Intervention to Reduce HIV/STI Among High-Risk Patients in China: Cluster Randomized Trial

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OVERVIEW

In a cluster randomized trial, we tested whether a program to train physicians in China on HIV and STI knowledge, diagnosis, treatment, and risk reduction counseling can potentially reduce HIV risk behavior and STI among high-risk STI patients.

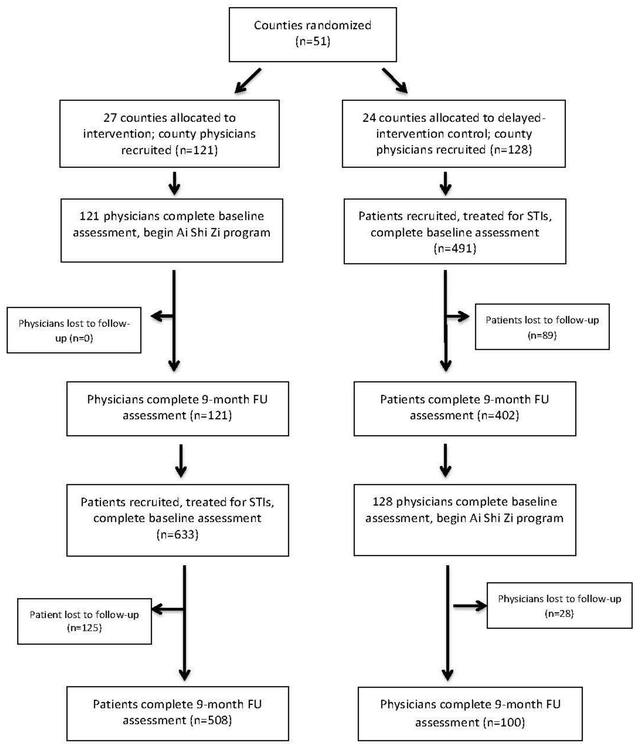
BACKGROUND

- In China, HIV is increasingly characterized by sexual transmission in high-risk groups.
- National AIDS policies in China support initiatives to promote ART and HIV testing, condom use, syringe distribution and drug treatment, and HIV stigma reduction.
- Implementation of China's national AIDS policies relies on physicians' capacities to deliver HIV prevention and HIV/STI treatment services.
- We developed a knowledge and skills-based training program (*Ai Shi Zi*) for physicians in China to reduce HIV and STI risk in high-risk patients.

STUDY DESIGN

- Setting: Anhui and Jiangsu provinces
  - 51 counties elected to participate (39 in Anhui, 12 in Jiangsu)
- 27 counties received immediate training (intervention group); 24 counties in delayed control
- 4-6 physicians in each county hospital participated in immediate or delayed-control training
- 4-6 STI patients of each physician were recruited and assessed at BL and 9-month follow-up on:
  - Gonorrhea and *Chlamydia* (BL STIs were treated)
  - Unprotected sex, 3 mos
  - HIV related knowledge and attitudes
  - Satisfaction with physician

STUDY FLOWCHART



AI SHI ZI PROGRAM

- Curriculum developed by Chinese and international collaborators.
- Training components:
  (1) Fundamentals of HIV (epidemiology, natural history, pathogenesis)
  (2) Patient treatment options – HIV and STIs
  (3) Diagnoses and clinical issues
  (4) Behavioral risk reduction counseling and stigma reduction
- Training structure:
  (1) 10-day group training on HIV/STI prevention, treatment, counseling treatment
  (2) Return to clinical practice for 2 months
  (3) Two 2-day booster sessions

RESULTS

Patient Outcomes (9-month FU)	Intervention	Control	OR / β 95% CI
STI prevalence	11.4%	40.4%	OR = 0.62 (0.46-0.84)
Unprotected sex, past 6 mo	84%	95%	OR = 0.22 (0.12-0.42)
HIV knowledge	16.80	14.94	β = 2.13 (1.52-2.73)
Attitudes toward PLWH	8.50	7.15	β = 1.51 (0.97-2.05)
Satisfaction w/Physician	2.43	2.29	β = 0.22 (0.15-0.30)

Cluster analyses used to account for nested design (county and physician levels). Additional controls: gender, marital status, employment. Missing data handled using last-observation carry forward method.

CONCLUSIONS

- Integrating HIV and STI training into medical education in China can be an effective strategy for reducing the country's HIV and STI epidemics
- 38% lower odds of STI infection (gonorrhea and *Chlamydia*) at 9-month follow-up among intervention patients compared with controls
- 78% lower odds of unprotected sex at 9-month follow-up among intervention patients compared with controls; however, unprotected sex remained high
- Greater HIV knowledge, less stigmatizing attitudes toward PLWH, and greater satisfaction with physician among intervention patients compared with controls

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