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Effective health information system management is a contributing factor in better decisions and quality health service provision.

Health Management Information System (HMIS) Launching

On 6 October 2011, Cambodian Ministry of Health (MoH) with supports of USAID (US Agency for International Development) through URC- Better Health Services Project (BHS) launched the MOH Health Management Information System. The launch was organized and prepared by the technical team of the Department of Planning and Health Information (DPHI) and URC Cambodia. It was presided by HE Prof Eng Huot, Secretary of State, Ministry of Health, and representative of USAID Cambodia. HE Prof Eng Huot appreciates the support of USAID and URC on HMIS work in Cambodia. A total of 134 participants (30 females) attended the launch. The participations are representatives of the MoH departments, national programs, national hospitals, provincial health departments, operational district, private providers and health development partners. URC staff presented the general concepts of the HMIS database integration. Ten HMIS users (3 MoH department, 1 URC, 2 PHD, 1 MCH-PHD, 1 OD,

HMIS launching on October 6, 2011.
Photographer: Mr. Pen Darith

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Contents

2 private providers) presented their experience and practice of the HMIS web based database. All presenters accounted that HMIS web based database is a useful and appropriate solution for managing the health information system in Cambodia. The director of Kien Svay OD presented a data quality check practice and how they use HMIS web based database system.

As of September 2011, the HMIS covers 5 different data sources: public health facility health statistics; private and NGO health statistics, the PMTCT and Linked Response programs, the Maternal Death Surveillance System; and results from the health facility assessments conducted by the QAO Office. The launch was close with fruitful results and Dr. Lo Veasnakiry, DPHI director, made a remark in the closing section.

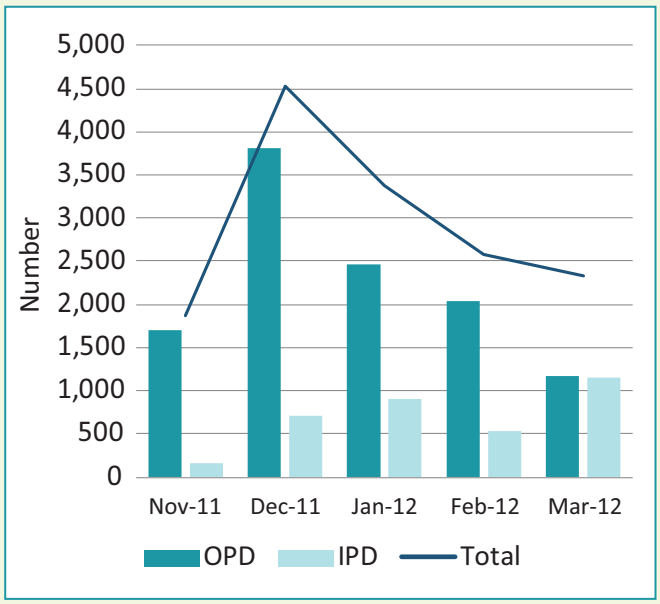
Patient Electronic Medical Record System

URC Cambodia has an area where the MoH has specifically nominated the BHS Project to take lead in developing Patient Electronic Medical Record System. The initial project is starting from patient registration, payment record and patient information record. URC team have been working at field level with the Siem Reap provincial hospital in which is level 3 (called CPA3- Complementary Package of Activities) in Cambodia. URC developed hospital based patient registration database along with other work of the technical team who is consulted and discussed about medical requirement and pre condition for hospital based database implementation. Finally the hospital patient database was launched on 16-11-2011. Hospital enrolled 197 patients at first day and 196 patients at second day, 213 patients at third day.

URC staff explained data clerk for gathering and entering patient information through computerized system at first day of launches in Siem Reap provincial hospital in Cambodia on 16-11-2011. Photographer: Ms. Oeng Sothary

The five database workstations are now located in registration room and cashier room. The registration services are worked 24 hours including weekend days. This is an integration patient database that will track multiple patient related data such as patient demographic, payment, diagnosis and other supported services. This is a first MoH public hospital at the field level who implement one way patient entry and centralize patient registration database. Hospital director and hospital staff are very happy and demonstrated strong collaboration with URC and ownership to manage hospital patient database. URC team also reported this process to DPHI/MoH and keeps them informed about the success.

Figure 1: Number of Siem Reap Provincial hospital patients



Cambodian Health Management Information System

Background

Department of Planning and Health Information of the Ministry of Health with technical support of the URC Better Health Services Project in Cambodia upgraded HIS Access database to the HMIS (Health Management Information System) web based database since mid-2010. BHS harnessed new technologies, such as open-source software and dynamic scripting languages (namely, MySQL and PHP) to build a new, user-friendly web interface.

The result was a full-featured, web-based application for entering, reviewing, and editing health information at all system levels. The new HMIS also has advanced functionality for reporting to reflect the key indicators in Cambodia's second National Strategic Plan (HSP2). Cambodia Health Management Information System Web based Databases were developed to organize large web sites and allow data capture via browser-based forms. By enabling users outside a closed network, access to a central or standalone database, they permit greater flexibility than through using traditional 'client-server' systems.

Accordingly, web-enabled databases have introduced a new tool for health managers, health staff and officers, permitting direct data capture at source and thus avoiding many of the delays and errors arising from paper forms, data transmission and multiple data entry. In addition, real-time data collection permits sophisticated decision support and reporting, and thus improved project co-ordination, planning and participation.

Outcomes

After one year of implementation, HMIS shows great results as shown by the following outcome indicators:

Figure 2: Data quality as percentage

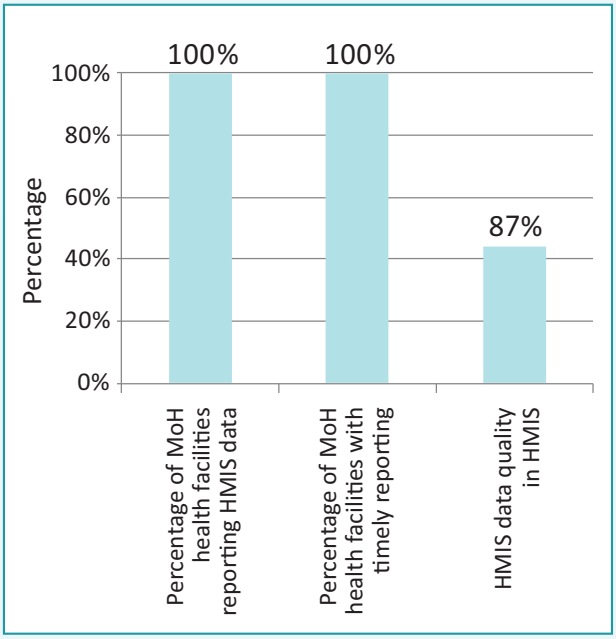
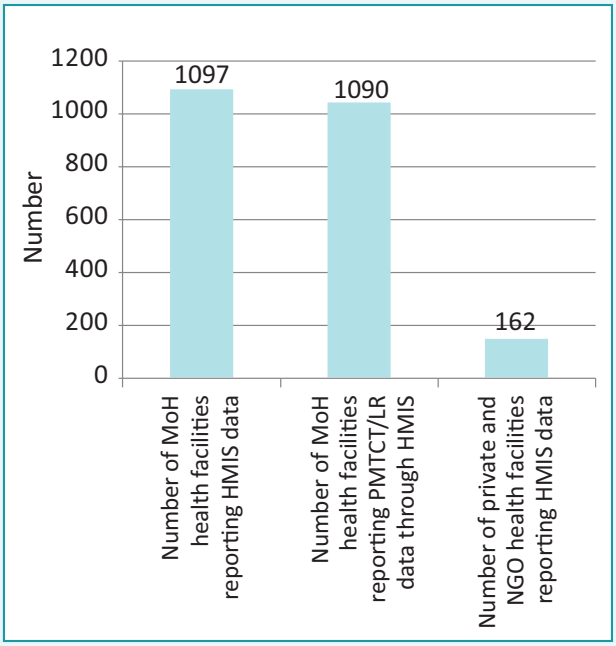


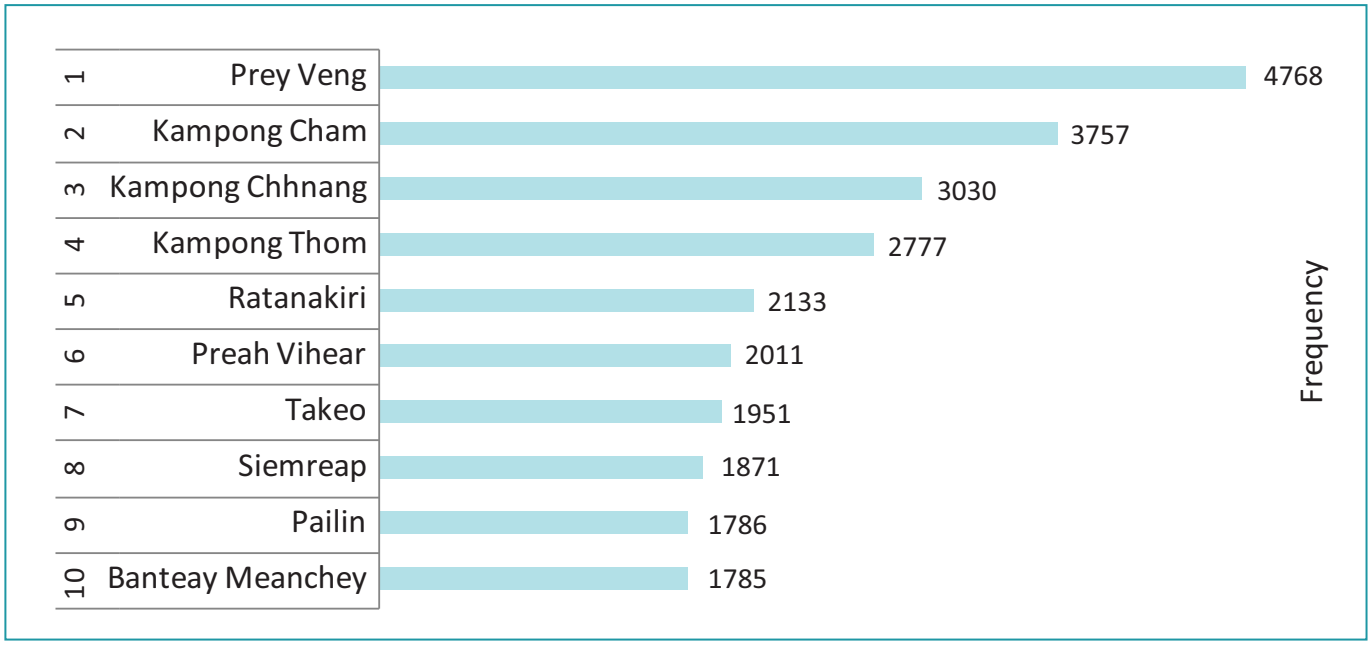
Figure 3: Number of health facility reported through HMIS



HMIS User

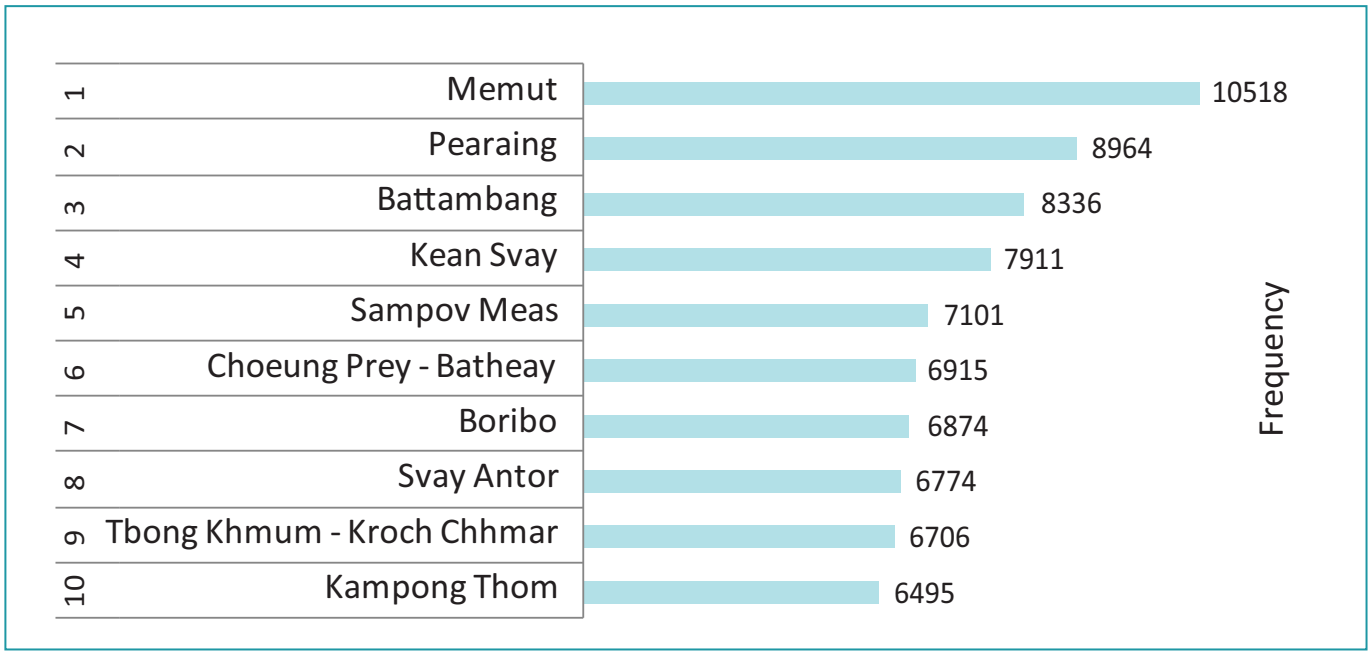
The figure 4 shows about the top- ten PHD used HMIS for the last 9 months that started from April, 2011 to December, 2011. The top three provinces are Prey Veng, Kampong Cham and Kampong Chhnang.

Figure 4: Top Ten PHD Used HMIS , April -Dec 2011



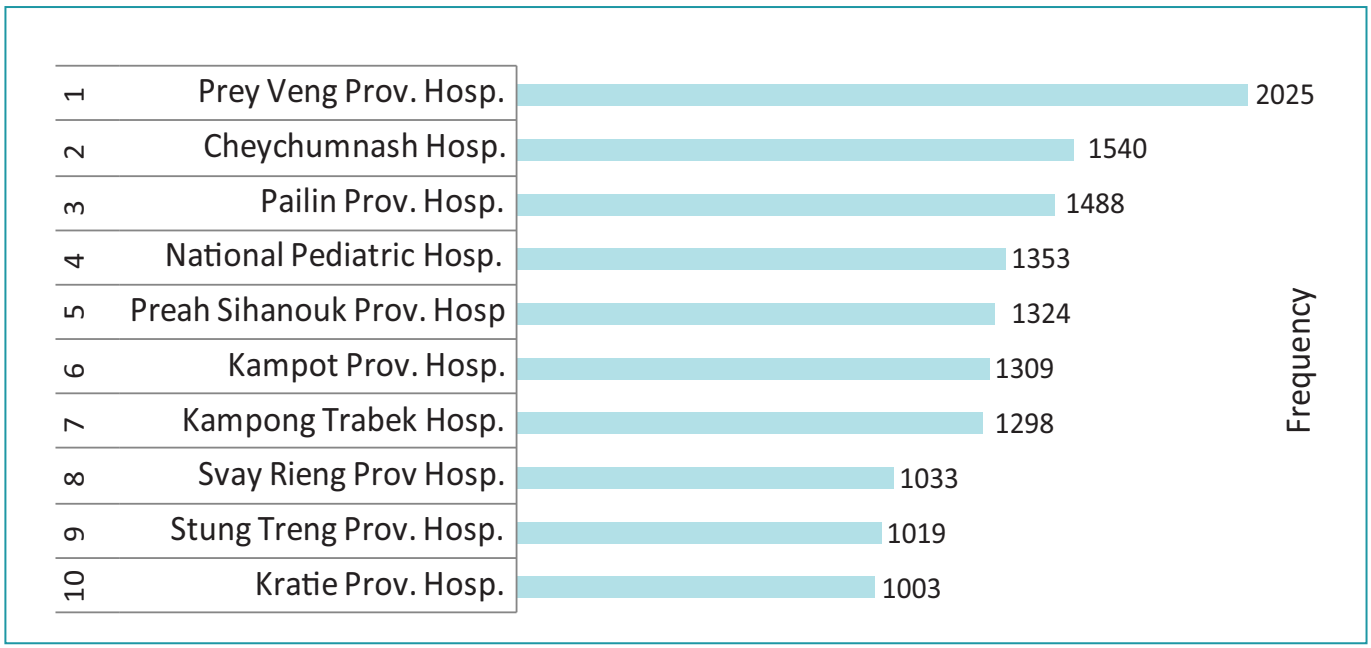
The figure 5 displays the top-ten of Operational Districts used HMIS among the 77 ODs in the whole country. For number one goes to Memut , number two goes to Pearaing and for number three goes to Battambang.

Figure 5: Top Ten OD Used HMIS , April -Dec 2011



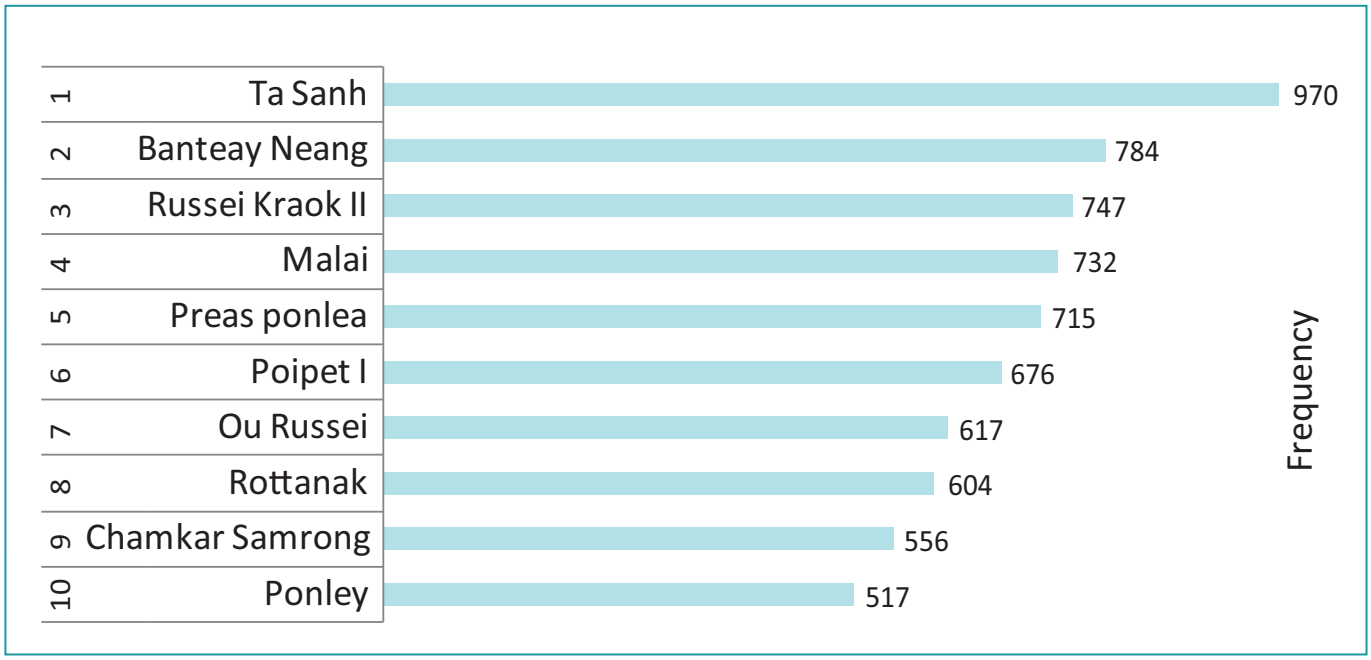
The figure 6 shows about the top ten hospital used HMIS for the last nine months. For number one run to Prey Veng Provincial Hospital, number two run to Cheychumnash Hospital and the number three run to Pailin Provincial Hospital.

Figure 6: Top Ten Hospital Used, April -Dec 2011



The figure 7 displays the top-ten HC used HMIS started from May, 2011 to December, 2011. Ta Sanh HC in battambang OD, Banteay Neang HC and Russei Kraok II HC in Mongkol OD are remarkably achieved of highly using HMIS in HC level.

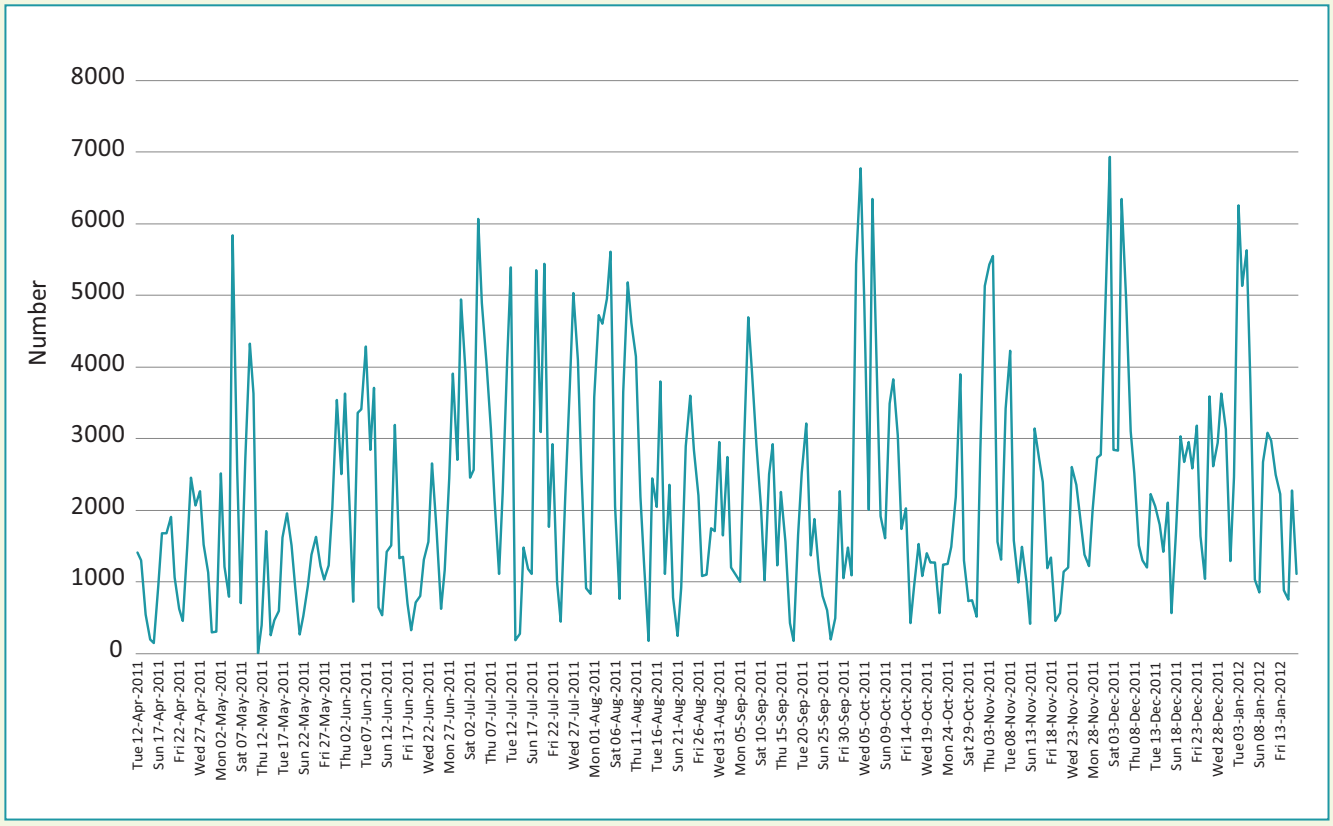
Figure 7: Top Ten HC used HMIS, May-Dec 2011



HMIS Daily Users

The HMIS daily users have been significantly increased since it had been officially introduced for national usage.

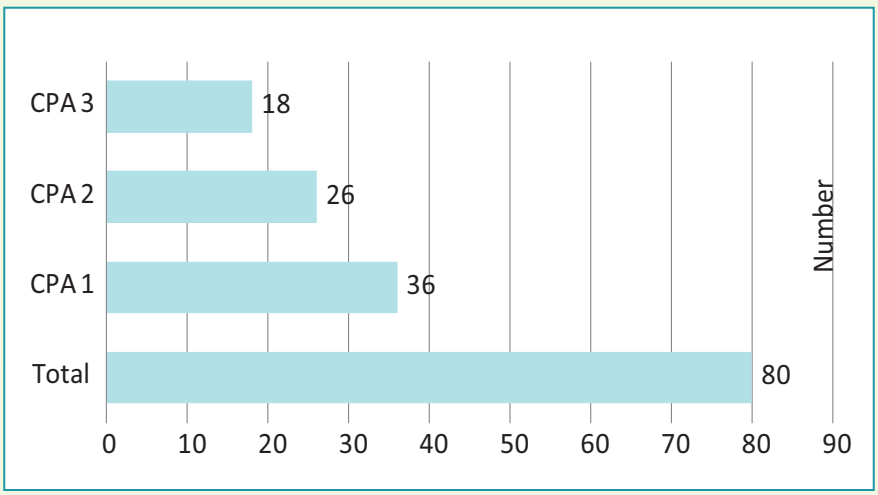
Figure 8: Daily Rate of HMIS Page Visits. April 2011-Jan 2012



Hospital Coverages

The figure 9 identifies the categories of hospitals which provide complementary care in 2011 in Cambodia. The base graph demonstrates that 45% of hospitals has implemented CPA1, 32.5% used CPA2, and 22.5% used CPA3. It means that around half of all hospitals in Cambodia has provided CPA1 services, especially at the countryside.

Figure 9 : Hospitals by Categories in Cambodia 2011



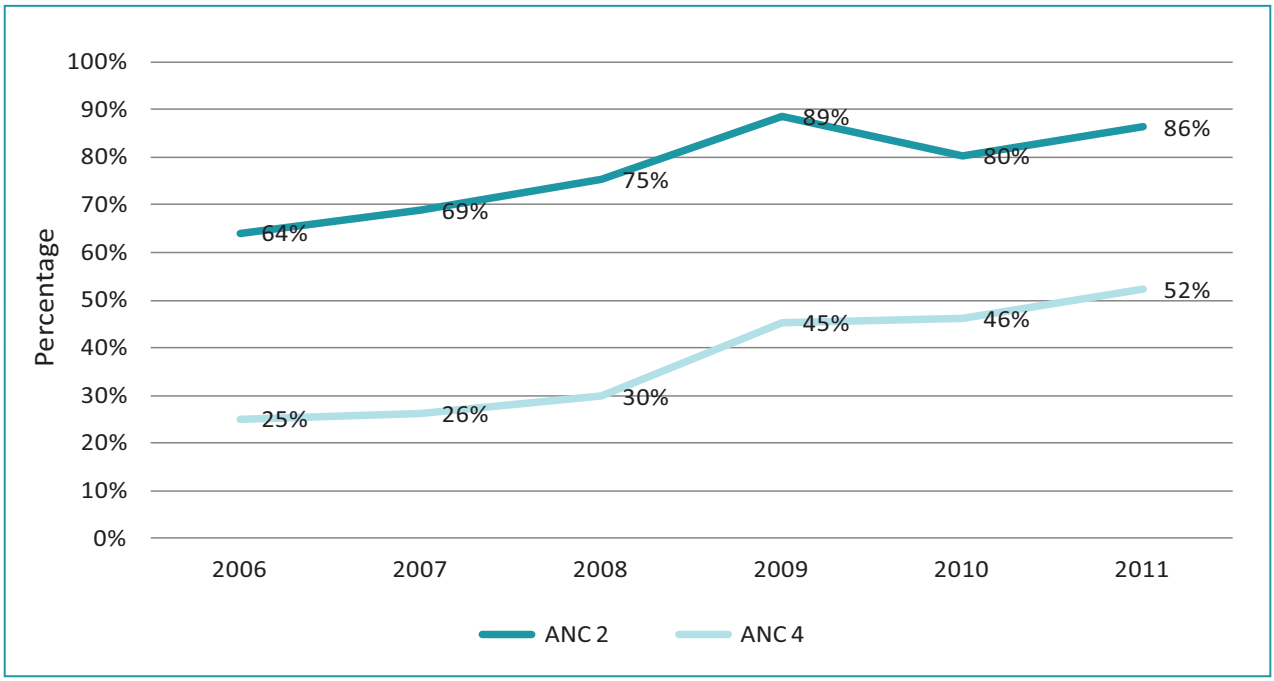
MCH Statistics

• Antenatal care visits

The figure 10 represents the percentage of progress of ANC2/ANC4 from 2006 and 2011. The line graph shows that pregnancy women who visited hospital for 2nd antenatal care gradually increased from 64%-89% in 2006 to 2009, but it slowly decreased at the beginning of 2010 (80%) then went up to 86% in 2011.

For the 4th antenatal care visited was progressively gone up from 25% to 52% in 2006 -2011. It could be the effective of the health awareness education through or more understanding of the advantage of pregnancy prevention.

Figure 10 : Trend of Antenatal Care Visits from 2006 to 2011

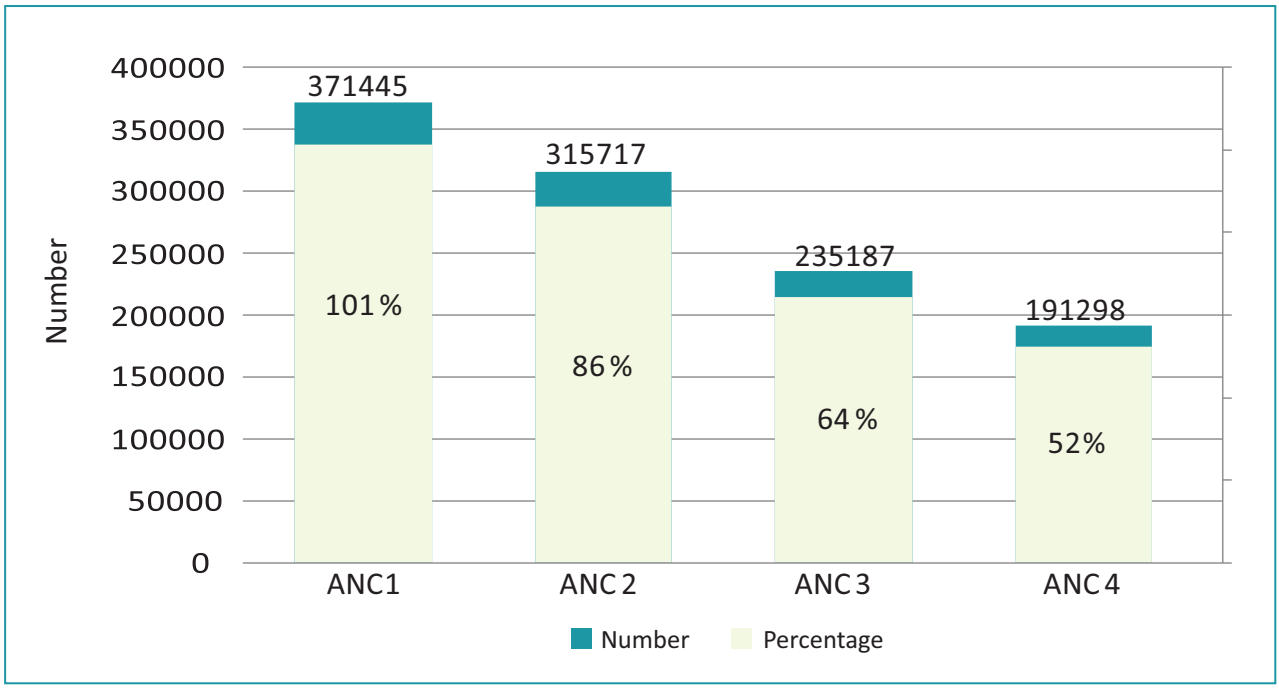


• Antenatal care visit in 2011

The figure 11 shows the number and percentages of the cascade of ANC in 2011. This graph clearly indicates, the 101% (371,445) of pregnancy women attend their first antenatal services, 86% (315,717) for ANC2, 64% (235,187) for ANC3 and 53% (191,298) for ANC4 during the specific pregnancy.

This indicates that maternal women in Cambodia regards antenatal care as a one-time service, while in fact they should make several visits before their delivery.

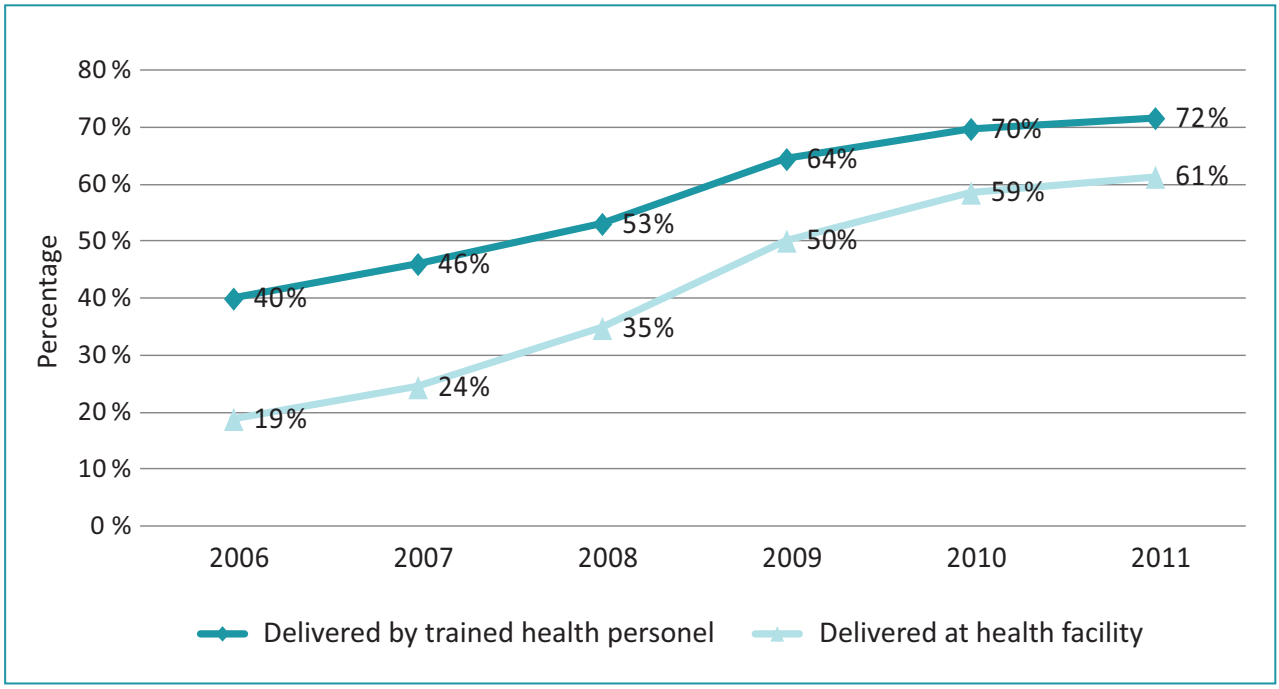
Figure 11 Antenatal Care Visits Cascade in 2011



• Births

The figure 12 represents the percentage of deliveries by trained health personnel and health facilities in2006 to 2011. The line graph displays that the percentages of delivered by trained health personnel gradually increased from 40%-72% in 2006-2011. The percentage of deliveries by health facilities increased parallelism from 19%- 61% by 2006-2011 with the trained health personnel. It means that more than 60% of delivered respond by trained or skill health personnel.

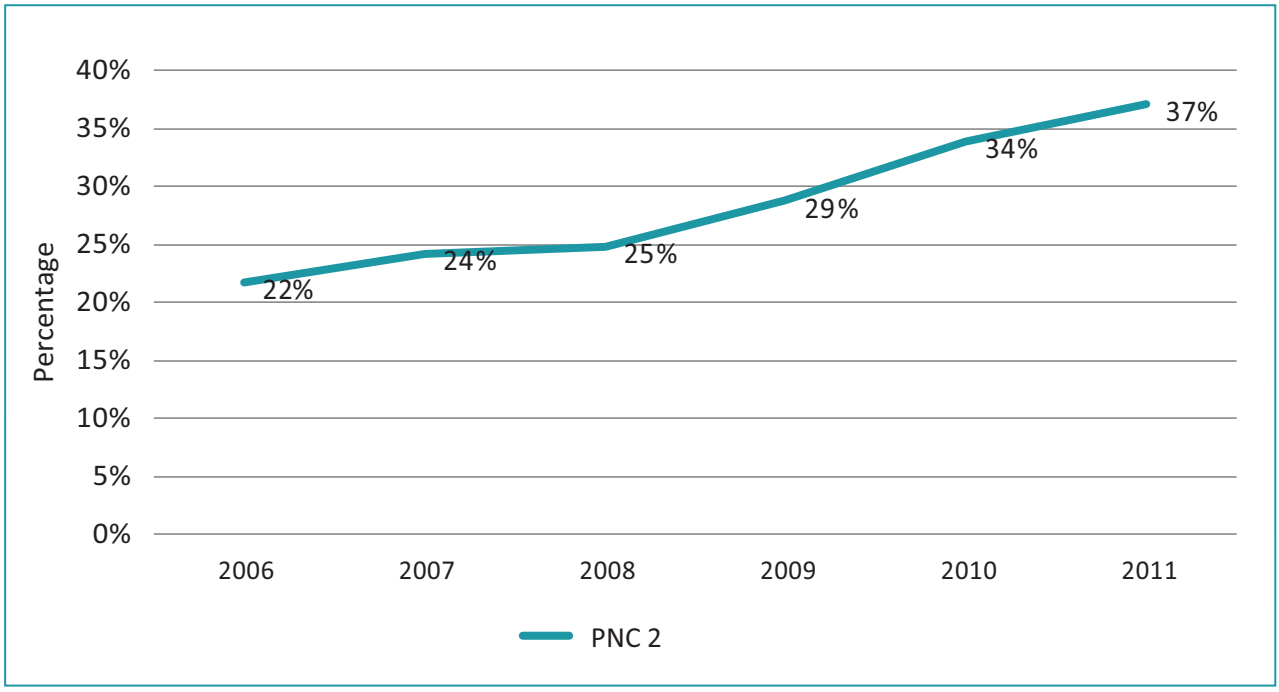
Figure 12: Percentage of Deliveries



• Post partum care cascade

To be strengthening the health care of women post partum, MOH has encouraged all women should be received at least 2 times of post partum care after their delivery. The chart shows the 2nd post partum care follow up from 2006-2011. This line graph indicates that the percentages of post partum care progressively increased from 22% to 37% in 2006-2011. The result shows the positive outcome, but it is not reach the MOH target.

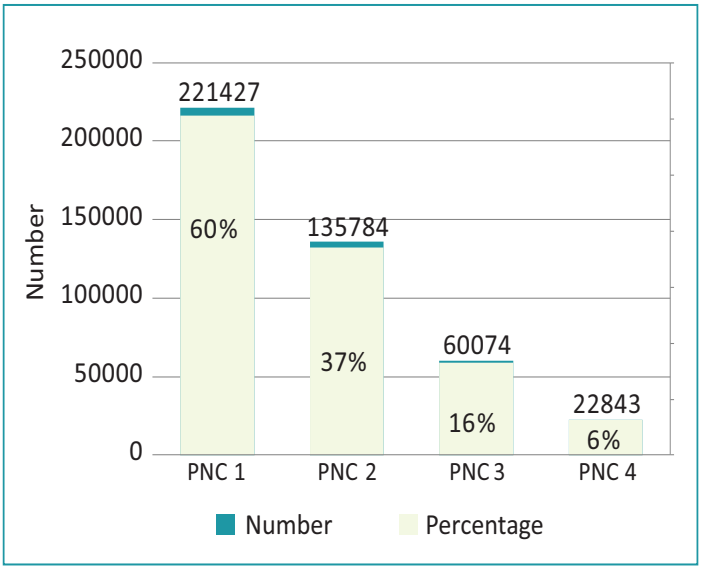
Figure 13: Percentage of Post Partum Care from 2006 to 2011



• Post partum care cascade in 2011

It is quite good that our women have continued their post partum care services. The figure 14 shows the result of Post partum care in Cambodia in 2011. The base-chart displays that the percentages of post partum care visit is 60% (221,427) in the PNC1, 37% (135,784) in PNC2, 16% (60,074) in PNC3 and 6% (22,843) in PNC4 after delivery. It would be better if all maternal women could complete their four post partum visits to ensure their medical well-being.

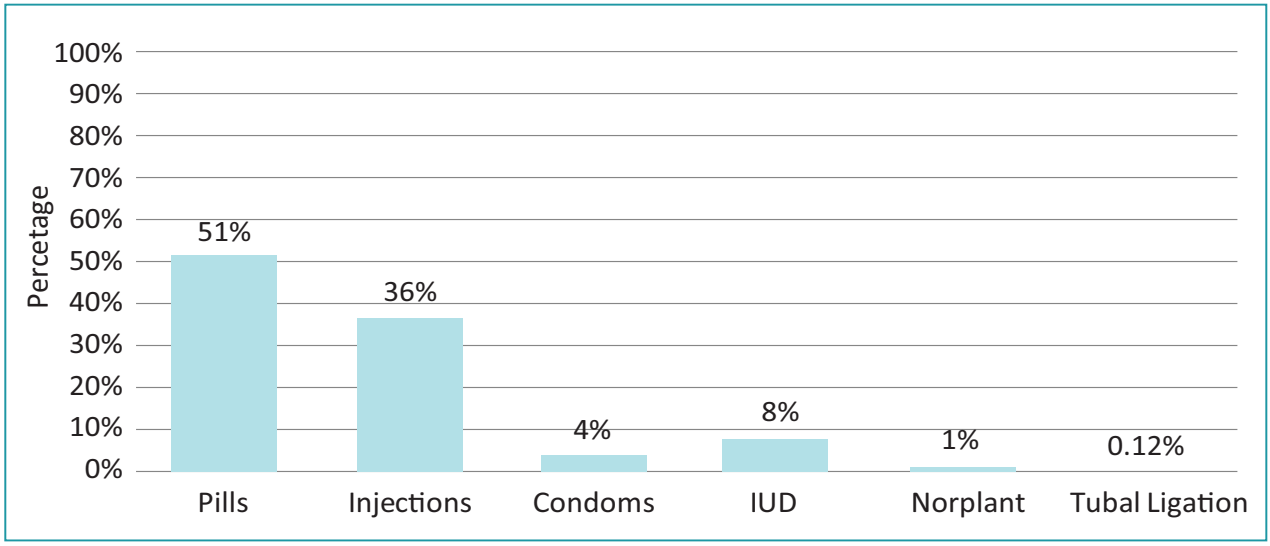
Figure 14: Post Partum Care Cascade in 2011



• Family planning

The figure 15 represents the statistical of birth spacing current user in 2011 (N=5810910). Pill is the main most popular method that is being used by women (51 %). The second choice method is injection (36 %) but for Tubal Ligation method is rarely used by women 0.12% according to the chart above.

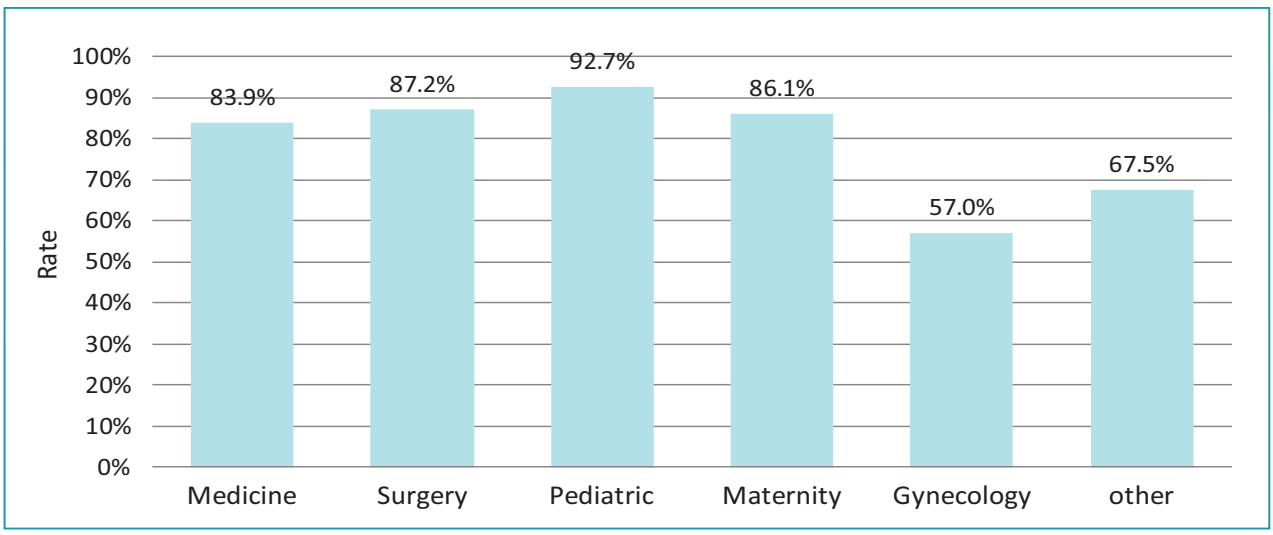
Figure 15 : Percentage of Birth Spacing Current Users in 2011 (N=581901)



• Bed occupancy rate in 2011

Hospital management is very important; Data analysis is more value to evaluate the progress of quality of bed occupation in hospital. The figure 16 indicates the over all of percentage of bed occupation rate is over the 50%, the majority of its is 92.7% in Pediatric ward, then 87.2% in surgery, 86.1% in maternity, 83.9 in Medicine, 57% in Gynecology and other wards is 67.5%. It mean that the most of services are occupied at least 57% in hospital in 2011. Other meaning is in this year, the most common of patients who infected is children.

Figure 16: Bed Occupancy Rate in 2011



• Average Length of Stay (ALS)

In order to evaluate the quality of health care services or measure the outcome of treatment, it would be monitor the length of patient staying in hospital. The base-chart below shows that among 6 main wards, the surgery ward is taken longer than other wards, it took 7days in average compared to medicine is 5.4 days, gynecology is 5days, pediatric is 4.9 days, maternity is 3.7 days and other wards is 4.3 days in 2011. In generally, all kind of diseases that admitted in hospital were taken 4-7 days in average. It means that all cases are the acute diseases.

Figure 17 : Average length of stay in Hospital in 2011

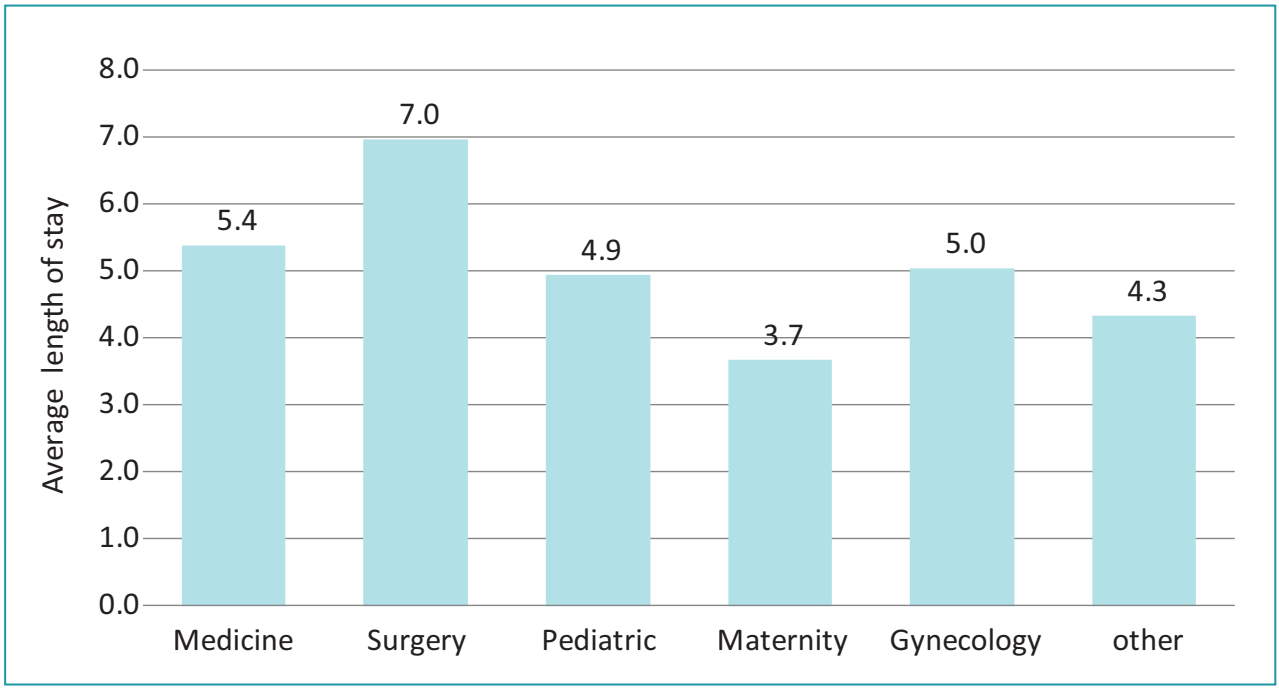
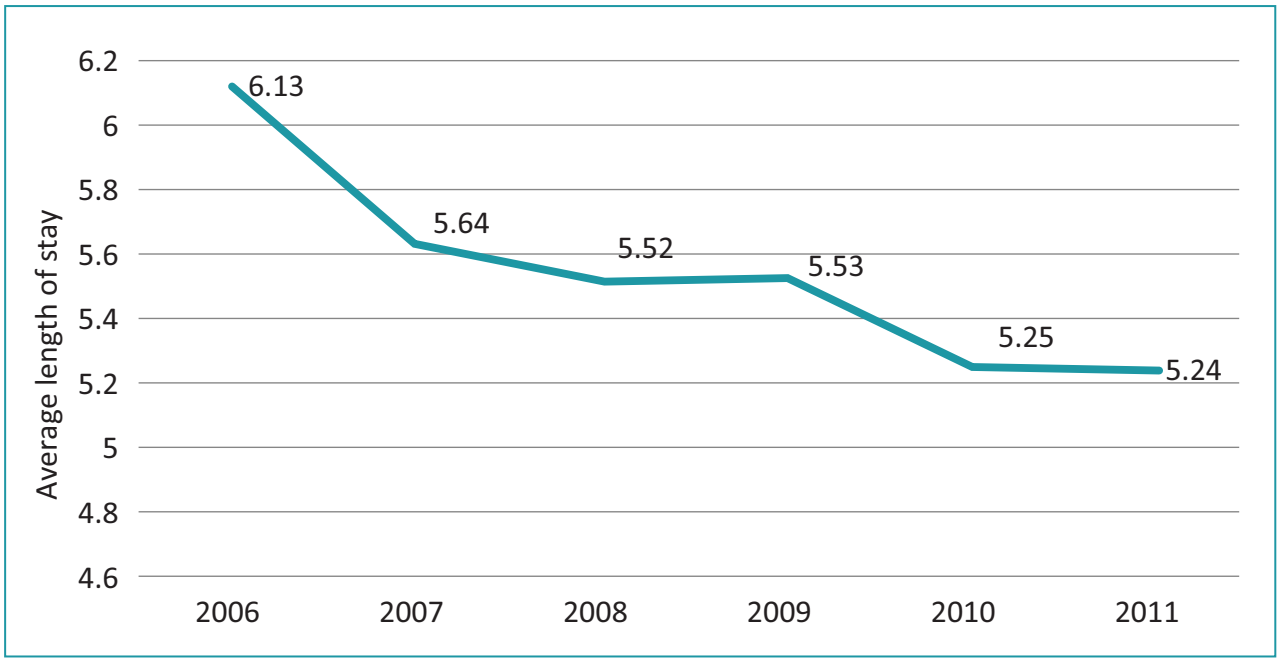


Figure 18 : Average length of stay in Hospital from 2006 to 2011



Events:

- January 17, 2012 : Workshop on Reviewing HMIS Implementation in Siem Reap Province
- March 14-15, 2012 : HMIS training Course for Private and NGO provider in Battambang Province
- March and April 2012: Meeting on reviewing and revising HMIS registers (Maternal and Newborn Health) in Phnom Penh

Siem Reap Provincial Hospital staff discussed on Patient Electronic Medical Record on Dec 2011.
Photographer : Ms. Oeng Sothary

Siem Reap Provincial Hospital staff discussed on Patient Electronic Medical Record on Dec 2011.
Photographer : Ms. Oeng Sothary

- April 20, 2012: HMIS Management Training Course at URC Phnom Penh Office
- March 21-22, 2012 : HMIS Training Course for PMTCT/LR at Kampong Cham Province.

Photographer : Ms. Oeng Sothary

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BETTER HEALTH SERVICES

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