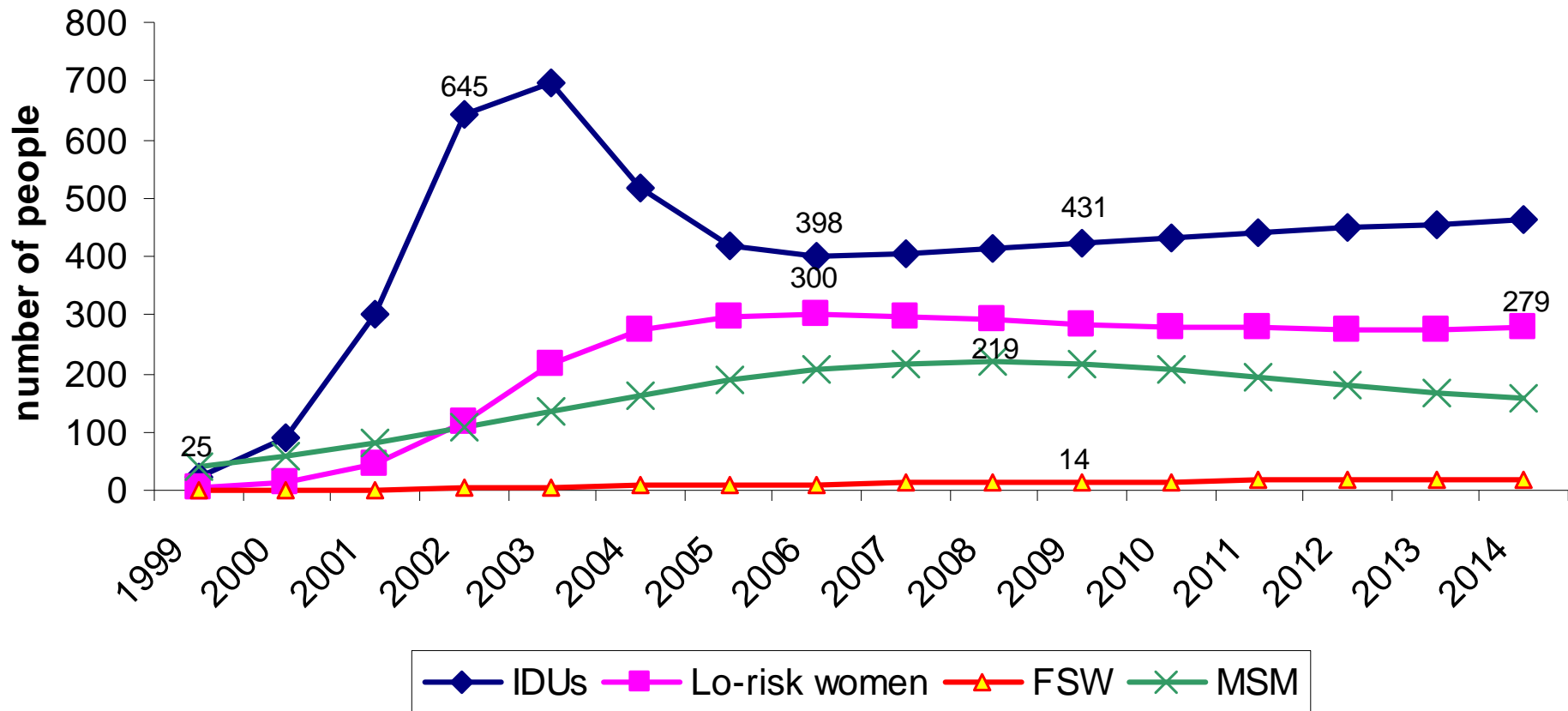
The Results

- The HIV Epidemic Projection in West Sumatera
- The Cost Implication of Five Scenarios
- The Epidemic Implication of Five Scenarios
- The Cost Effective Analysis
- The Sensitivity Analysis

HIV Epidemic Projection in West Sumatera



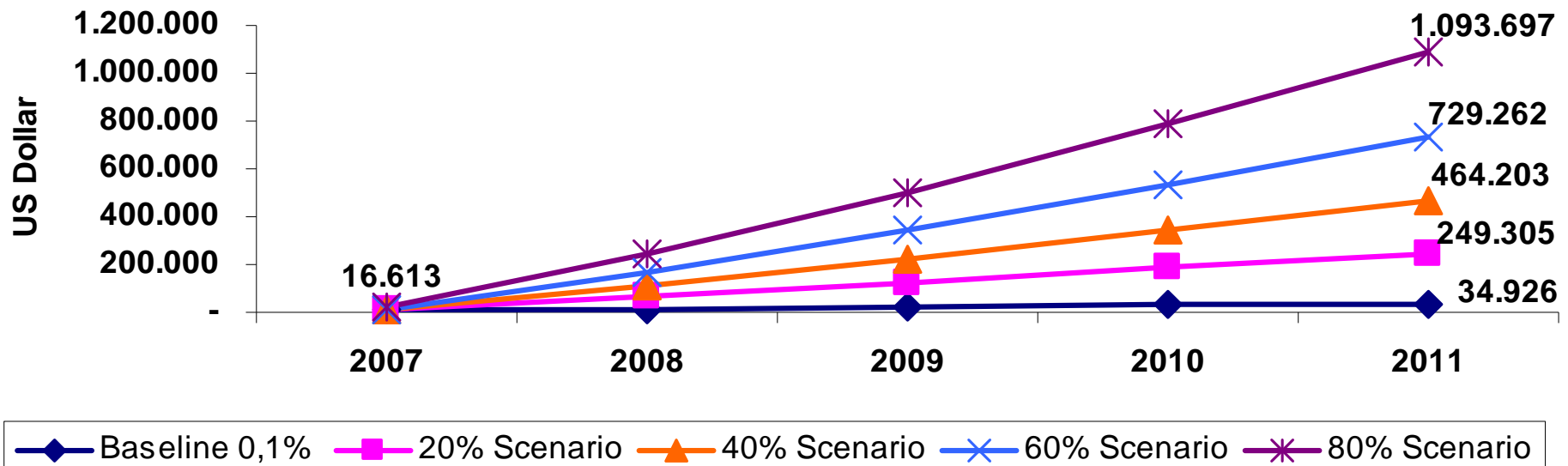
New HIV Infections in IDUs and Other Risk Groups



The Cost Implication of Five Scenarios



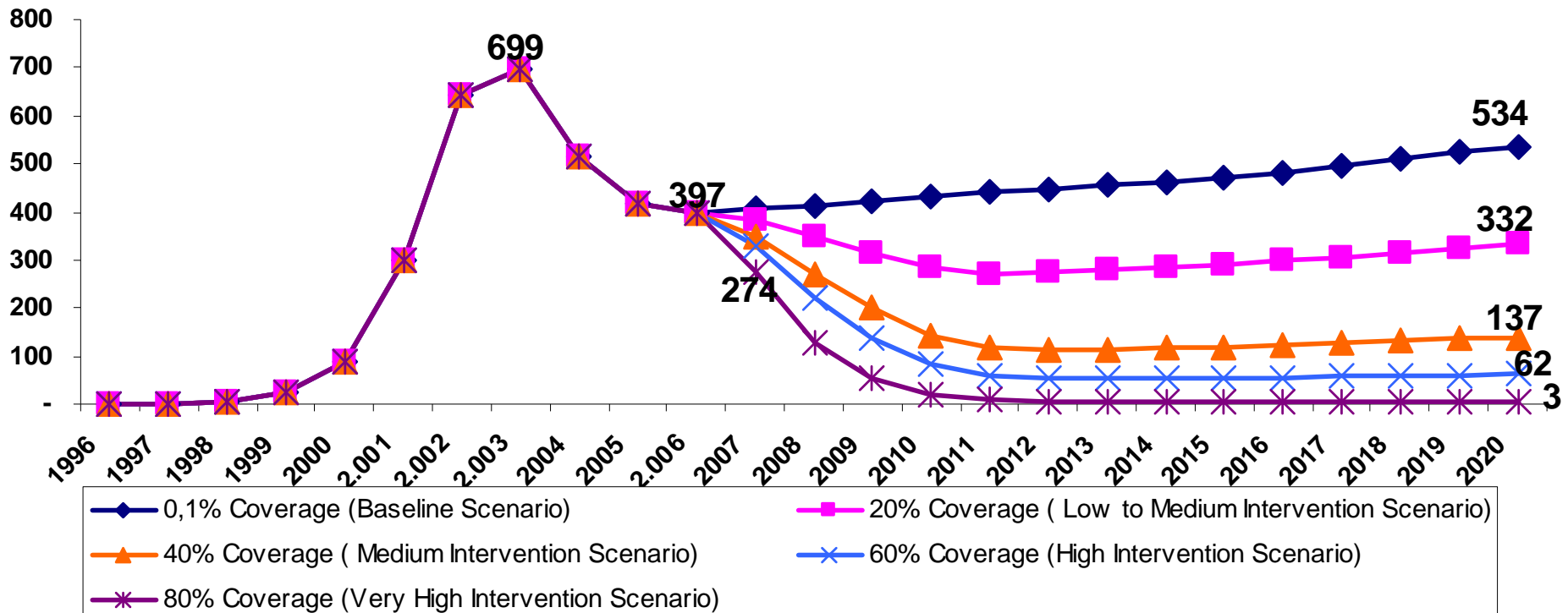
Cost of Scenarios Per Year



The Epidemic Implication of Five Scenarios



IDUs New HIV Infections by year: Impact of four scenarios compared to Baseline



The Cost Effective Analysis



Level of Coverage	Number of New Infections averted in 5 years (a)	Cost of Interventions in 5 Years (US\$) (b)	Average Cost Effectiveness Ratio (US\$/new infection averted) (a/b)
20% Coverage (Low to Medium Intervention Scenario)	510	522,510	1,026
40% Coverage (to Medium Intervention Scenario)	1,032	1,049,096	1,016
60% Coverage (High Intervention Scenario)	1,281	1,679,126	1,311
80% Coverage (Very High Intervention Scenario)	1,623	2,535,000	1,562

The Sensitivity Analysis



- Uses four parameters of the Asian Epidemic Model:
 - Percent of IDUs sharing the needle
 - Number of injection each day
 - Average duration of injecting (year)
 - Probability of infection among IDUs
- Reduction of the percentage of IDUs sharing the needle and the numbers of injection per day are important determinants in reducing the HIV epidemic in West Sumatera

Recommendation



- If the Universal access is the goal, 80% is the target level of coverage
- Timely implementation of comprehensive package targeting IDUs to prevent further spread of HIV
- Incorporate social concerns into planning
- Increasing the political commitment and strengthening support system, such as the health system, human resources and institutional management
- Keep updating the mathematical projection method
- Further study to improve the unit cost accuracy