

# Concept of Continuous Quality Improvement (CQI) for CoC

National Center for HIV/AIDS,  
Dermatology and STD

Research Unit, Data Management Unit, AIDS Care Unit



# What is CQI?

- **C = Continuous**
- **Q= Quality**
- **I= Improvement**

**Continuous Quality Improvement**

# What is CoC?

- **C = Continuum**
- **o= of**
- **C= Care**

**Continuum of Care**

# Continuum of Care (CoC)

- Implement in 2003;
- Until now the coverage of CoC extends to almost nation-wide; the estimation is about 90% AIDS patients already received ART;
- What is the quality services provided to patients?
- HIV CQI would play important role in improving the quality services of HIV care

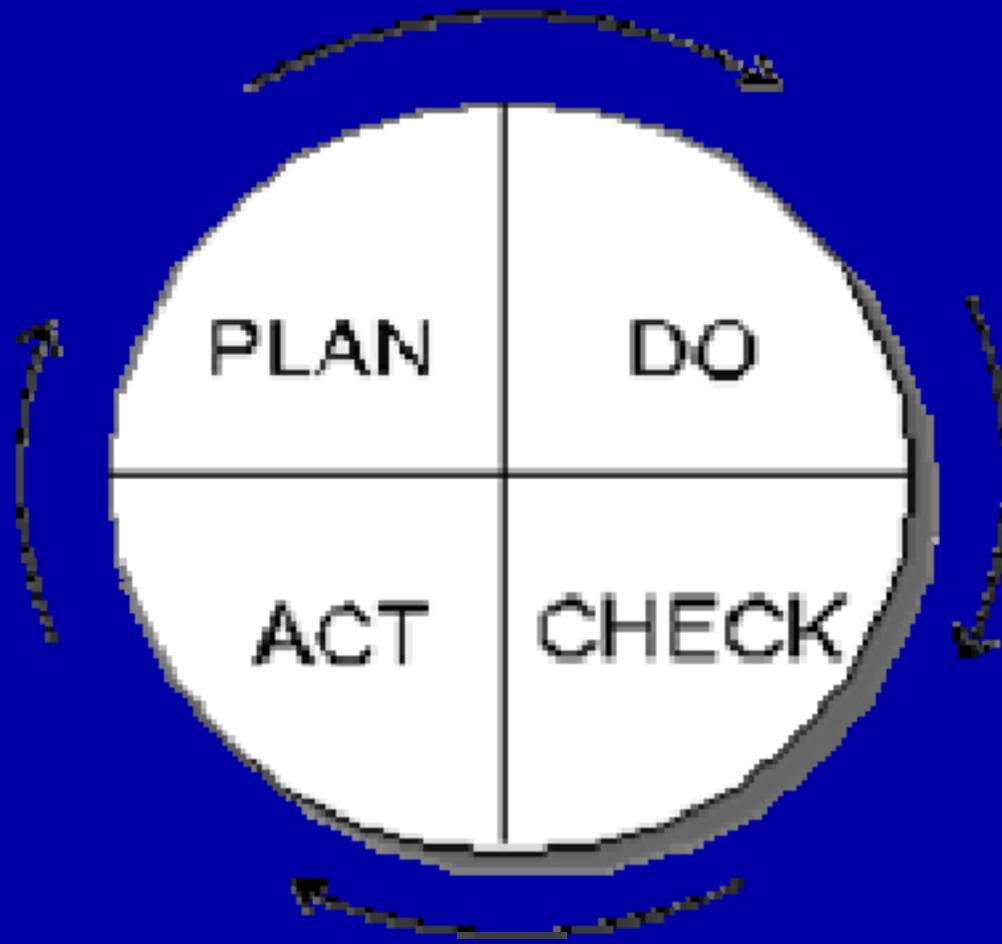
- In 2006 NCHADS data management unit has designed a standard electronic database that allows for individual patient data entry at OI/ART sites.
- In January 2008, 15 OI/ART sites are equipped with the electronic database and record individual patient information.
- This quarterly report provides information on the number of OI and ART patients lost to follow, transferred out and died.
- the quality of service is not checked regularly and data are not used by ART site team (clinician, data management, nurses, ART site .)

# Concept and Objective

- Deming and his colleague, Shewhart, promoted the **PDCA** cycle – mean that

Plan, Do, Check and Act.

# *The PDCA Cycle*



# Overall objective

- To improve the quality of care and treatment services provided to PLHA in Cambodia

## Specific objectives

- To create a culture of continuous quality improvement among CoC team
- To improve communication between health care providers , data management team, community support teams and other related organizations in the CoC

# The mortality indicators

- Percentage of patients under ART who died
- Percentage of patients under ART who were lost to follow-up
- Percentage of patients under OI who died or were lost to follow-up

# Quality of service indicators

- Percentage of patients on ART who kept all appointments in the last quarter (post-ART)
- Percentage of patients with CD4<250 or WHO stage4 who start ART within 60 days (pre-ART)
- Percentage of patients with CD4 counts less than 200 and 100 receiving prophylaxis with CXT and fluconazole respectively
- TB screening: Percentage of patients newly registered at the OI/ART site who were screened for TB (pre-ART)
- Percentage of patients on ART who are still on first line regimens after 12 or 24 months (post-ART)

# Case-finding and prevention indicators

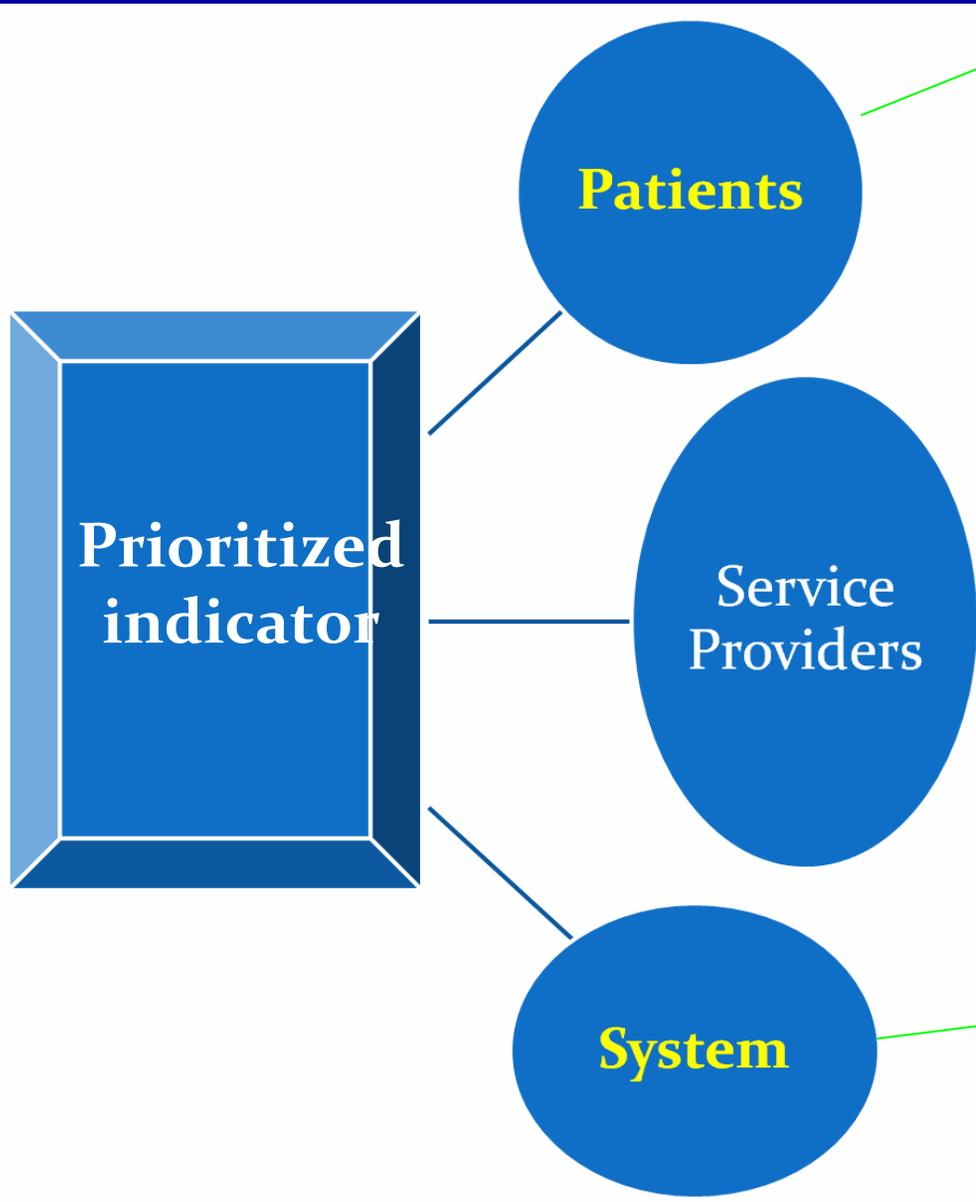
- Percentage of new OI patients with an initial CD4 count of  $>250$  (pre-OI)
- Percentage of new TB patients who receive HIV testing and counseling (TB)
- Percentage of ANC1 patients who receive HIV testing and counseling (PMTCT)
- Percentage of known HIV+ pregnant women who receive prophylaxis and follow-up (pre-OI)

**Problem Prioritization, Root  
Causes Analysis and  
Corrective action**

# Prioritization criteria

- **Importance**
- **Urgency**
- **Feasibility**

# Root Causes Analyses



- What are the cause?
- .....?
- .....?

- Causes?
- .....?
- .....?

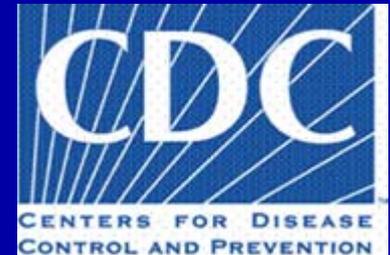
- What are the causes?
- .....?
- .....?

THANK YOU

# Launching of Continuous Quality Improvement for HIV/AIDS Care in Pailin RH, Pailin Province

September 23, 2010

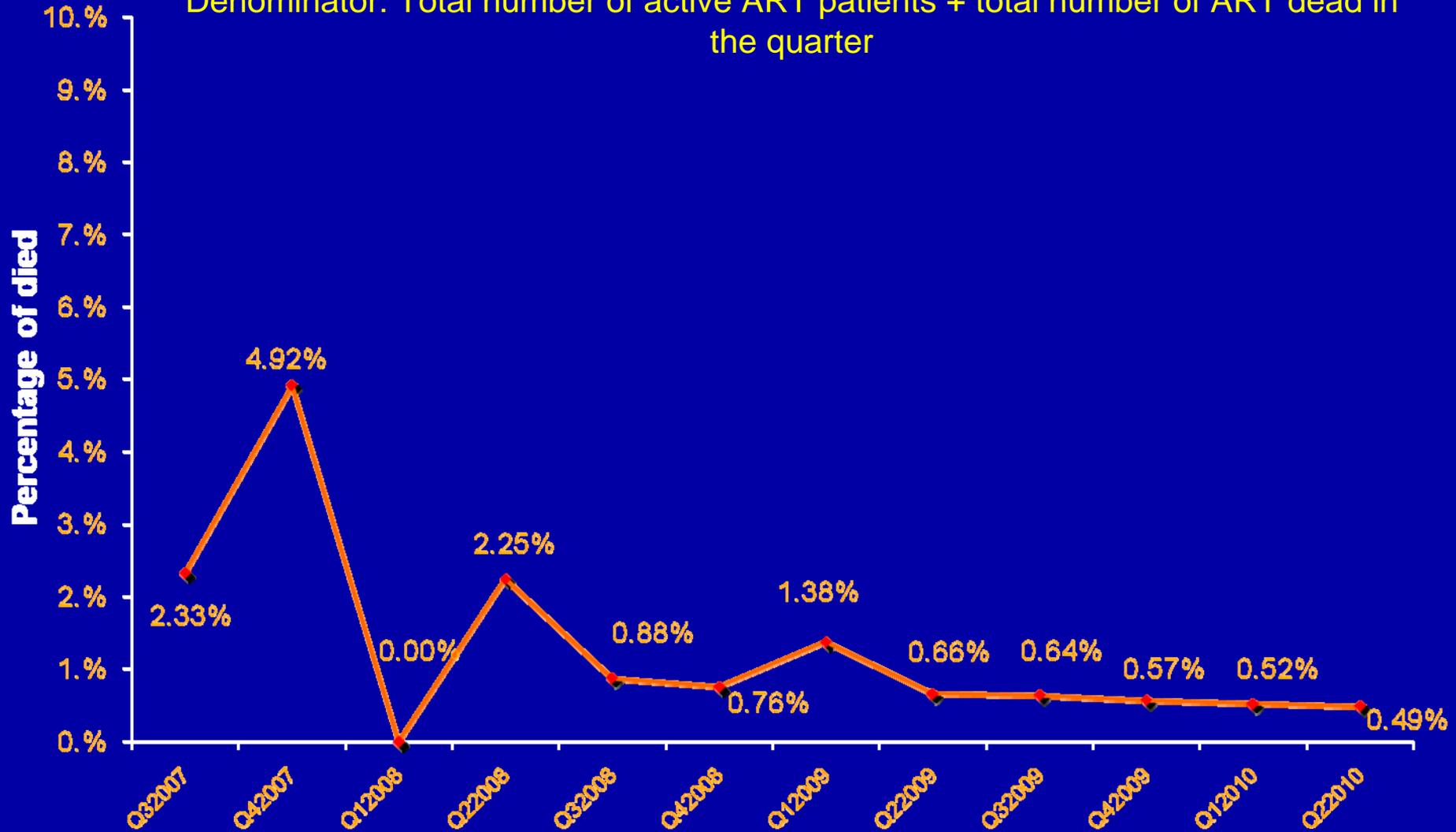
National Center for HIV/AIDS,  
Dermatology and STDs



# FINDINGS

# Percentage of adult patients under ART who died by quarter in Pailin RH

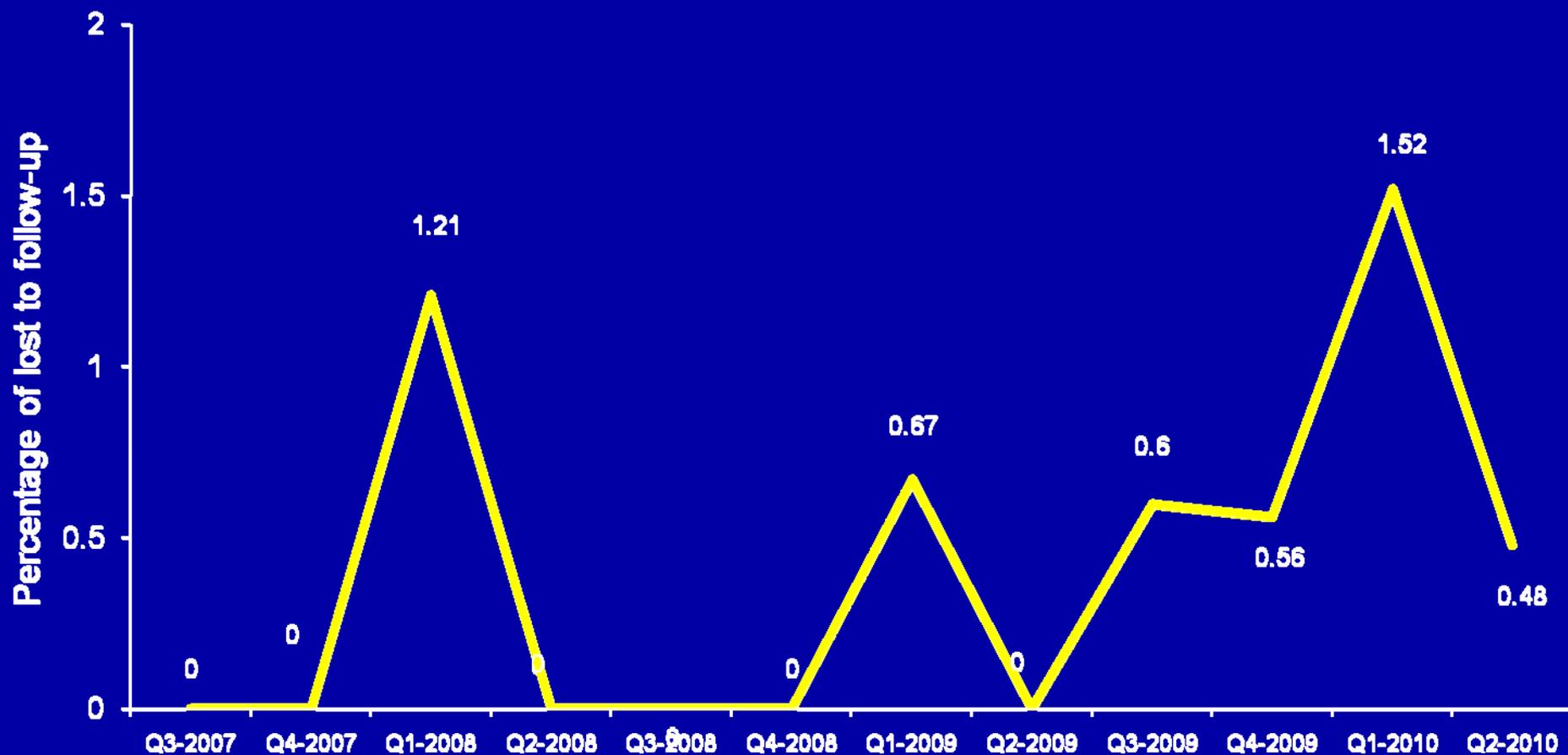
Numerator: Total number of patients known to have died during the quarter.  
Denominator: Total number of active ART patients + total number of ART dead in the quarter



## Percentage of adult patients under ART who were lost to follow-up by quarter in Pailin RH

Numerator: Total number of patients who were lost to follow up during the quarter. "Lost to follow up" is defined in the National ART Guidelines as lost for at least 3 months and not classified as dead, transferred out, or stopped ART.

Denominator: Total number of active patients on ART at the end of the quarter + total number of patients who lost to follow up



## Percentage of adult patients under OI who were lost to follow-up by quarter in Pailin RH

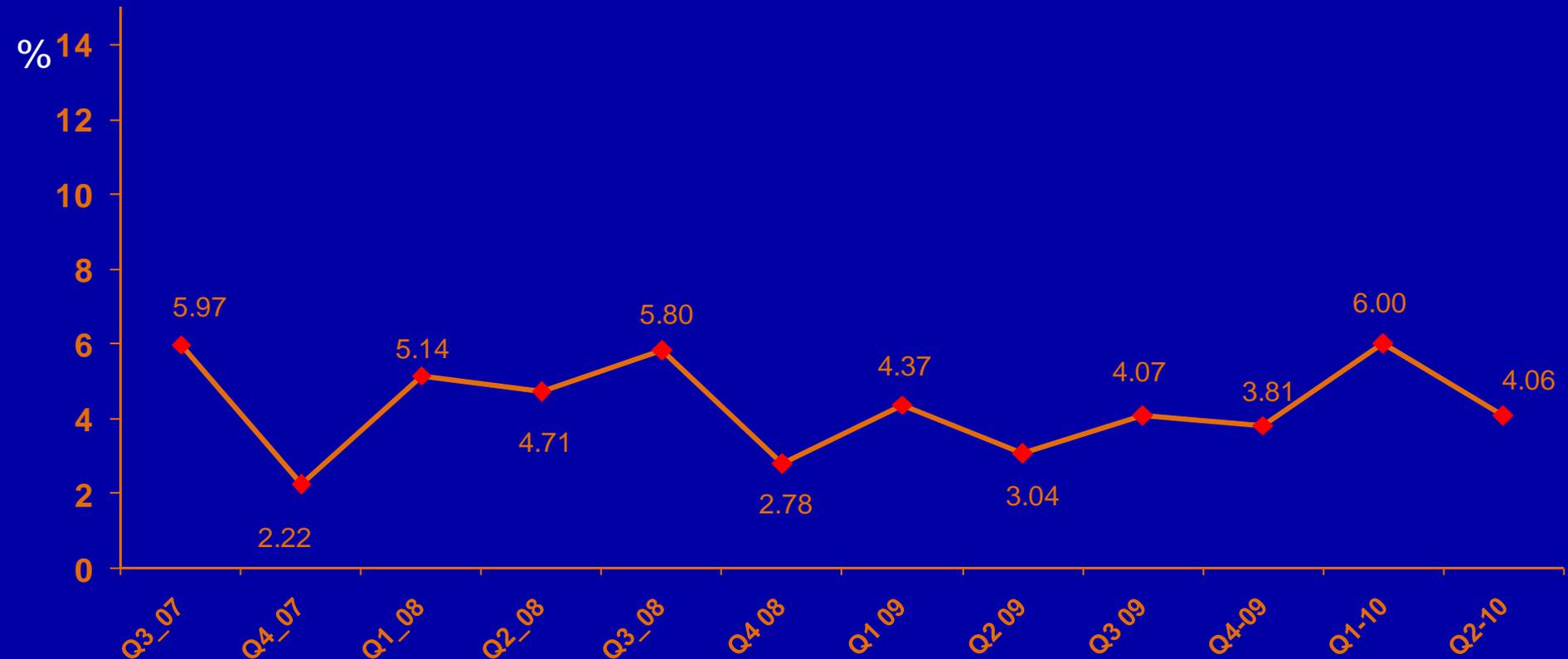
Numerator: Total number of OI patients who were lost (whether or not they are known to have died) during the quarter.

Denominator: Total number of active patients on OI at the end of the selected quarter + total number of OI patients who were lost during the quarter



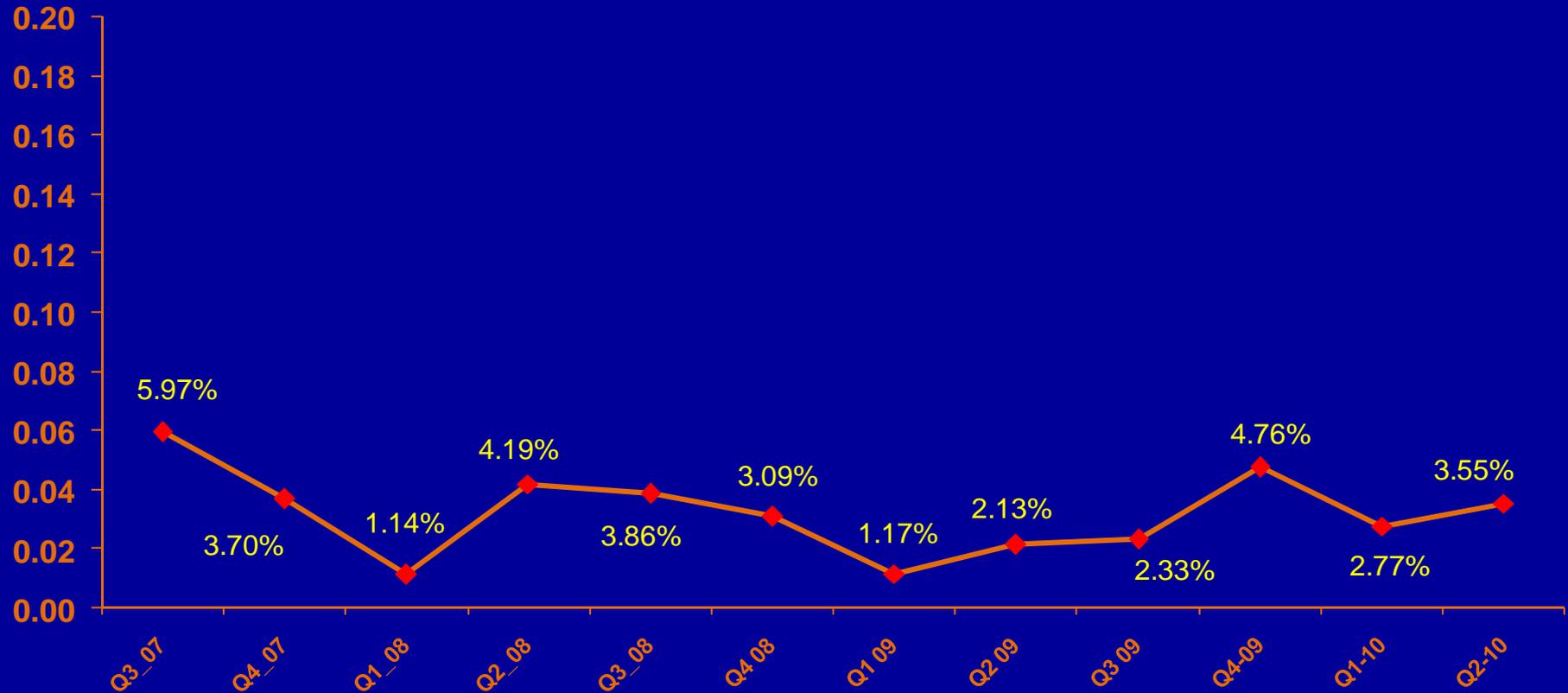
# Percentage of late visit beyond buffer by quarter in Pailin RH

- Numerator = Number of Late Visits Beyond Buffer in the Quarter
- Denominator = Number of Total Visits in the Quarter



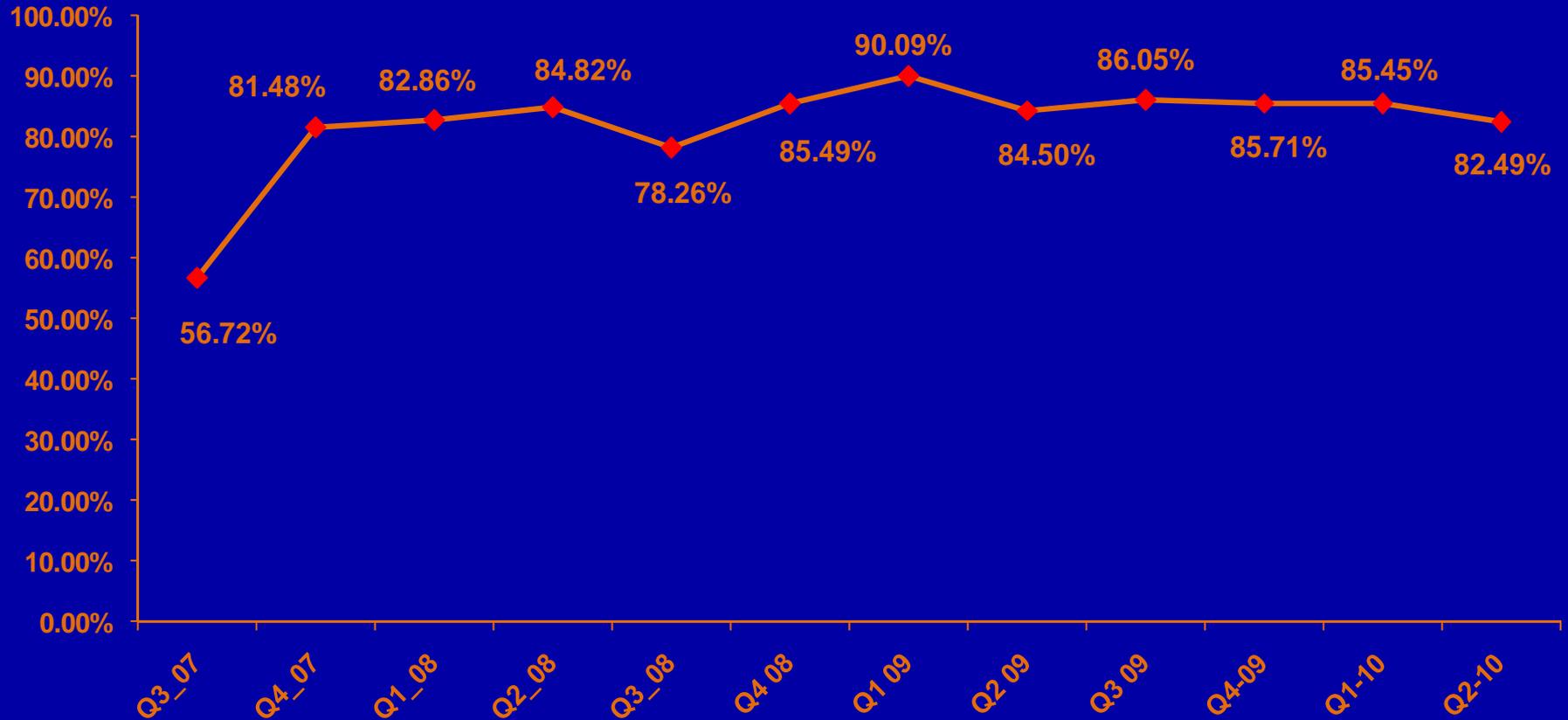
# Percentage of late visit within buffer by quarter in Pailin RH

- Numerator = Number of Late Visits in Buffer in the Quarter
- Denominator = Number of Total Visits in the Quarter



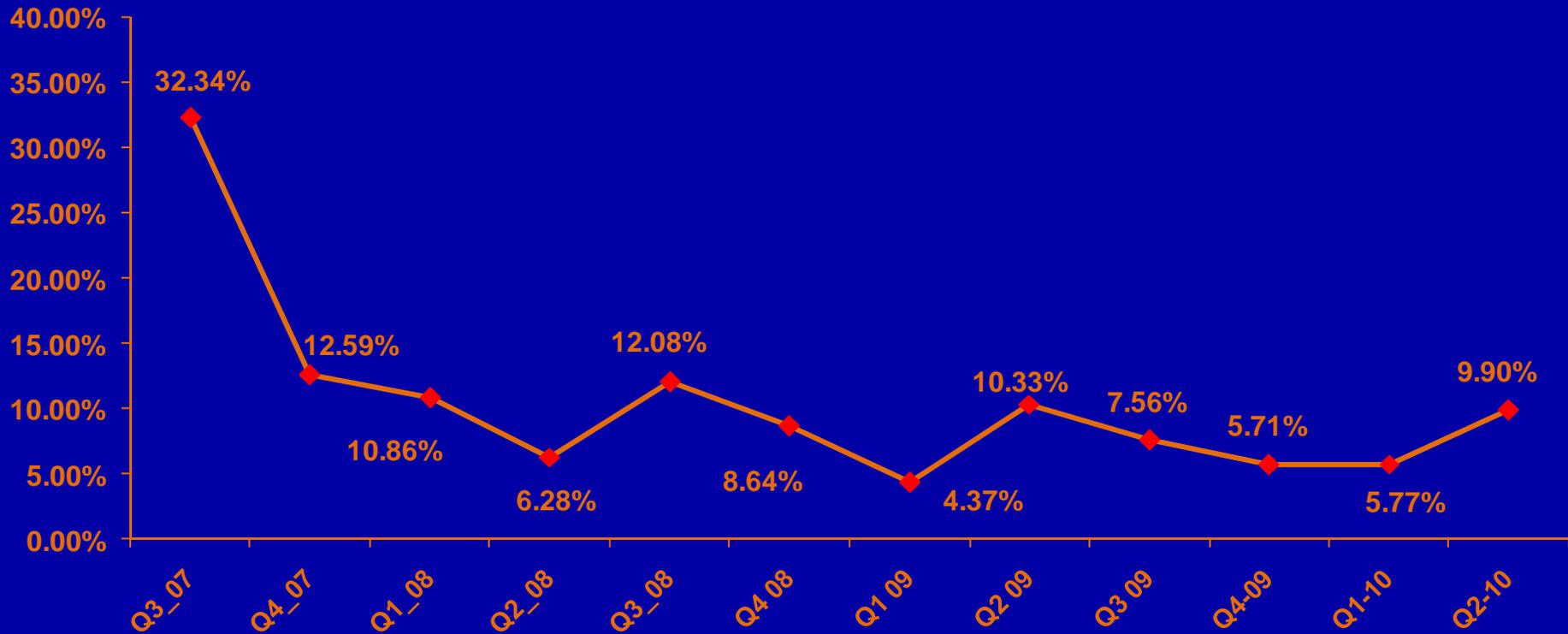
# Percentage of visit exactly on schedule by quarter in Pailin RH

- Numerator = Number of Visits Exactly in the Quarter
- Denominator = Number of Total Visits in the Quarter

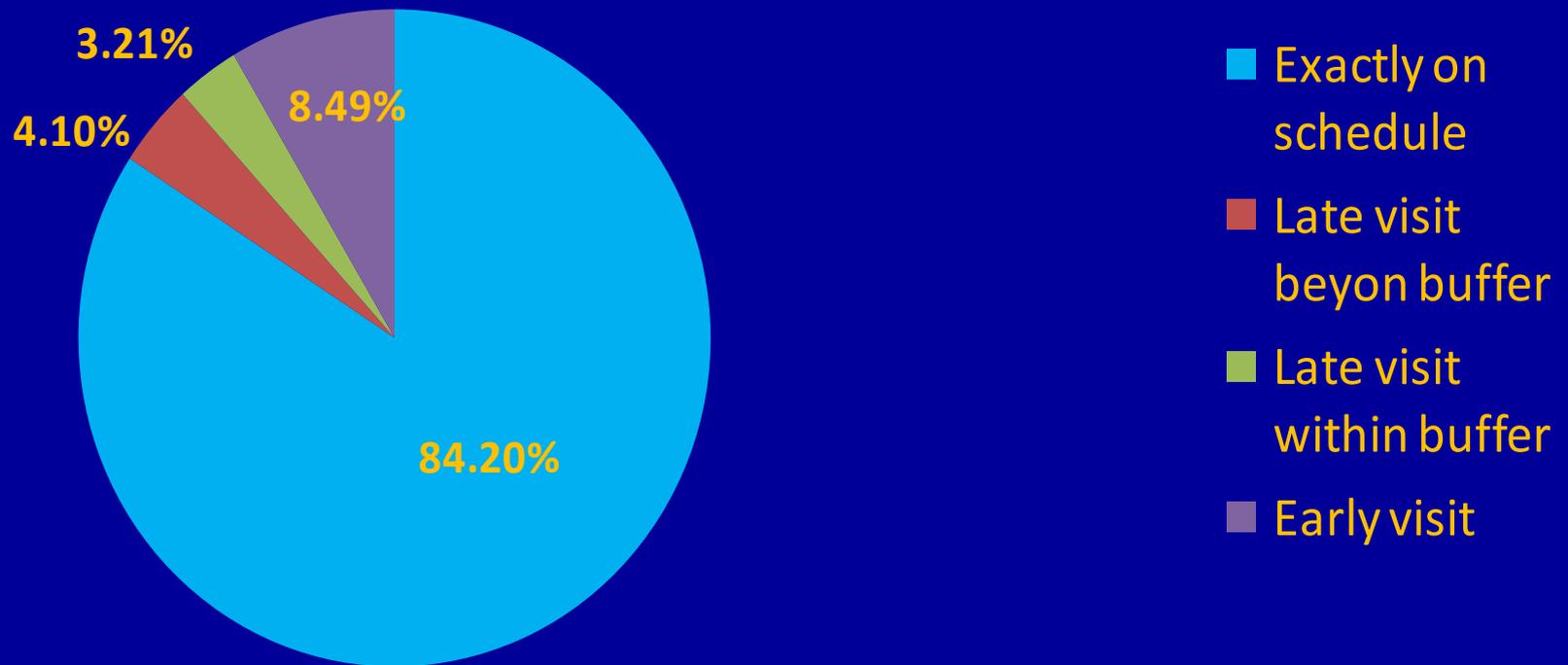


# Percentage of early visit by quarter in Pailin RH

- Numerator = Number of Early Visits in the Quarter
- Denominator = Number of Total Visits in the Quarter



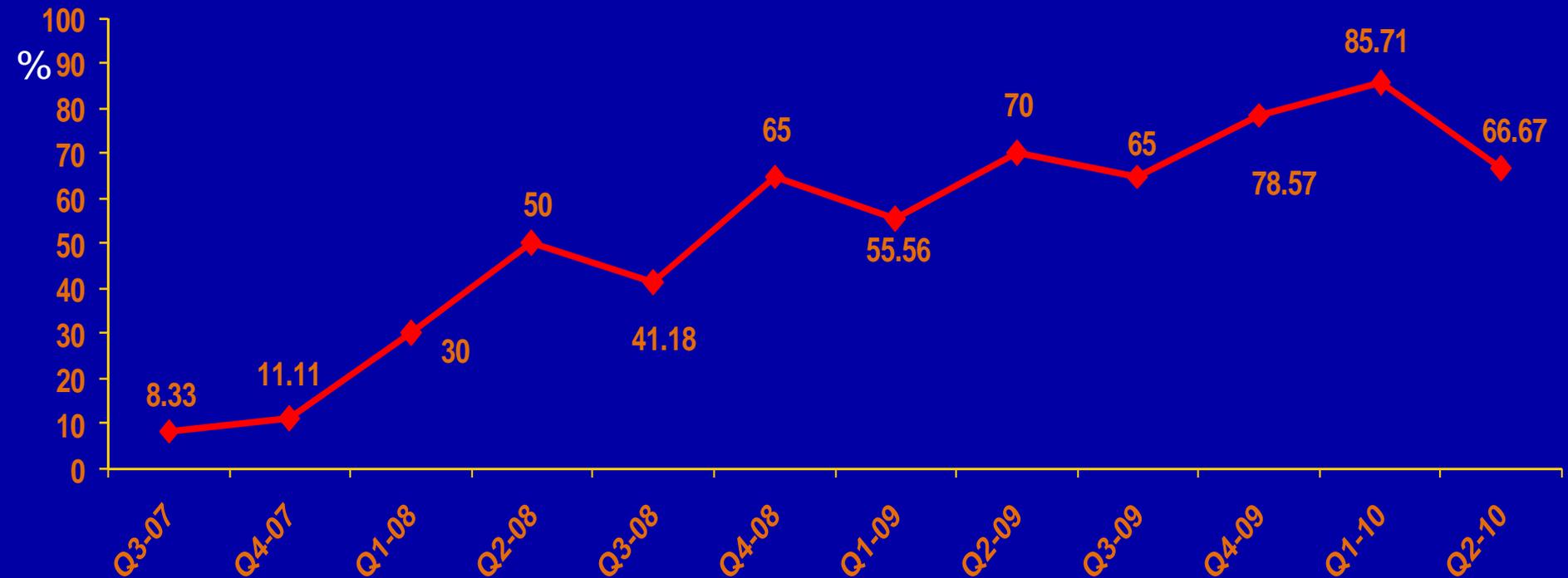
# Percentage of visit status for ART in Pailin RH



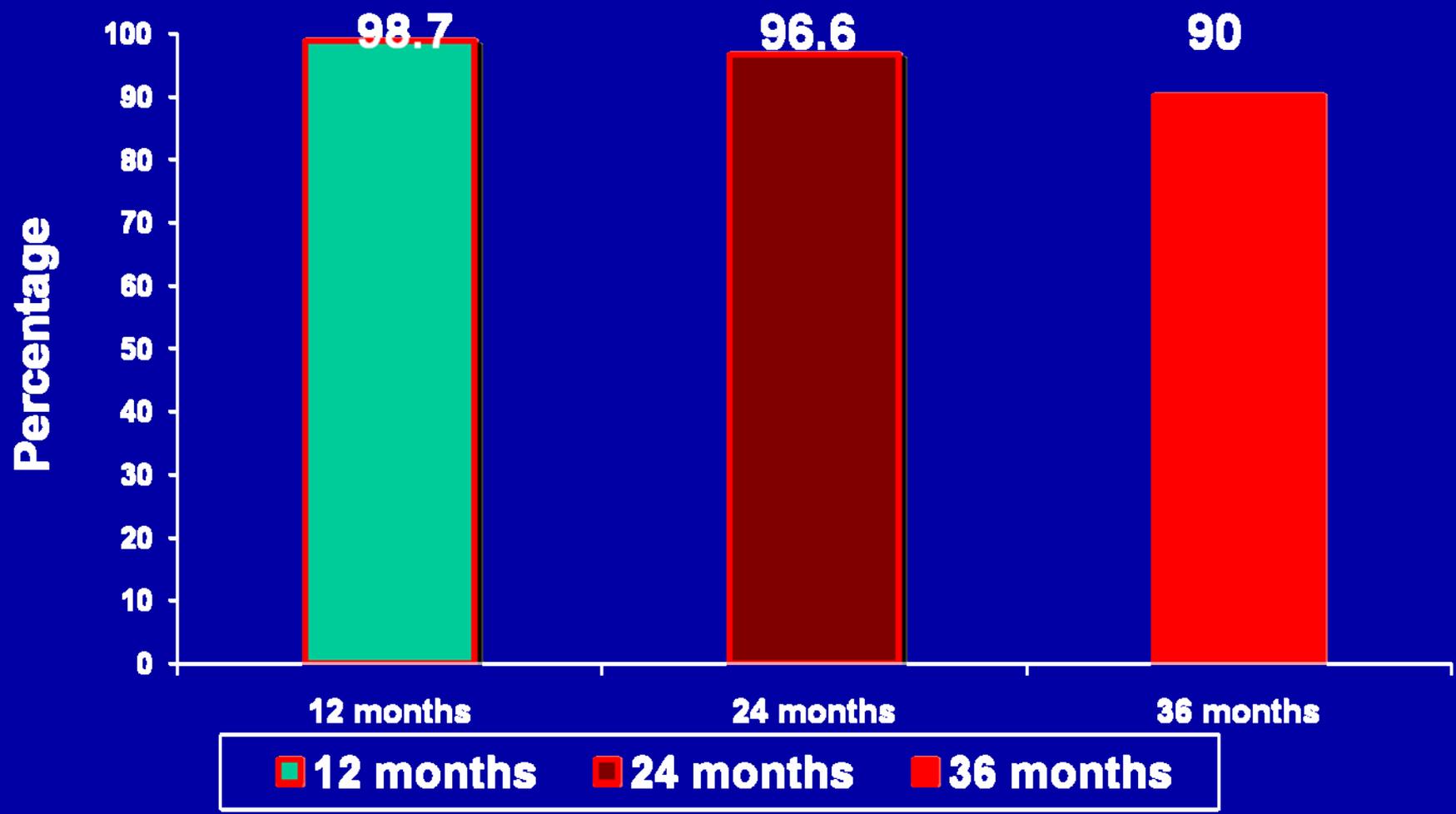
# Percentage of patients whose CD4<350 (CD4<250 before April 2010) or WHO stage 4 who start ART within 60 days after eligible in Pailin RH

Numerator: Number OI patients with a CD4 count of <250/350 or WHO stage 4 within the first month of the reporting quarter or the two months previous who start ART by 60 days

Denominator: Total number of OI patients with a CD4 count of <250/350 or WHO stage 4 within the first month of the reporting quarter or the two months previous.



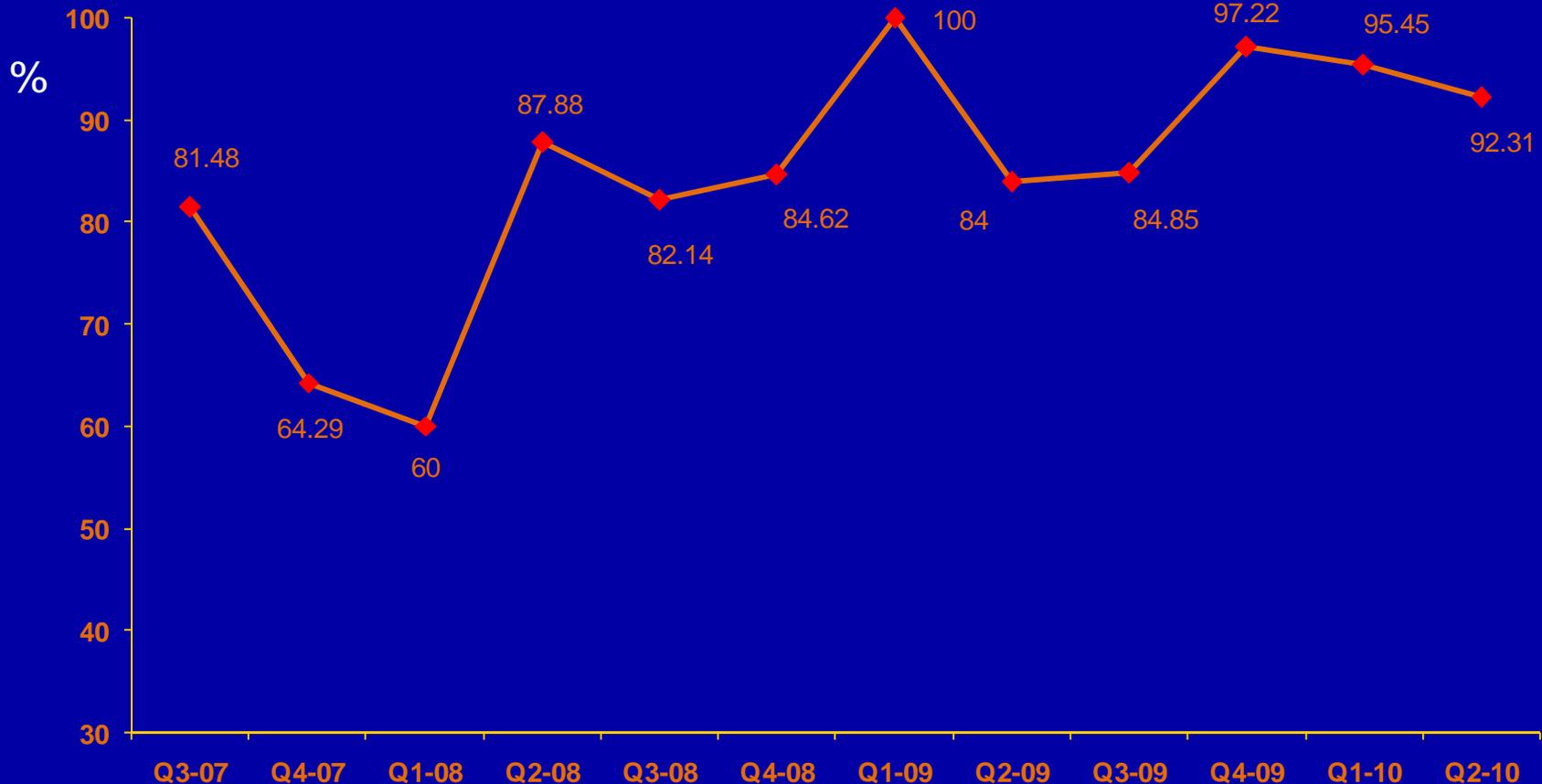
# Percentage of patients on ART who are still on first line regimens after 12 or 24 months or 36 months



# Percentage of Patients whose CD4<200 and received Cotrimoxazole by quarter in Pailin RH

Numerator: Number of OI/ART patients with most recent CD4 levels of <200 and who receive a new or ongoing prescription for cotrimoxazole at the appointment following the date of the CD4 test (within the quarter)

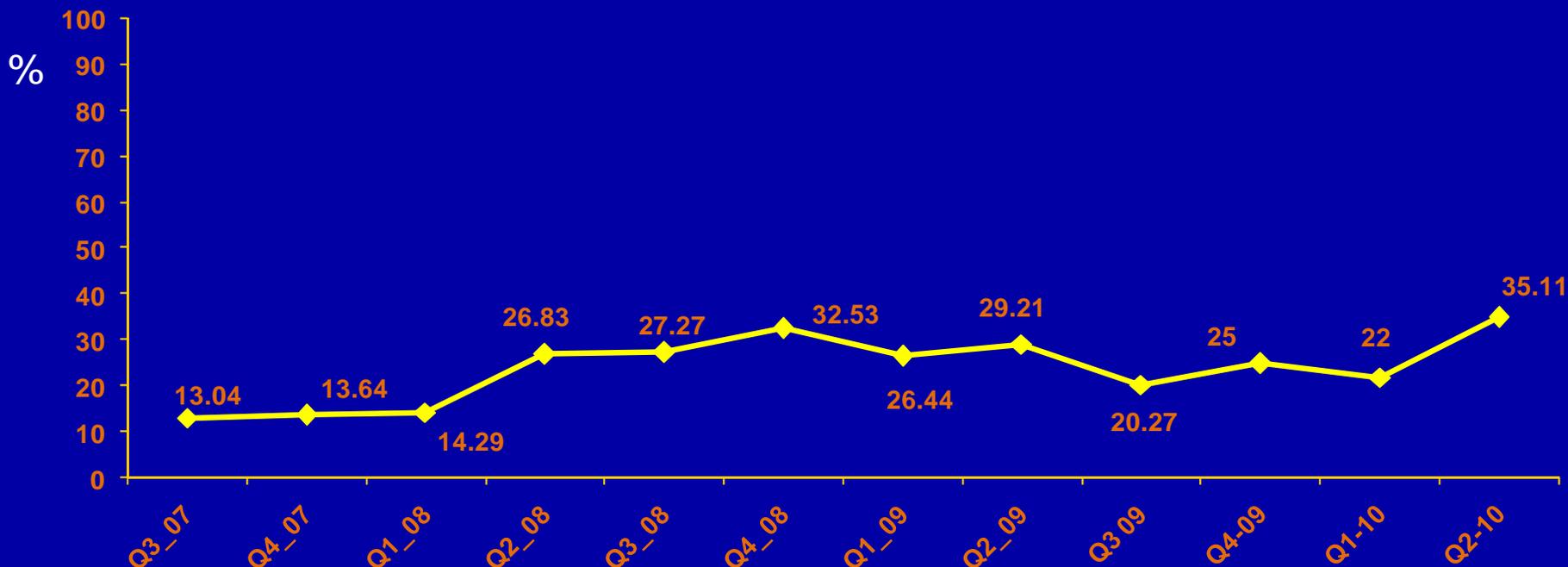
Denominator: All OI/ART patients with CD4 cell counts < 200 (within quarter)



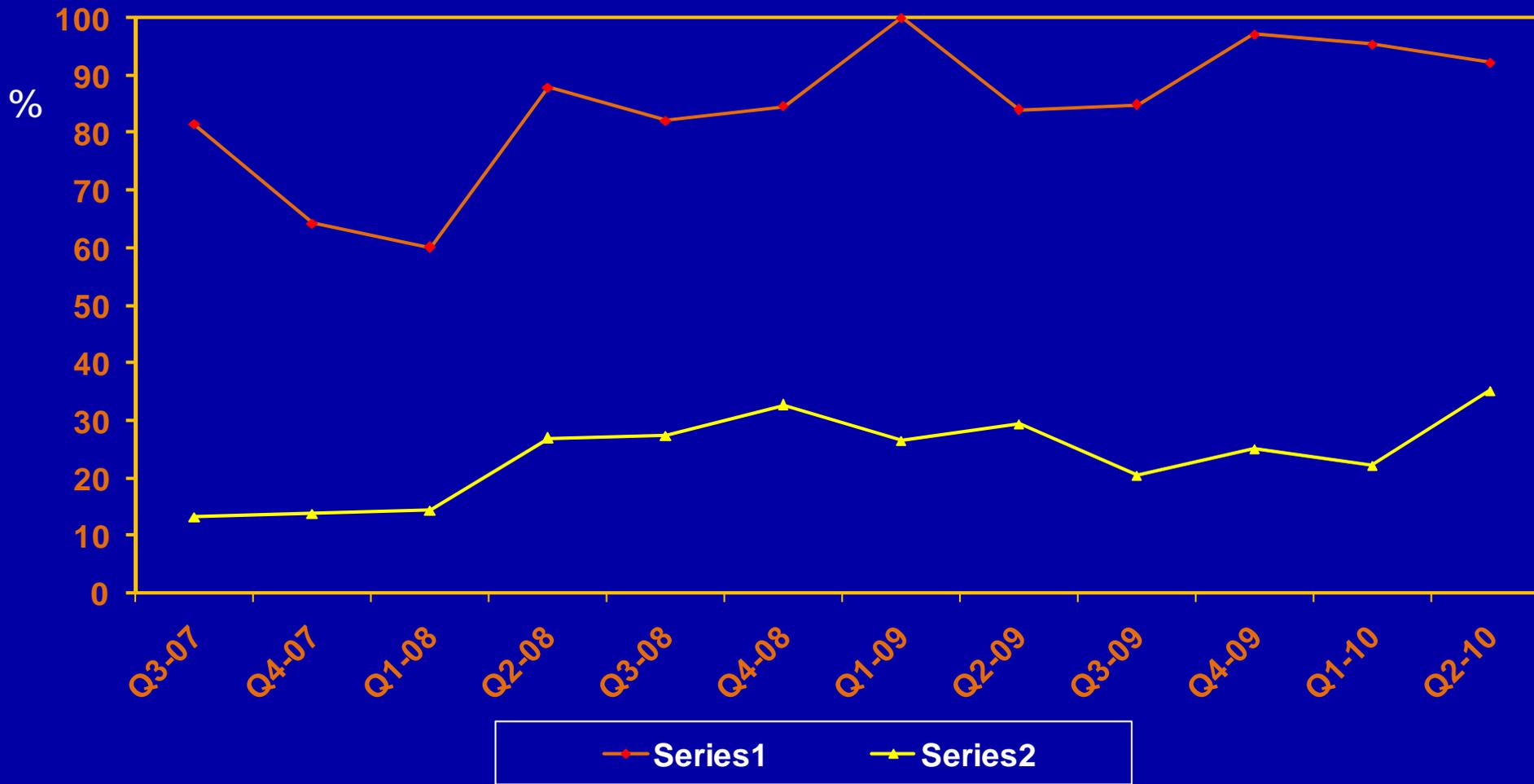
# Percentage of Patients whose CD4 $\geq$ 200 and received Cotrimoxazole by quarter Pailin RH

Numerator: Number of OI/ART patients with most recent CD4 levels of  $\geq$ 200 and who receive a new or ongoing prescription for cotrimoxazole at the appointment following the date of the CD4 test (within the quarter)

Denominator: All OI/ART patients with CD4 cell counts  $\geq$  200 (within quarter)



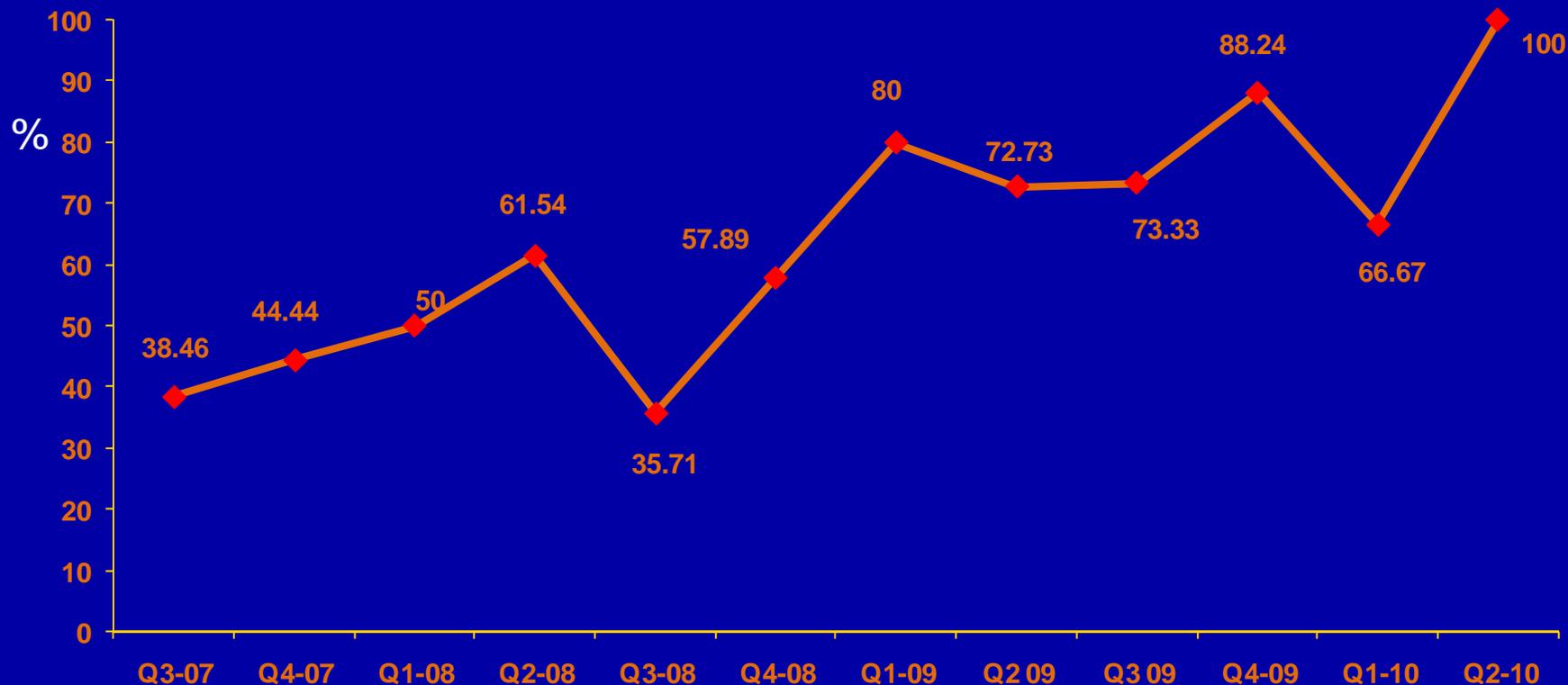
# Percentage of Patients whose CD4 $\geq$ 200 and CD4 $<$ 200 received Cotrimoxazole by quarter in Pailin RH



# Percentage of Patients whose CD4<100 and received Fluconazole by quarter in Pailin RH

Numerator: Number of OI/ART patients with most recent CD4 levels of <100 and who receive a new or ongoing prescription for fluconazole at the appointment following the date of the CD4 test. (within the quarter)

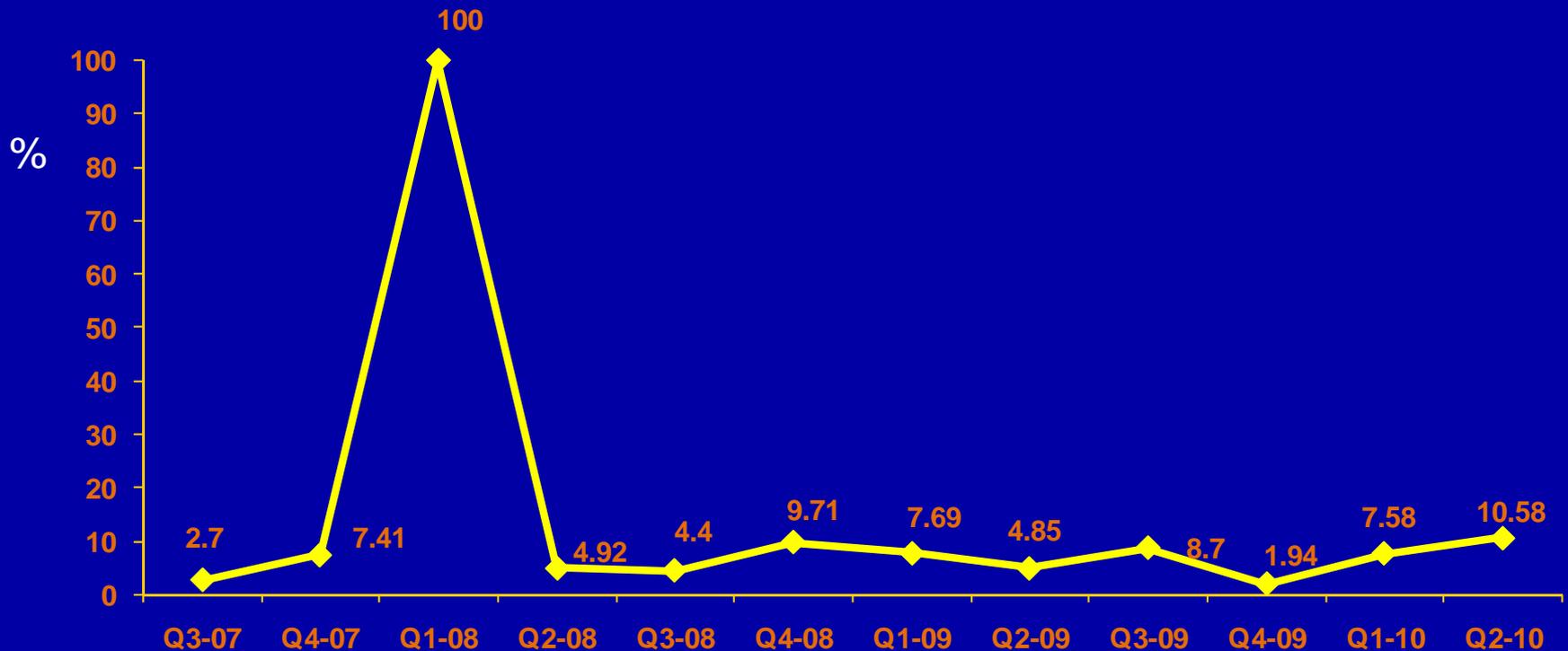
Denominator: All OI/ART patients with CD4 cell counts < 100 (within quarter)



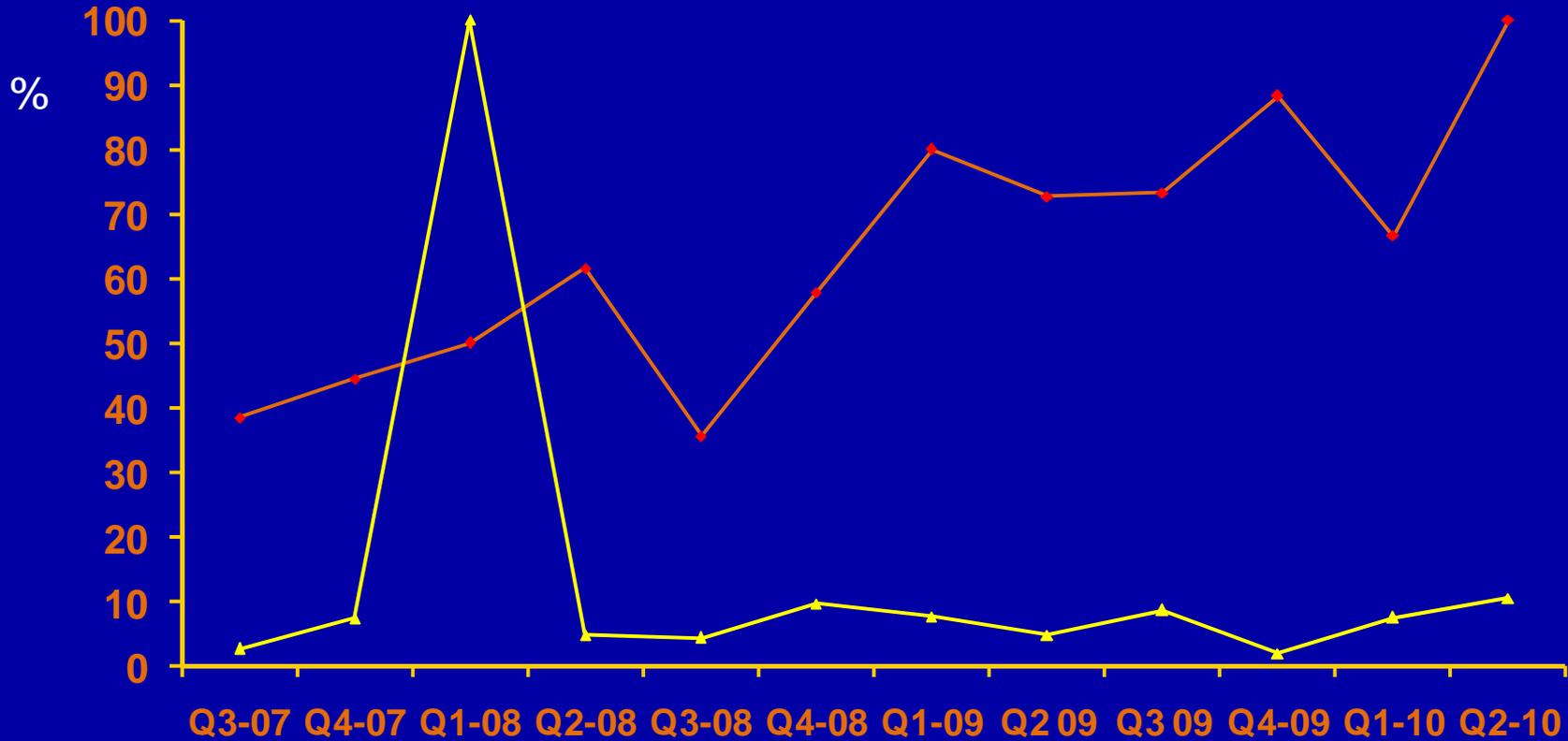
# Percentage of Patients whose CD4 $\geq$ 100 and received Fluconazole by quarter in Pailin RH

Numerator: Number of OI/ART patients with most recent CD4 levels of  $\geq$ 100 and who receive a new or ongoing prescription for Fluconazole at the appointment following the date of the CD4 test (within the quarter)

Denominator: All OI/ART patients with CD4 cell counts  $\geq$  100 (within quarter)

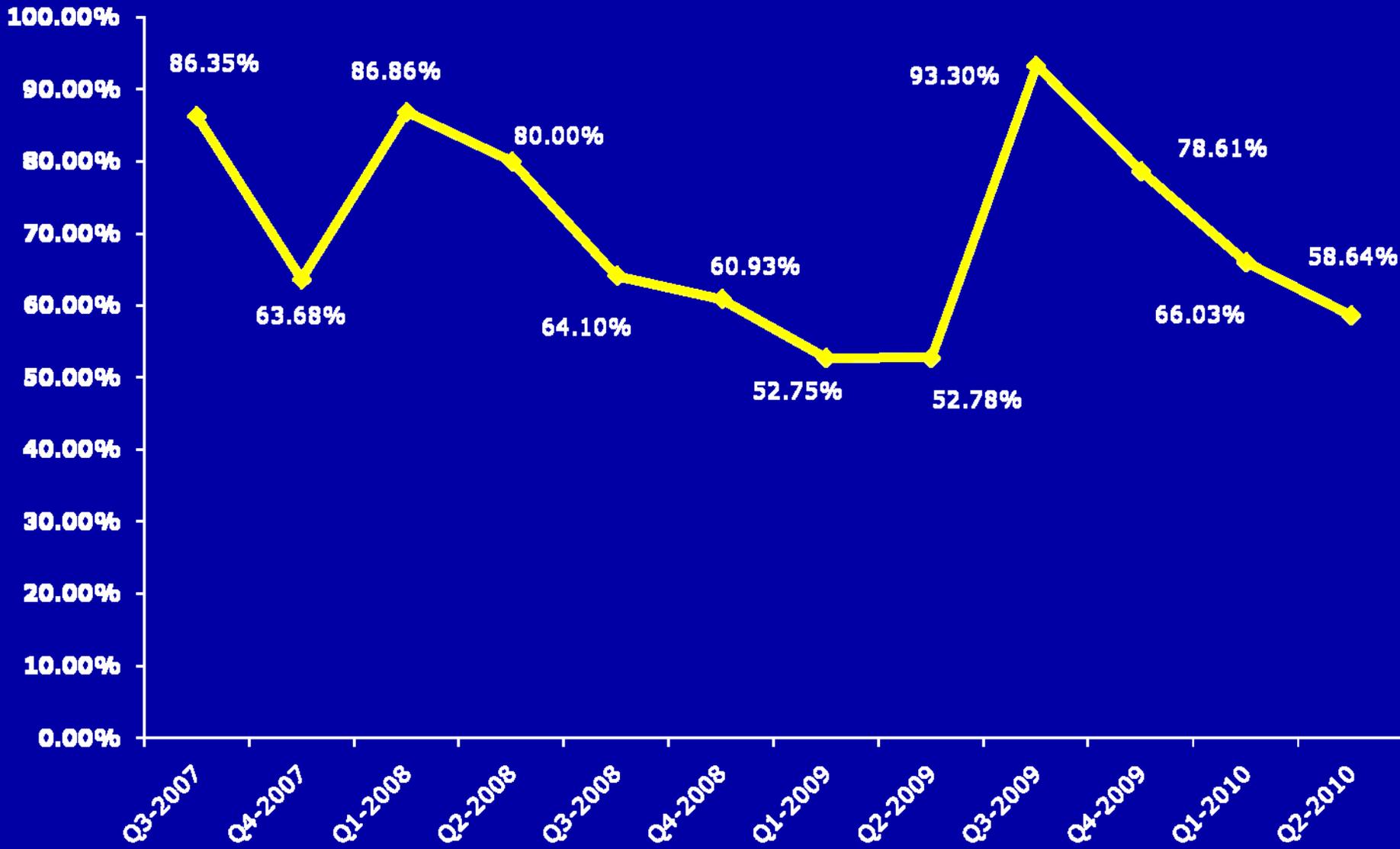


# Percentage of Patients whose CD4 $\geq$ 100 and CD4 $<$ 100 received Fluconazole by quarter in Pailin RH

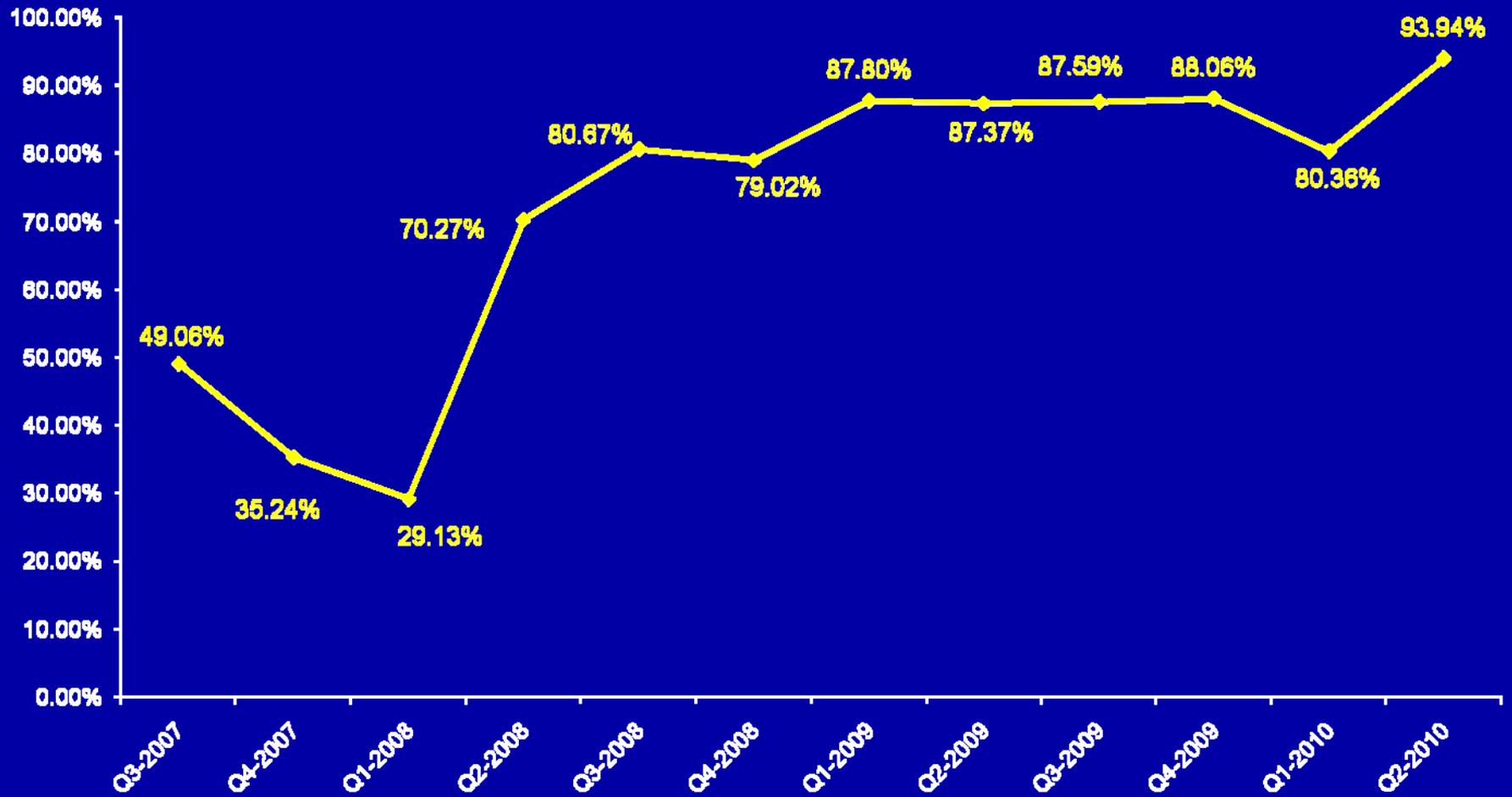


—●— Fluco  $<$  100    —▲— Fluco  $\geq$  100

**Percentage of HIV Testing among ANC 1 at Pailin RH by Quarter**  
(Nominator = number of ANC1 post tested counseled; Denominator = total number of ANC first visit)

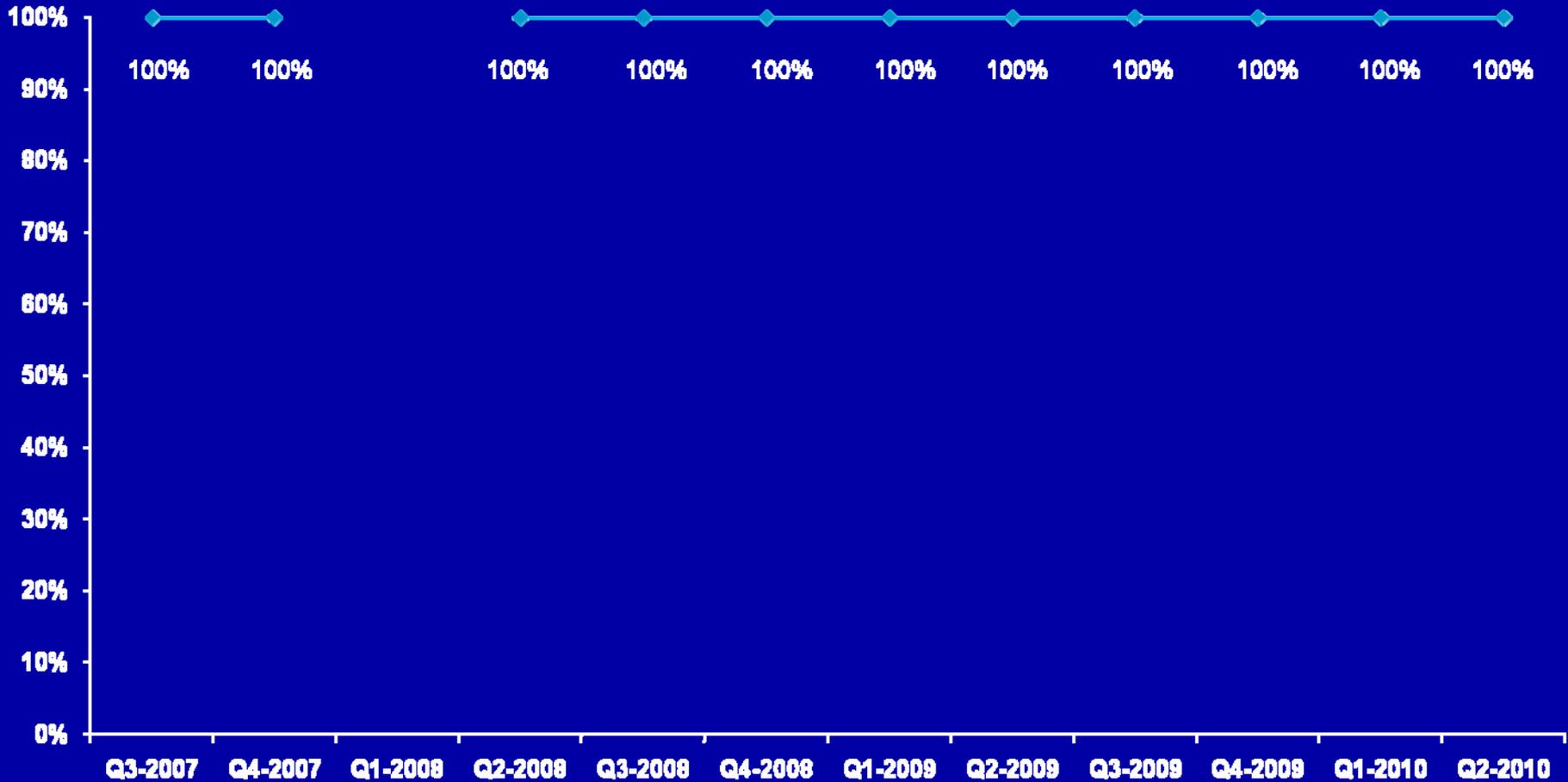


Percentage of delivered women with **known HIV status** at **Pailin RH** by Quarter  
(Numerator = Total Number of delivered Women with **known HIV status** ;  
Denominator = Total Number of delivered Women)

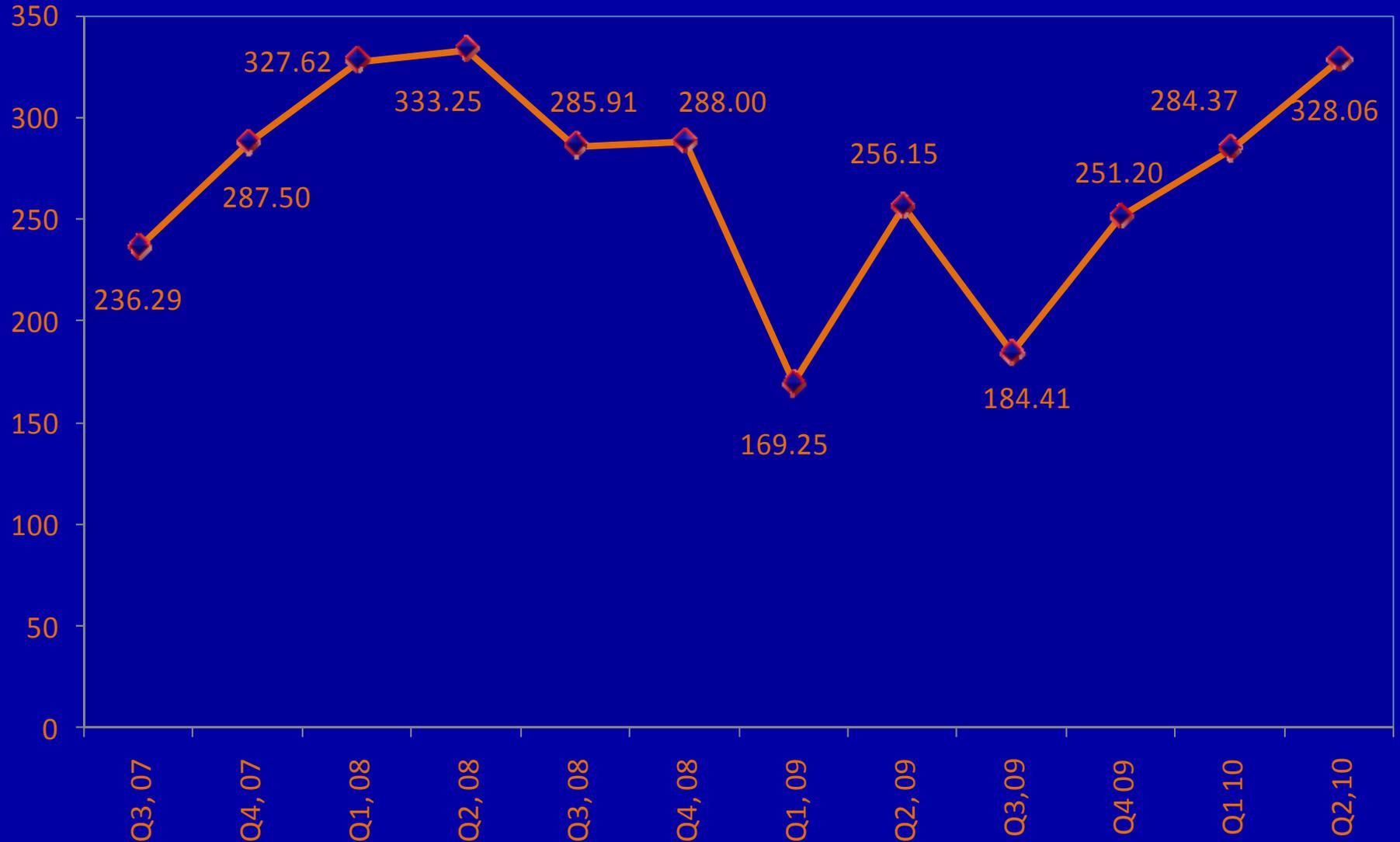


# Percentage of HIV + Women who received any prophylaxis or HAART during Labor at Pailin RH by Quarter

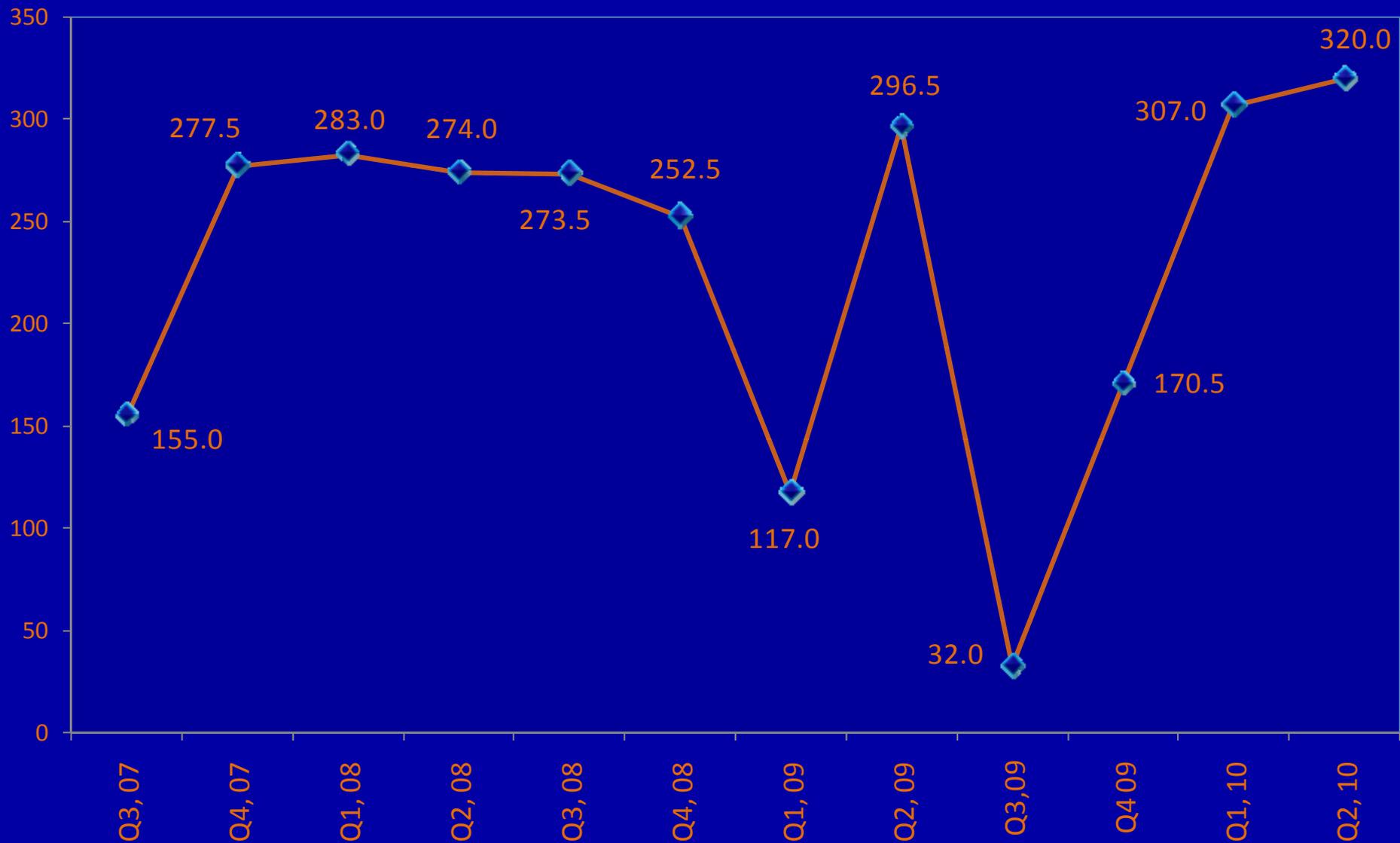
(Numerator = Total Number of delivered Women who received any prophylaxis or HAART during Labor;  
Denominator = Total Number of Women who Delivered with known HIV status + )



# Mean of CD4 at initial visit by quarter in Pailin RH



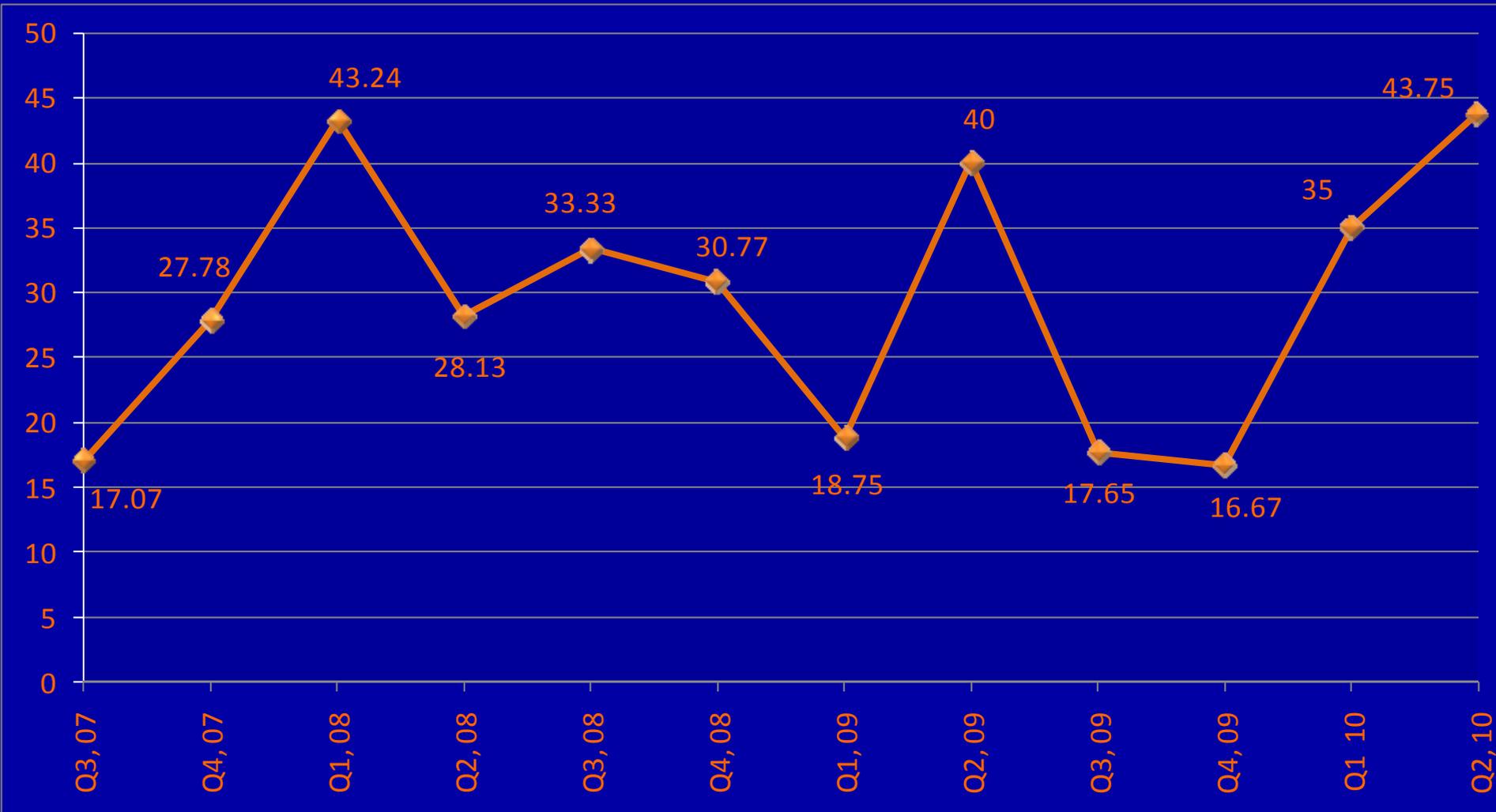
# Median of CD4 at initial visit by quarter in Pailin RH



# Percentage of patients who has CD4>350 at initial visit by quarter in Pailin RH

Numerator: Total number of initial visit patients with CD4> 350 by quarter

Denominator: Total number of initial visit patients by quarter



# Percentage of patients who has CD4>250/350 at initial visit by quarter in Pailin RH

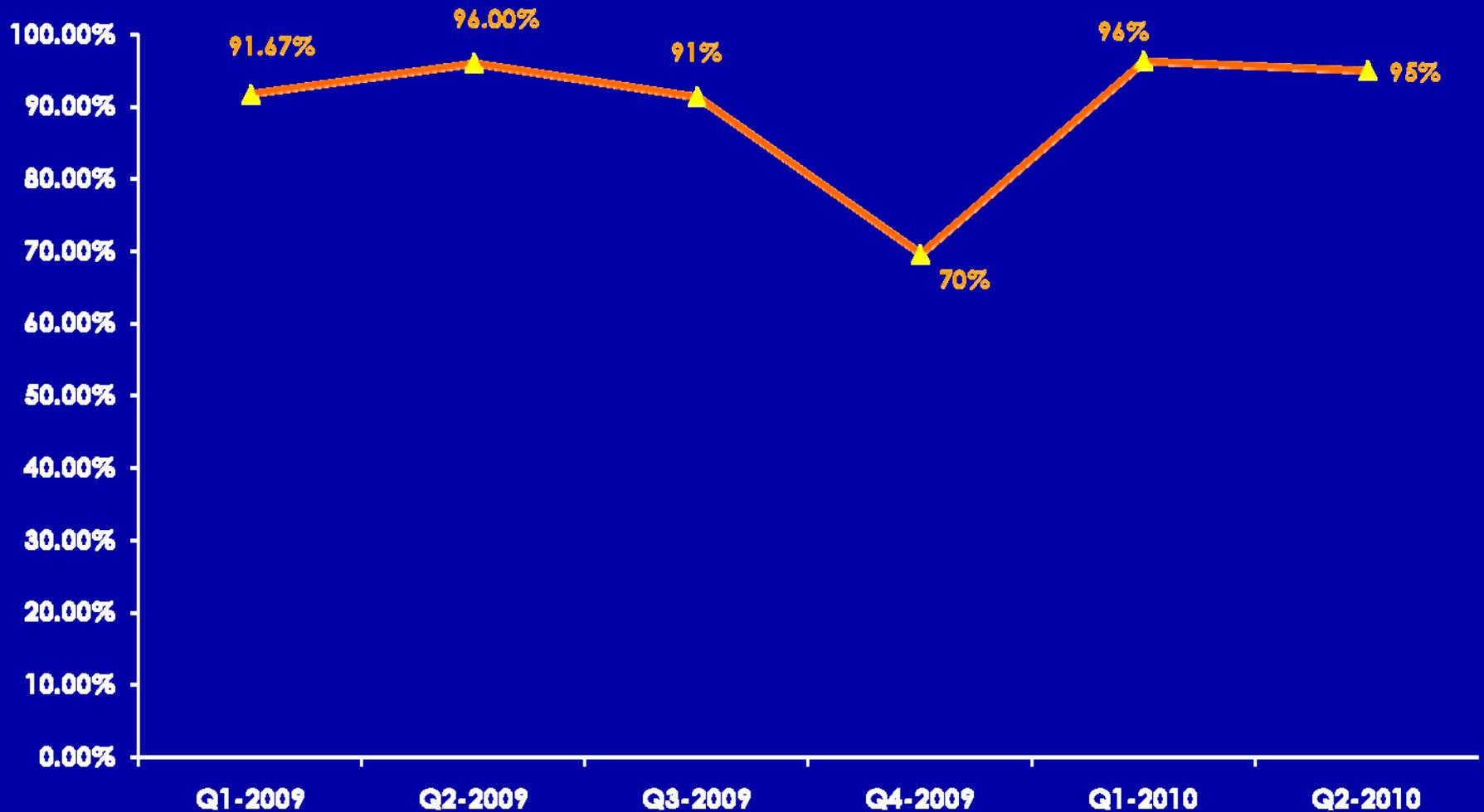
Numerator: Total number of initial visit patients with CD4> 250/350 by quarter  
Denominator: Total number of initial visit patients by quarter



# Percentage of new OI Patients in Provincial RH who were screened for TB by quarter

Numerator: Total number of new OI patient screened for TB status by quarter

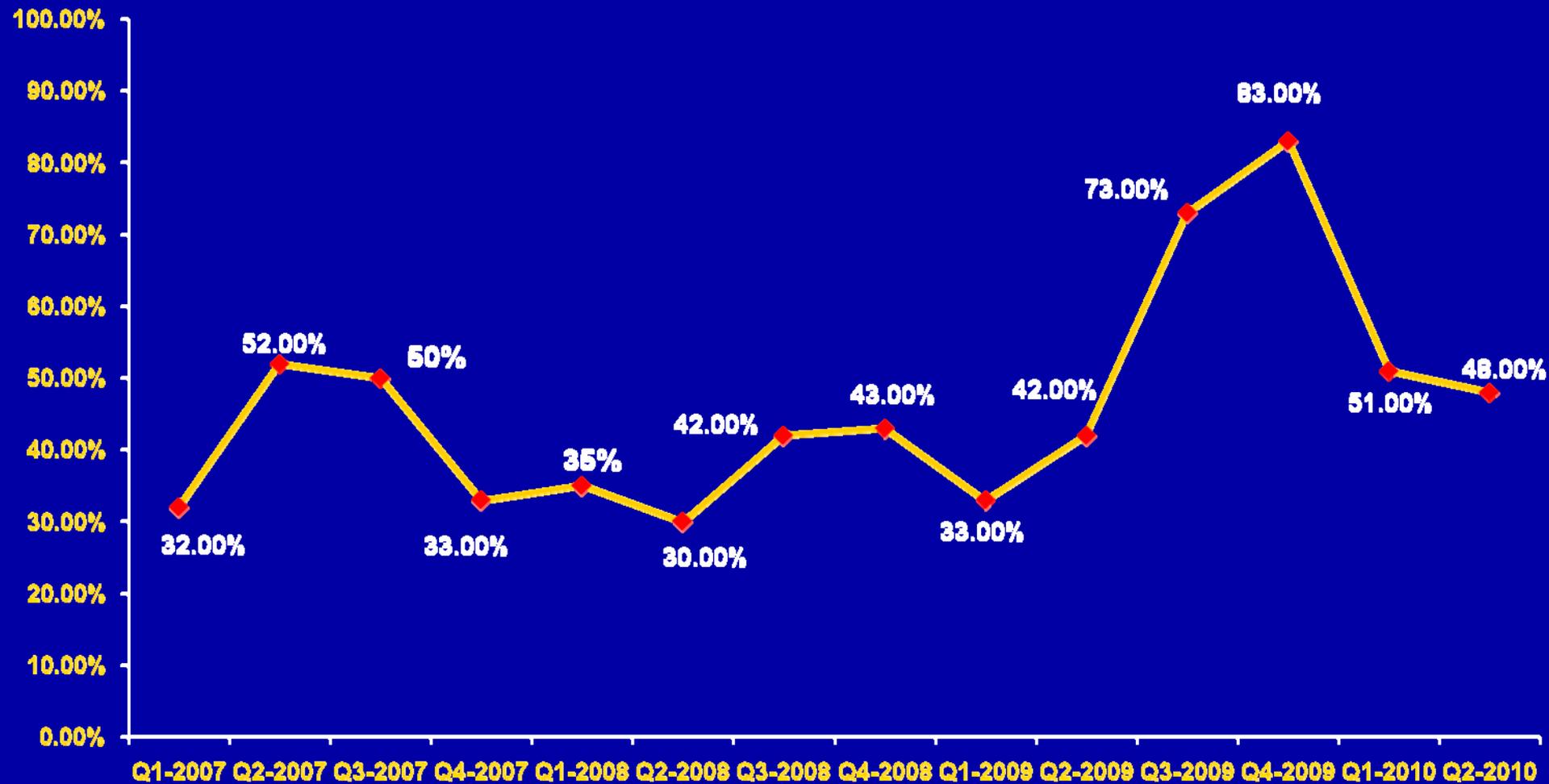
Denominator: Total number of new patient registered at OI/ART site by quarter



# Percentage of new TB Patients in Pailin RH who were screened for HIV by quarter

Numerator: Total number of new TB patient screened for HIV status at VCCT by quarter

Denominator: Total number of new TB patient registered at TB ward by quarter



វិភាគបញ្ហា ចំណាត់ថ្នាក់បញ្ហា ដំណោះស្រាយ

និង កែតម្រូវដៃនការសកម្មភាព

កម្មវិធីពង្រឹងគុណភាពបន្ត លើសេវាថែទាំបន្ត

មន្ទីរពេទ្យបង្អែកទេត្តប៉ែលីស

២៣ កញ្ញា ឆ្នាំ ២០១០

បង្ហាញដោយ លោក សាវណ្ណ យុទ្ធវិ

ប្រធានក្រុម OI/ART នៃមន្ទីរពេទ្យបង្អែកទេត្តប៉ែលីស

# មាតិកា

- កំណត់បញ្ហាជាអាទិភាព
- វិភាគបញ្ហា
- ដោះស្រាយបញ្ហា
- កែតម្រូវផែនការសកម្មភាព

# កំណត់បញ្ជាក់ជាអាទិភាព

- សំខាន់
- បន្ទាន់
- អាចធ្វើទៅបាន

## ការស្រាវជ្រាវ indicators (3/13)

- ភាគរយនៃអ្នកជំងឺមកពិនិត្យយឺត ហើយអស់ថ្នាំបំប្លែង (លើស៣ថ្ងៃ)
  - សំខាន់: ២២/២២
  - បន្ទាន់: ២២/២២ និង អាចធ្វើបាន: ២២/២២
- ភាគរយនៃអ្នកនៃអ្នកជំងឺដែលមាន CD4 តូចជាង២៥០/៣៥០ ឬ WHO stage 4 ដែលបានផ្តល់ថ្នាំ ប្រឆាំងមេរោគអេដស៍ (ក្នុងរយៈពេល ៦០ថ្ងៃ)
  - សំខាន់: ២១/ ២២
  - បន្ទាន់: ២០/២២ និង អាចធ្វើបាន: ២១/២២
- ភាគរយនៃអ្នកនៃអ្នកជំងឺ OI ថ្មីមក Screen TB
  - សំខាន់: ២២/ ២២
  - បន្ទាន់: ២១/ ២២ និង អាចធ្វើបាន: ២១/២២

វិទ្យាសាស្ត្រ

ភាគរយនៃអ្នកជំងឺមក  
ទទួលថ្នាំយឺតដោយ  
ហួសថ្នាំបំរុងចំនួន៣ថ្ងៃ

អ្នកជំងឺ

- ចំណាកស្រុក (ទៅរកស៊ីនៅថៃ មកពីស្រុកផ្សេង) ផ្លូវពិបាក ផ្ទះនៅឆ្ងាយ អ្នកជំងឺមិនចេះអក្សរ
- អ្នកជំងឺមិនយល់ពីស្ថានភាពជំងឺខ្លួនឯង / ផលប្រយោជន៍នៃការមកពិនិត្យជំងឺឡើងទាត់
- ប្តី/ប្រពន្ធយកថ្នាំបោះចោល អ្នកជំងឺក្រីក្របាត់សៀវភៅណាត់ អ្នកជំងឺមិនចូលក្រុម HBC
- ខ្វះថវិកាធ្វើដំណើរ អ្នកជំងឺបាត់ថ្នាំខ្លាចពេទ្យស្តីអោយ ផ្លាស់ប្តូរទីលំនៅ ផ្លាស់លប្តូរទីតាំងធ្វើការ
- អ្នកជំងឺមានការភ័យខ្លាចនៅពេលហួសពេលណាត់

ប្រព័ន្ធ

- ខ្វះមធ្យោបាយសំរាប់ទំនាក់ទំនងជាមួយនឹងអ្នកជំងឺ
- ពេលខ្លះមានការខ្វះខាតថ្នាំ ដោយសារប្រព័ន្ធបញ្ជូនមានការយឺតយ៉ាវ

អ្នកផ្តល់សេវា

- គ្រូពេទ្យណាត់ថ្ងៃច្រើន
- ប្រាក់លើទឹកចិត្តតិចតួច និង យឺតយ៉ាវ
- អ្នកផ្តល់ប្រឹក្សាពន្យល់អ្នកជំងឺនៅមានការខ្វះខាត / នៅមានកំរិត
- HBC ខ្វះថវិកាសំរាប់បញ្ជូនជំងឺ

ភាគរយនៃអ្នកជំងឺ  
ដែលសមស្របនឹងទទួល  
ARV ក្នុងរយៈពេល  
៦០ថ្ងៃ

អ្នកជំងឺ

- អ្នកជំងឺនៅឆ្ងាយ ខ្វះថវិកាធ្វើដំណើរ អ្នកជំងឺមិនចង់ទទួលថ្នាំ នៅពេលមានសុខភាពល្អ
- អ្នកជំងឺខ្វះការយល់ដឹងពីជំងឺអេដស៍ អ្នកជំងឺមានការភ្លេចច្រើន
- អ្នកជំងឺមិនទាន់ចង់ទទួលថ្នាំ
- អ្នកជំងឺខ្លះមិនព្រមមករៀនអំពីការ ទទួលថ្នាំ
- អ្នកជំងឺអត់ចេះអក្សរ មានបញ្ហាផ្លូវចិត្ត អ្នកជំងឺមិនគោរពការណាត់
- មានជំងឺឱកាសនិយមច្រើន ( របេង...) ផ្ទះឆ្ងាយ គ្មានថវិកាគ្រប់គ្រាន់សំរាប់ធ្វើដំណើរ

ប្រព័ន្ធ

- IT មិនទាន់មានបញ្ជាញរបាយការណ៍អំពី CD4<350

អ្នកផ្តល់សេវា

- HBC និង អ្នកផ្តល់ប្រឹក្សា នៅមានកម្រិតក្នុងការផ្តល់ប្រឹក្សា
- HBC ខ្វះថវិកាសំរាប់បញ្ជូនជំងឺ
- ខ្វះបុគ្គលិក ផ្នែកទទួលជំងឺ ១រូបនិង មន្ទីរពិសោធន៍ ១រូប

ភាគរយនៃអ្នកជំងឺ  
ឱកាសនិយមថ្មី បញ្ជូនទៅ  
ធ្វើ TB Screening

អ្នកជំងឺ

-អ្នកជំងឺមិនព្រមទៅមើលកំហាក នៅពេលត្រូវពេទ្យបញ្ជូនទៅមណ្ឌលសុខភាព

ប្រព័ន្ធ

កាលពីមុនមិនទាន់មានប្រព័ន្ធ IPT (3Is), ម៉ាស៊ីន Rx ចាស់ and បន្ទប់ថតមិនទាន់មាន  
លក្ខណៈស្តង់ដារ

អ្នកផ្តល់សេវា

-អ្នកថត Rx មានការព្រួយបារម្ភរណ៍ចំពោះសុខភាពខ្លួនឯង

သော့: နှစ်သိန်းပေကျော်

បញ្ហះភាគរយនៃអ្នកជំងឺមកទទួលថ្នាំយឺត  
ដោយហួសថ្នាំបំប្រុងចំនួន៣ថ្ងៃ  
ពី៤.០៦% មក ២.០% (ក្នុងរយៈពេល១២ខែ)

អ្នកជំងឺ

- HBC ចេញថ្លៃធ្វើដំណើរបន្ថែមទៀត
- បង្កើនការអប់រំដល់អ្នកជំងឺតាមរយៈ អ្នកផ្តល់ប្រឹក្សា MMM Dr. and HBC

ប្រព័ន្ធ

- ភ្ជាប់ទូរស័ព្ទលើតុ និងផ្តល់ថ្លៃសេវា
- ផ្តល់ថ្នាំអោយបានទៀងទាត់

អ្នកផ្តល់សេវា

- សុំប្រាក់ឧបត្ថម អោយទាន់ពេលវេលា
- ផ្តល់ថវិកាបន្ថែមសំរាប់HBC
- បើកវគ្គបំប៉នបន្ថែមដល់មន្ត្រីផ្តល់ប្រឹក្សា/គ្រូពេទ្យ

ភាគរយនៃអ្នកជំងឺដែលសមស្រប  
នឹងទទួលបាន ARV ក្នុងរយៈពេល ៦០ ថ្ងៃ  
ឡើងពី ៦៦.៦៧% ទៅ ៩០%  
(ក្នុងរយៈពេល ១២ ខែ)

អ្នកជំងឺ

- HBC និងអ្នកផ្តល់ប្រឹក្សា បង្កើនការអប់រំ
- បន្ថែមថវិកាលើ HBC ដើម្បីយកអ្នកជំងឺមកពេទ្យ

ប្រព័ន្ធ

- IT បញ្ចេញលទ្ធផល CD4 < 350 រាល់សប្តាហ៍

អ្នកផ្តល់សេវា

- ផ្តល់ថវិកាបន្ថែមសំរាប់ HBC ក្នុងការបញ្ជូនជំងឺ
- បើកវគ្គបំប៉នបន្ថែមដល់មន្ត្រីផ្តល់ប្រឹក្សា/គ្រូពេទ្យ
- ផ្តល់ថវិការដ្ឋបាលបុគ្គលិកពីររូប

ថែរក្សារភាគរយនៃអ្នកជំងឺឱកាសនិយមថ្មី  
ដែលបាន ចុះឈ្មោះ បញ្ជូនទៅ Screen  
ជំងឺរបេង អោយនៅចន្លោះពី  
៩៥% ទៅ ១០០ %  
(ក្នុងរយៈពេល១២ខែ)

អ្នកជំងឺ

-HBC, MMM, Dr. និង អ្នកផ្តល់ប្រឹក្សា បង្កើនការអប់រំអ្នកជំងឺបន្ថែមទៀត

ប្រព័ន្ធ

- សុំជួសជុលបន្ទប់ថតRx អោយមានលក្ខណៈស្តង់ដា  
-សុំផ្តល់ម៉ាស៊ីនលាងហ្វីល និង ម៉ាស៊ីនថតថ្មីមួយគ្រឿង

អ្នកផ្តល់សេវា

កែលម្អវិធីនិងសកម្មភាព

## Action plan for CQI in Krong Pailin Referral Hospital in Pailin Province

Objective	Main activities	Detail activities	Project Month												Expected/input	\$
			1	2	3	4	5	6	7	8	9	10	11	12		
<b>1. Decrease the percentage of late visit beyond drug buffer from 4.06% to 2.0% at the end of September 2011</b>																
1. Patient education and support																
		MMM and HBC team explain the importance of appointment' s adherence to the patient	x	x	x	x	x	x	x	x	x	x	x	x		
		HBC team provide transportation support to patient when necessary needed	x	x	x	x	x	x	x	x	x	x	x	x		
		Counselor stress the importance of appointment' s adherence to the patient	x	x	x	x	x	x	x	x	x	x	x	x		
2. Improve staffing condition																
		Retreat for staff (OI/ART team) motivation														\$4,000.00
3. Request for more equipment/materials																
		Monthly fee for telephone	x	x	x	x	x	x	x	x	x	x	x	x	20\$*12m	\$240.00
		New phone line connection	x													\$30.00
4. Improve communication																
5. Training																
		Refresh training for counselor and Doctor														
															<b>Sub- total</b>	<b>\$4,270.00</b>

Objective	Main activities	Detail activities	Project Month												Resources	Source
					3	4	5	6	7	8	9	10	11	12		
<b>2. Increase the percentage of patient with CD4 less than 350 or WHO stage 4 who start ART within 60 days from 66.67% to 90.0% at the end of September 2011</b>																
1. Patient education and support																
		MMM and HBC team explain the importance of appointment' s adherence to the patient	x	x	x	x	x	x	x	x	x	x	x	x		
		HBC team provide transportation support to patient when necessary needed	x	x	x	x	x	x	x	x	x	x	x	x	5p*5\$12m*2t	\$600.00
		Counselor stress the importance of appointment' s adherence to the patient	x	x	x	x	x	x	x	x	x	x	x	x		
2. Improve staffing condition																
		provide incentive for one nurse	x	x	x	x	x	x	x	x	x	x	x	x	80\$*12m	\$960.00
		Provide incentive for one Lab.	x	x	x	x	x	x	x	x	x	x	x	x	80\$*12m	\$960.00
3. Improve communication																
5. Training																
		Refresh training for counselor and Doctor														

**Sub total \$2,520.00**

Objective	Main activities	Detail activities	Project Month												Resources	Source
					3	4	5	6	7	8	9	10	11	12		
<b>3. Maintain the percentage of TB screening in Provincial RH among new OI patients from 95% % to 100 % at the end of September 2011</b>																
		Rx Room Renovation														\$10,000.00
		Rx Machine														
		Rx film washing machine														

**Sub total \$10,000.00**

**GRAND TOTA \$16,790.00**

<b>4. Increase the percentage of HIV screening in Provincial RH among new TB patients from 48% % to 85 % at the end of September 2011</b>
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