Health outcome of PLWA on ART and service system in hospitals with different size under universal coverage in Thailand: Does size matter?

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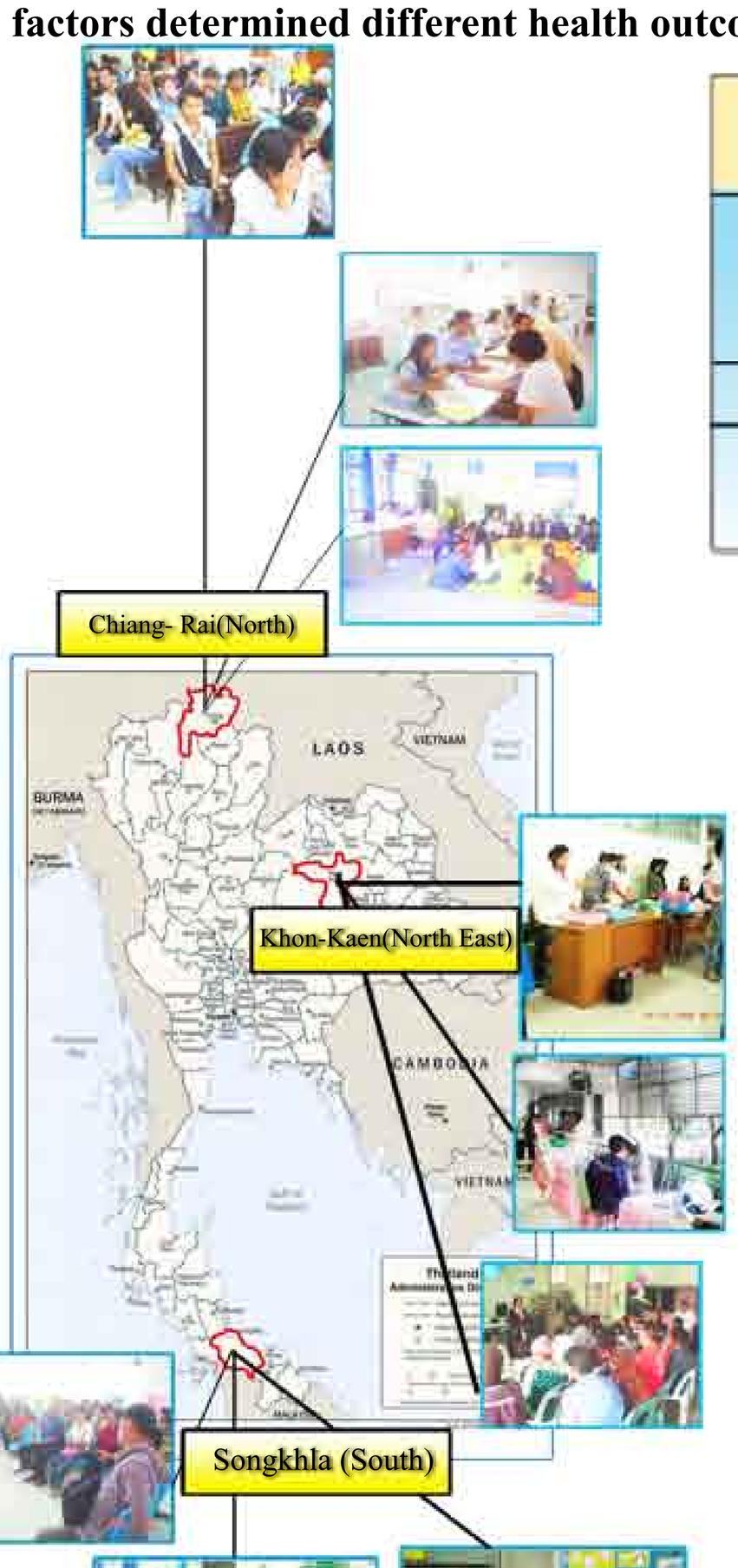
Issue

The development of generic production of Anti-retroviral agents and fixed-dose combination regimen of ART by the Government Pharmaceutical Organization, Thailand becomes a leading country scaling up of the National ART Program (NAP) with an aim toward universal coverage. PLHA access to treatment and care is equally accessible by all and are fully covered more than 900 hospitals. Free ART and OI drugs have been provided through the development of innovative procurement schemes with a strong HIV, CD4 and viral load laboratory network since 2007. The key questions are addressed : 1) how health care services in hospitals with different size were affected health outcome and 2) what key factors determine different health outcome?

Description

During January to December 2009, a retrospective cohort study was conducted among 824 PLHA on ART under NAP in 9 public hospitals in 3 provinces (3 regional and 6 community hospitals). The outcome of the study was CD4 change between prior receiving ART and at recruitment. The study wanted to find key factors determined different health outcome among PLHA on ART in regional and community hospitals.



Chiang-Rai (North)			Khon-Kaen (North-east)			Songkhla (South)		
RH (1)	CH (1)	CH (2)	RH (2)	CH (3)	CH (4)	RH (3)	CH (5)	CH (6)
780*	90	30	867	90	30	650	30	30

*Beds
RH = Regional Hospital
CH = Community Hospital

Lesson Learned

Although ART service in all hospitals was under the same system (NAP),the difference of ART delivering system affected results on health outcome. Our study showed that community hospitals had higher opportunity to find increased CD4 count change as well as higherper centage of adherence (>95%) than regional hospitals. This could be explained from the limitation of the regional hospitals due to overwhelmed clients per session (i.e. PLWA had to wait for three hours before seeing the doctors for 3 minutes) and the restricted service space that might lead to low efficiency of service (i.e. no place for PLWA to wait).The study also found that the adherence of ART which was important to show the quality of service system assessed using pill count method could not be accomplished.

Factors	Description	Adj OR	P-Value	[95% CI]	
				Lower	Upper
Facility level	Regional Hospital	1			
	Community Hospital	3.44	0.029	1.13	10.49
Sex	Male	1			
	Female	1.97	0.080	0.92	4.25
Age	Per 1 year increase	1.02	0.320	0.98	1.08
ART Duration	Per 1 year increase	1.06	<0.001	1.03	1.09
Type of ARTs	NNRTIs-base	1			
	PIs-base	0.30	0.041	0.09	0.95
OI History	Yes	1			
(1 year)	No	0.46	0.232	0.13	1.64
Travel distance	Per 1 Km increase	1.00	0.318	0.99	1.01
Service time	Per 1 min increase	0.99	0.318	0.99	1.00

Participant point of view

-Demographics (sex, age)
-Duration of receiving ARTs
-Type of ARTs
-History of OI in the previous year
-Distance of travelling
-Service time
-Socio-economics
-Disease status

Provider point of view
-Facility level (Hospital)

Economic/Finance
-Co-payment
-Voluntary component

Health outcome - CD4 level

Next Step

From our study, we recommend increasing competency of health service personnel who could be trained and able to administer ART for PLWA rather than doctors. Satellite or extended or mobile clinics could be founded as an alternative ART service in community hospital or a department store.