

Stabilizing HIV Prevalence Among Injection Drug Users: Early Evidence from a Cross-Border HIV Prevention Project in China and Vietnam

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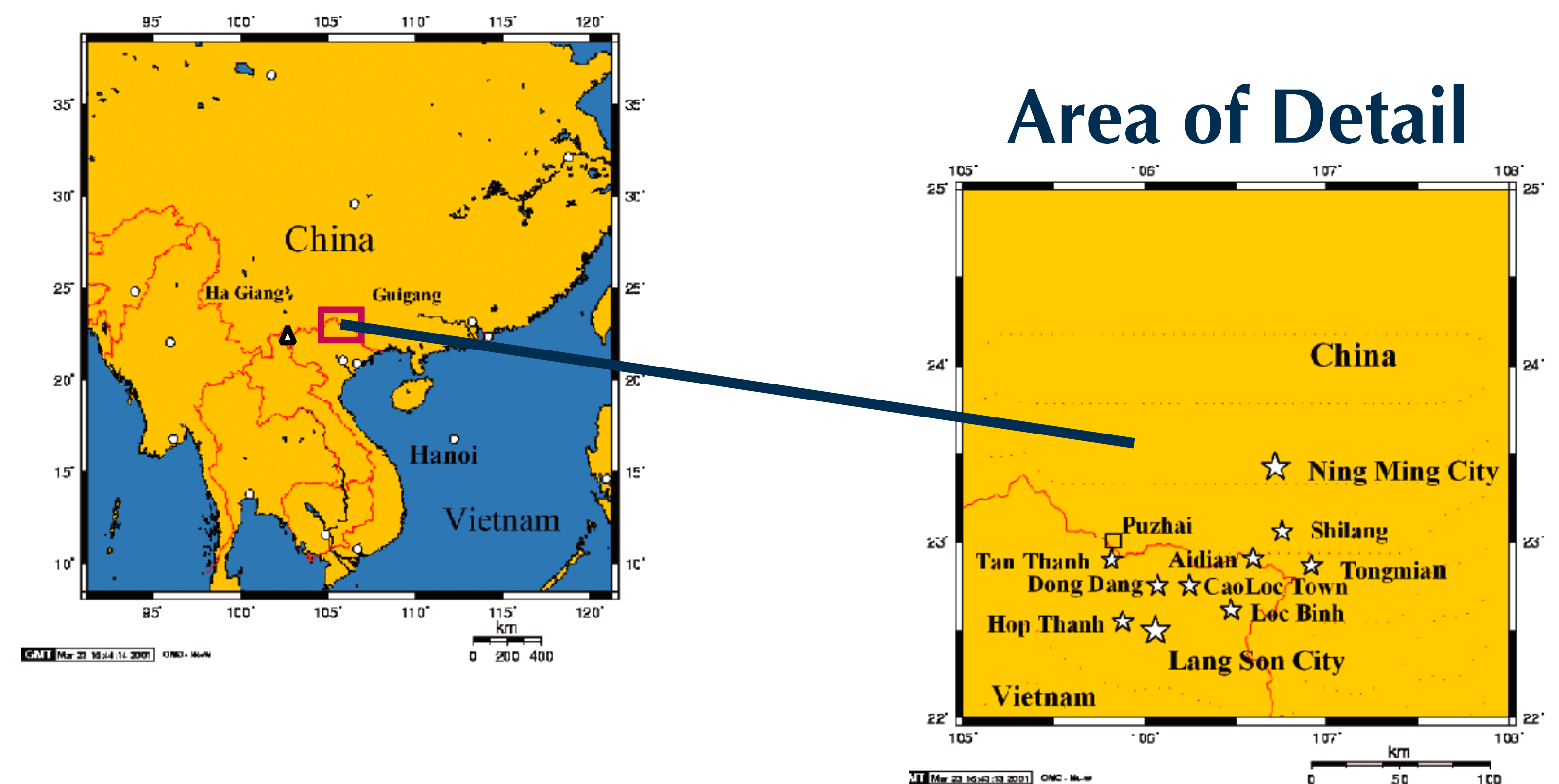
Background

- First-ever cross-border HIV prevention project (with interventions on both sides) targeting IDUs
- Cross-Border Movement and HIV/AIDS
 - Drug Trans-shipment Routes ⇒ Heroin Use ⇒ Heroin Injection ⇒ HIV Transmission ⇒ Increasing HIV Prevalence ⇒ Cross-Border Transmission
 - Small-scale movement across long, porous border
 - Trade, migratory employment, “floating population”
 - Inter-marriage, ethnic minority groups on both sides

Geographic Setting

Map of Project Sites

- Key:
- ★ Large Project Site
 - ☆ Small Border Site
 - ▲ Peer Driven Intervention Site



Intervention

- Peer-based education of IDUs (outreach model)
 - Social marketing of new needles/syringes – direct distribution and through redemption of pharmacy/clinic vouchers
 - Public health: collection/safe disposal of used needles/syringes
 - Community education
- Full implementation of interventions in original sites began July (Vietnam) – October (China), 2002

Data Collection and Analysis

- Cross-sectional surveys (interviews and HIV testing with counseling) of IDUs — baseline + 6, 12, 18, 24, 30 months; Baseline, 6- and 12-month completed in China and Vietnam
- For HIV prevalence, the relationship between the proportion of subjects in a site testing positive and distance to the border was modeled by an overdispersed logistic model
- The relationship between the mean number of years injecting and distance was modeled by a weighted linear model with weights depending on the site sample sizes

HIV Prevalence Patterns

Table 1: HIV Prevalence in Each Site

Vietnam	Baseline (n = 348)	6-Month (n = 350)	12-Month (n = 327)
Lang Son	57%	53%	49%
Cao Loc	42%	53%	43%
Loc Binh	41%	34%	34%
Dong Dang	40%	42%	35%
Tan Thanh	5%	14%	27%
All Lang Son Sites	46%	46%	43%
China	Baseline (n = 308)	6-Month (n = 343)	12-Month (n = 307)
Aidian	32%	38%	19%
Tongmian/Shilang	44%	38%	42%
Ning Ming City	12%	18%	9%
All Ning Ming Sites	17%	23%	14%

- HIV Prevalence among IDUs is stable in Lang Son and Ning Ming over 12 months (Table 1).
- There is a negative gradient of HIV prevalence among the sites running from the border in Vietnam to the sites farthest from the border in China. The gradients have similar slopes at baseline and 12 months (Figures 1 – 2). The negative gradient for HIV prevalence was similar at baseline (odds ratio = 0.97 [p<0.001]) and 12 months (odds ratio = 0.97 [p<0.001]). At each point, the odds of an individual being HIV positive decreased by 2-3% for each kilometer in the Chinese direction
- There is a similar gradient for self-reported length of injection history by distance from the border (Figure 3), i.e., IDUs in Lang Son tend to have been injecting longer than those in Ning Ming

Figure 1: Gradient of HIV Prevalence by Distance from Border: Baseline

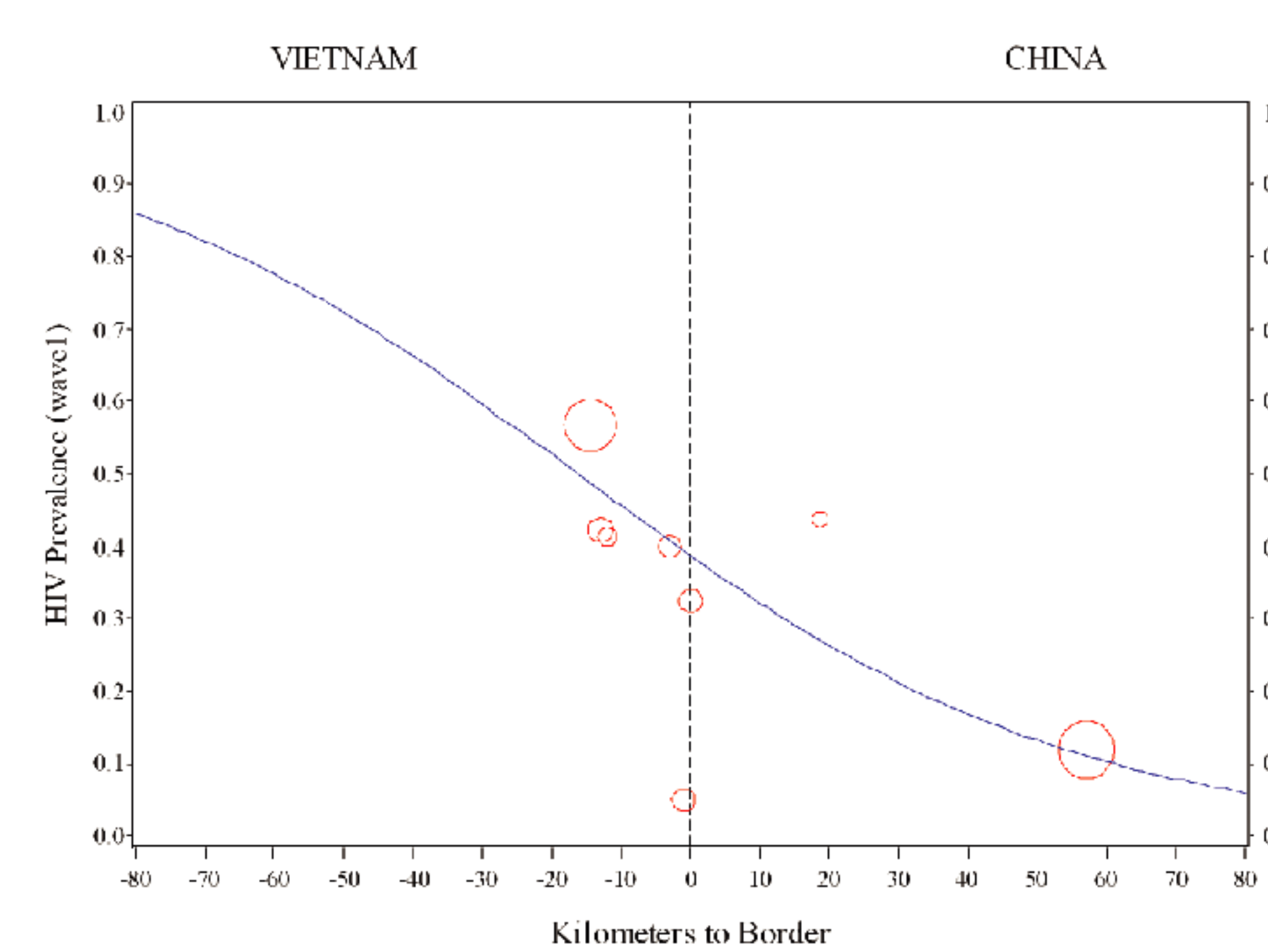


Figure 2: Gradient of HIV Prevalence by Distance from Border: 12 Months

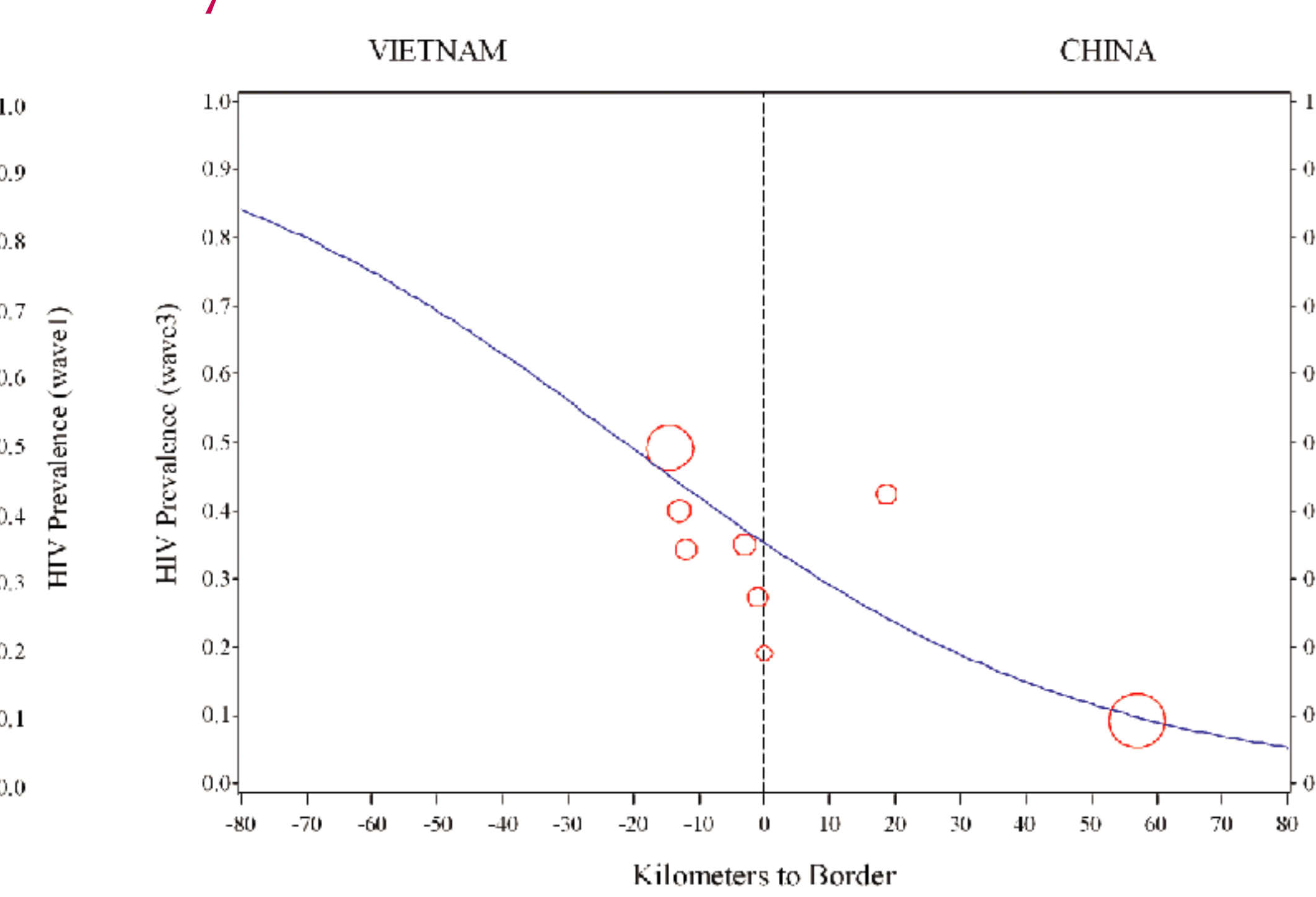
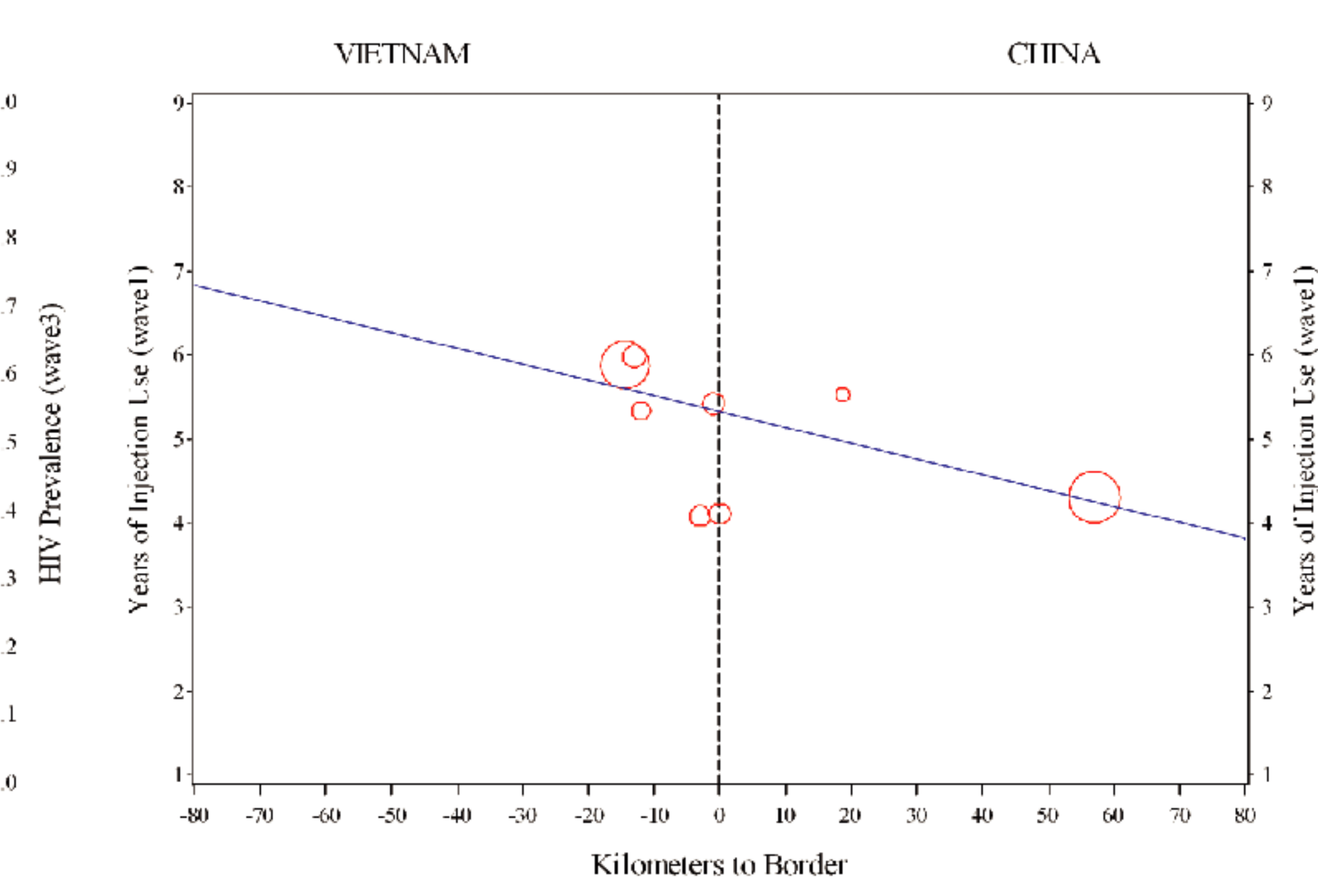


Figure 3: Gradient of Average Years of Injection by Distance from the Border: Baseline



Conclusions

- The gradients of HIV prevalence by distance from the border and by average length of injection history are consistent with the spread of heroin injection and HIV along drug transshipment routes
- Continuing stability of gradient pattern and actual prevalence rates, together with declining incidence, will suggest control of cross-border and intra-country transmission of HIV

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