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# **Higher Adherence of Antiretroviral Therapy (ART) in Community Hospitals than in Regional Hospitals: A Cohort Study Under The Universal Coverage in Thailand**



*Sukhontha Kongsin<sup>1</sup>, Sukhum Jiamton<sup>2</sup>, Kitiya Prom-On<sup>1</sup>,  
Kanoksak Wongpeng<sup>1</sup>, Petcherut Sirisuwan<sup>1</sup>, Sittikorn Rongsumlee<sup>1</sup>*

<sup>1</sup>*Research Centre for Health Economics and Evaluation Faculty of Public Health, Mahidol University, Thailand*

<sup>2</sup>*Department of Dermatology, Faculty of Medicine Siriraj Hospital, Mahidol University, Thailand*

## Background: Epidemic of HIV/AIDS in Thailand

Bureau of Epidemiology reported

- Spontaneous report since 1984 to 31<sup>st</sup> March 2011
  - Cumulative 372,874 AIDS patients
    - AIDS deaths 98,153 cases

(Division of Epidemiology, Thai MOPH, 2011)

## Background: HIV/AIDS treatment and care in Thailand

### Antiretroviral therapy (ART)

- HAART (Highly Active Antiretroviral Therapy) had been introduced to Thailand in 2000
- People accessing this treatment increased dramatically
  - Reducing no. deaths from AIDS
  - Thai HIV prevalence reduction
    - in 2003 = 1.8 %
    - in 2005 = 1.4 %

(Tribune I. H., 2005)

## Background: HIV/AIDS treatment and care in Thailand

- Thailand scaling up National AIDS Program (NAP) Since 2007
- Aimed toward universal coverage (UC) for ART
  - PLHA equally access to treatment and care
  - Free ART and OI drugs provided
  - Service covered >900 hospitals
- Supported CD4 & viral load laboratory network

# Objective

Aim of the study

- To find facility factors related to Adherence of Antiretroviral Therapy under the universal coverage

# Research Methodology: Research Design

- A Cohort Study from **June 2008 to September 2009**
- Coverage Area of 9 hospitals in 3 provinces
- Approved by National Ethical Review Committee, MOPH
- Anonymity and confidentiality:
  - Not recorded patient names in case record form
  - Used IDs instead
  - All case record forms confidentially kept in locked cabinet

# Research Methodology: Research Sites



**Chiang-Rai Province (North)**

Chiangrai Prachanukroh Hospital

Maechan Hospital

Somdet Phra Yan Sangwon Hospital

**Khon-Kaen Province (North-East)**

Khon-Kean Hospital

Phra Yuen Hospital

Somdet Phra Kranua Hospital

**Songkhla Province (South)**

Hadyai Hospital

Khuan Niang Hospital

Singhanakhon Hospital

## Research Methodology: population and sample

- HIV-infected adults receiving antiretroviral therapy
  - Under National AIDS Program (NAP)
  - Age 20 years old and over
  - Male or female
  - Living in 3 provinces

# Research Methodology: Measured adherence

1. Pill count
2. Self report (VAS) score 0 to 100

การประเมิน Adherence ด้วยวิธี Visual Analogue Scale

5.2 บันทึกการทานยาต้านไวรัสเอดส์ในช่วง 30 วันของผู้ติดเชื้อเอชไอวีเอดส์ที่มารับยาต้านไวรัสเอดส์โดยใช้ Visual Analogue Scale คำอธิบายให้ท่านลากเส้นตามแนวนอนในช่องว่างหรือตอบเป็นตัวเลขตามระดับการรับประทานยาของท่าน

2A5002a1 วันที่ประเมิน.....	2A5002b1 การกินยาต้านไวรัสเอดส์ของท่าน
2A5002b1 ชนิดของยาต้านไวรัสเอดส์.....	
<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <p>0 = ไม่ได้กินยาต้านไวรัสเอดส์และ กินยาต้านไวรัสเอดส์ไม่ตรงเวลาเลย</p> </div>	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <p>100 = กินยาต้านไวรัสเอดส์และ ตรงเวลาทุกครั้ง</p> </div>



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# Results



# Characteristics of hospital

## Level of Hospitals

Hospitals	Beds	Level of hospital
Chiangrai Prachanukroh Hospital	780	Regional Hospital
Khon-Kean Hospital	867	Regional Hospital
Hadyai Hospital	650	Regional Hospital
Maechan Hospital	90	Community hospital
Somdet Phra Kranua Hospital	90	Community hospital
Somdet Phra Yan Sangwon Hospital	30	Community hospital
Somdet Phra Kranua Hospital	30	Community hospital
Khuan Niang Hospital	30	Community hospital
Singhanakhon Hospital	30	Community hospital

## Characteristics of patients

823 cases come for follow up until the completion of the study

- Female 53 %
- Mean age 39.6 years
- Education higher than primary 44.1%
- Married 50 %
- Average income 4,643 baht (USD 154\*) /month

\*1 USD = 30 bath

## Characteristics of patients

### Adherence from pill-counts and self-report

Adherence	Pill count	Self report (VAS)
	No.(%)	No.(%)
< 95%	76(12.6)	411(49.94)
>=95%	525(87.4)	412(50.06)

## Adjusted associations between Level of hospital and Adherence from self-report by Visual Analog Scale (VAS) and Pill Count

Level of hospital	Pill count		OR	95%CI	P-value
	Adherence<95%	Adherence>=95%			
	No.(%)	No.(%)			
<b>Regional Hospital</b>	<b>65(17.3)</b>	<b>310 (82.7)</b>	<b>1</b>		
<b>Community Hospital</b>	<b>10 (4.8)</b>	<b>199(95.2)</b>	<b>4.17</b>	<b>2.10-8.31</b>	<b>&lt;0.001</b>
Level of hospital	Self report by VAS		OR	95%CI	P-value
	Adherence<95%	Adherence>=95%			
	No.(%)	No.(%)			
<b>Regional Hospitals</b>	<b>294(53.7)</b>	<b>253(46.3)</b>	<b>1</b>		
<b>Community Hospital</b>	<b>120(43.5)</b>	<b>156(56.5)</b>	<b>1.51</b>	<b>1.13-2.02</b>	<b>0.006</b>



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# Conclusion & Recommendation



## Conclusion

- The study found that
  - Small hospitals higher ART adherence than large hospitals under same system
  - This might be explained in smaller hospital
    - Closer and probably better patient-staff relationship
    - easy to travel or access to clinic
    - ART one-stop service
    - Exclusively private space for clinic

## Conclusion

- Explanation for larger hospitals
  - Many patients per session
  - Limited space for clinic
  - Not separated from other clinics
  - Not one-stop services

## Conclusion

- PLWHA Network
  - Found to be an important person help on service deliver in all hospitals
    - Weight and blood pressure check
  - Help on sharing information on ART & lab
  - Volunteers for ambulatory visits & psychosocial support in community

## Recommendation

- Regional/general hospital might need
  - Substantial supports on budget and personnel
  - the allocation of service space
  - increasing interest in ART Adherence

## Recommendation

- Evaluation of ARV adherence
  - Taken into process of ARV service
  - Specify to same standard
  - Varies to context of each hospital

## Recommendation

- Support of PLWHA Network to appropriately participate in service process of ART in hospitals
  - May help health personnel on ART Adherence evaluation

# Acknowledgement

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**Thank you for your attention**



Research Centre for Health Economics and Evaluation  
[www.ReCHEE.org](http://www.ReCHEE.org)  
Faculty of Public Health, Mahidol University, Thailand