



Cambodian Health Management Information System

Overview of HMIS Database

The Cambodian Health Management Information System (HMIS) is an essential and fundamental tool for gathering and recording health information from public, private and non-governmental organization health providers. The HMIS database provides information about outpatient and inpatient visits, as well as about support services offered at health facilities across the country. Currently, all of the public health facilities in Cambodia are reporting 100% of their health data using the HMIS database.

With the support of the URC-BHS project, the DHPI/MOH has standardized the software used to enter data into the national health information system. This has simplified the process of integrating vertical program data into the MoH HMIS database. Currently, the databases are standardized as MySQL. Eventually the PHP designed interface will be able to query data across different databases, including vertical program databases and other data sources. It is also possible for provincial and operating district staff to enter both MoH HMIS and vertical program data directly into the HMIS database through a common set of web-based data entry screens. By linking these processes of data entry, 100% of the data inputted into the HMIS database is currently being entered in a regular and timely fashion.

Welcome Message

Welcome to the Quarterly Bulletin of the Cambodian Health Management Information System (HMIS) of the Ministry of Health. This bulletin is produced by the Department of Planning and Health Information (DPHI) to provide information and news about the progress of the HMIS in Cambodia.

We hope that this bulletin will stimulate discussion and an exchange of ideas among HMIS users throughout the country. We encourage you to contact us with your ideas, success stories, and features so that we can share your experiences and opinions about HMIS with the rest of the HMIS community. Please share with us by visiting www.hiscambodia.org.

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Recent Publications

- DPHI/MoH issued The Annual Health Statistics of 2009 and 2010. The Annual Health Statistics are posted at www.hiscambodia.org
- The technical team of the Department of Planning and Health Information (DPHI) of the Ministry of Health (MoH) and URC-BHS wrote a practical user guide to using the web-based Health Management Information System (HMIS) database. The User Guide contains information about how to access/utilize the general health information system, Prevention of Mother and Child Transmission of HIV (PMTCT) and Linked Response data, the Maternal Death Surveillance Record (MDSR) and data inputted by private and NGO providers. The User Guide was signed by HE Prof. Eng Huot, Secretary of State, Ministry of Health on 23 September 2011.

Staff Capacity Development

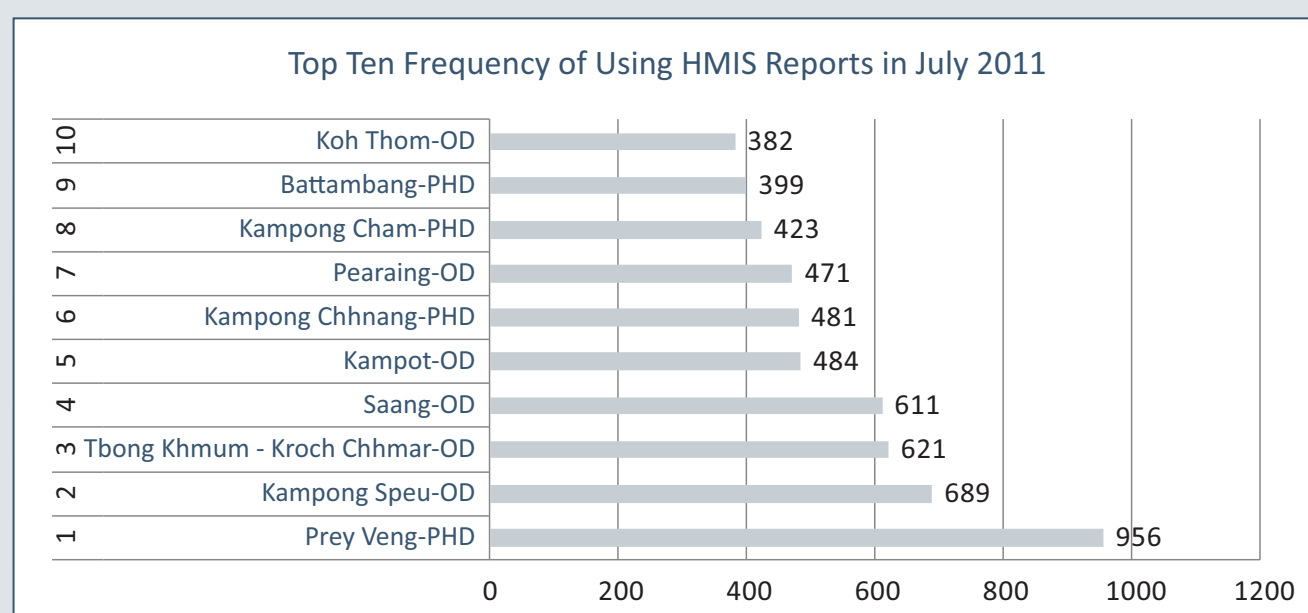
- DPHI/MoH and PHD, with support from the BHS project, provided two HMIS training courses for private and NGO providers. The first course, which was conducted on 16-17 August 2011 in Battambang Province, was attended by 19 private and 8 NGO health facility staff members. The second course, which was conducted on 20-21 September 2011, was attended by 23 private and 4 NGO health facility staff members.

HMIS Database Users and Sites as of September 2011				
	HMIS		PMTCT	
	# Users	# Total Sites	# Users	# Total Sites
National/Others	28		13	
PHD	36	24	30	24
OD	97	77	85	68
Hospitals	99	89	12	89
Health Centers	80	990		990
Private Sites	19	19		
NGO Sites	8	84	1	17
Total Users	367		141	

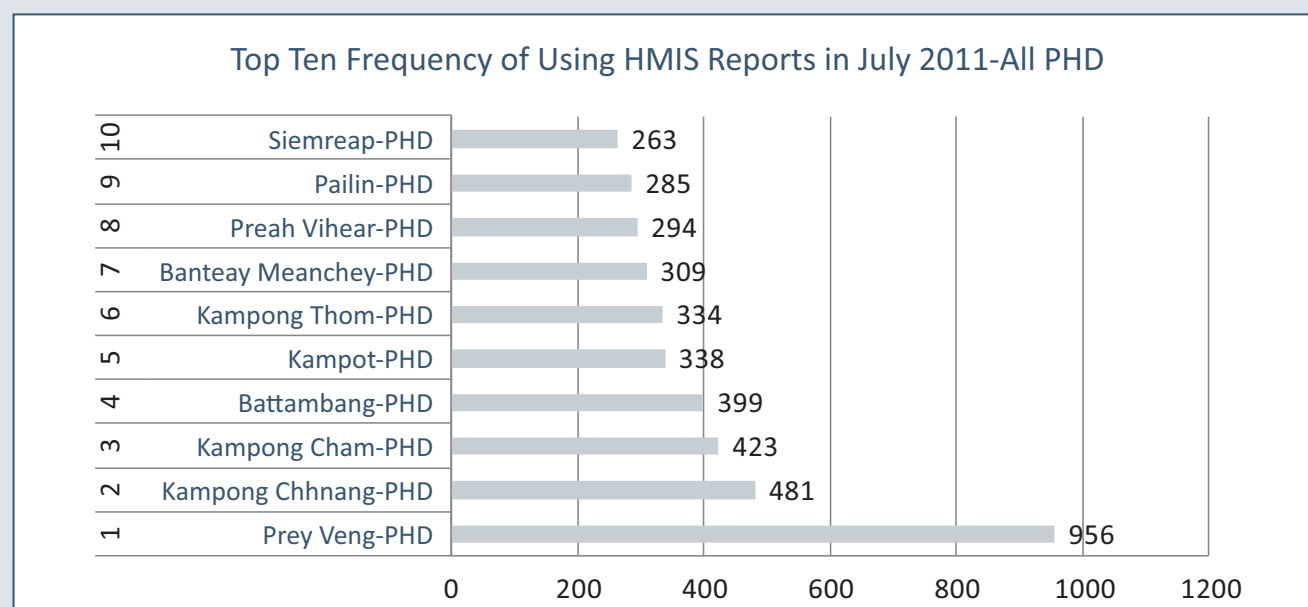
- DPHI/MoH and NMCHC (PMTCT Program), with technical support from the BHS project, conducted five HMIS training courses at NMCHC. Three of these courses took place in August 2011 and two of these courses took place in September 2011. A total of 125 MCH and/or HIS officers attended these HMIS training courses.

Top Ten Frequency - Users

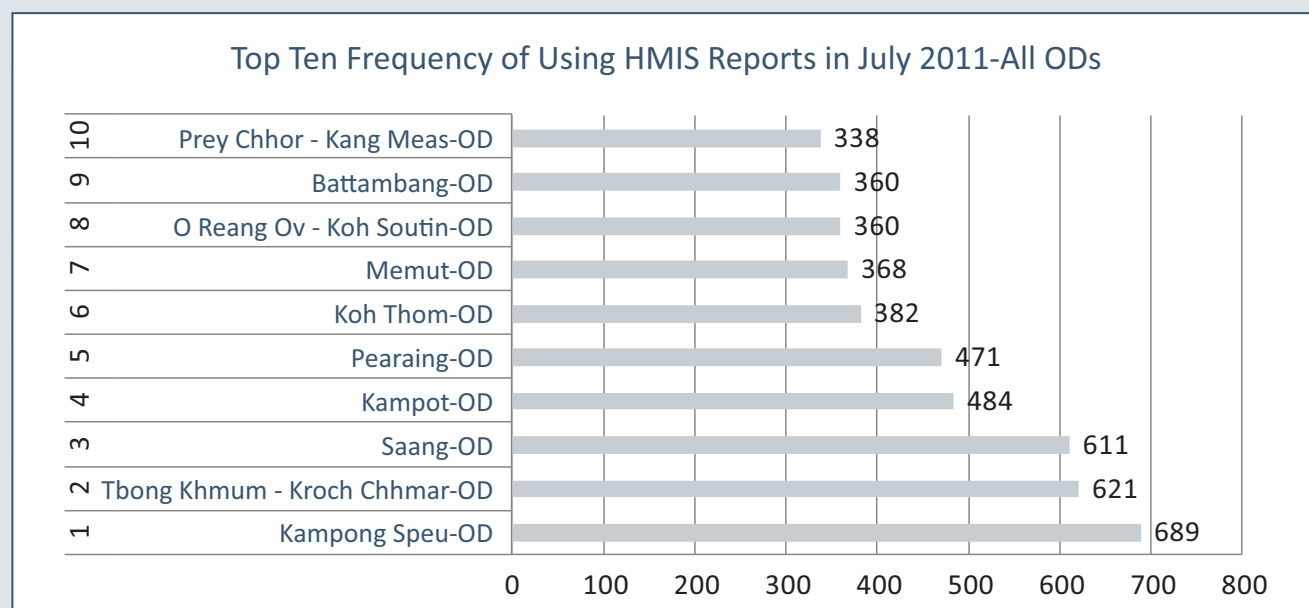
The following figure displays the top-ten users (both ODs and PHDs) of HMIS data and reports during July 2011. The top three provinces, Prey Veng, Kampong Chhnang and Kampong Cham, achieved remarkably high monthly utilization rates of 956, 481 and 423, respectively.



The following figure displays the ten ODs, among the 77 ODs, that utilized HMIS reports most frequently during July 2011.

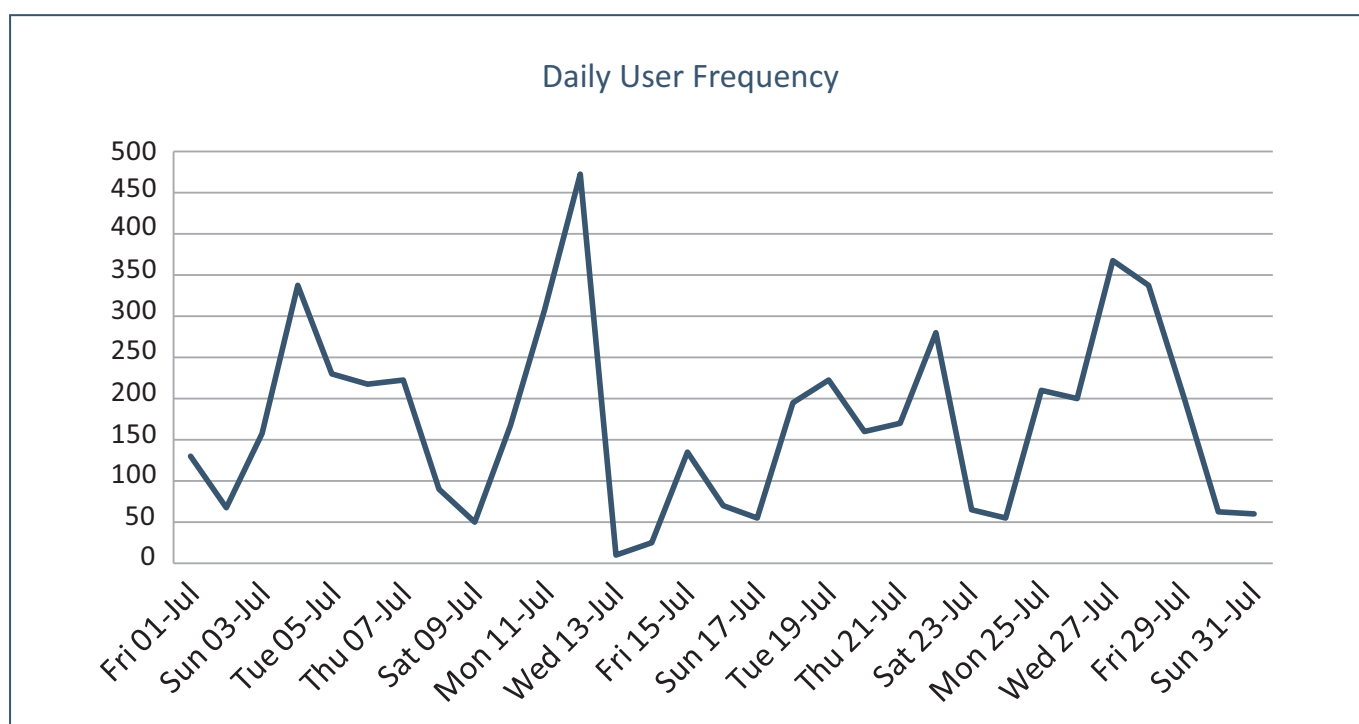
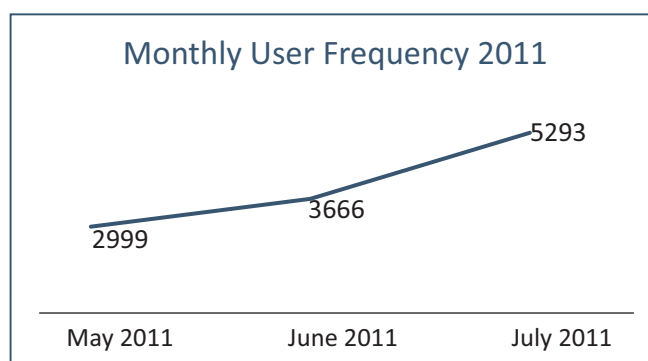


The following figure displays the ten PHDs that utilized HMIS reports most frequently during July 2011.



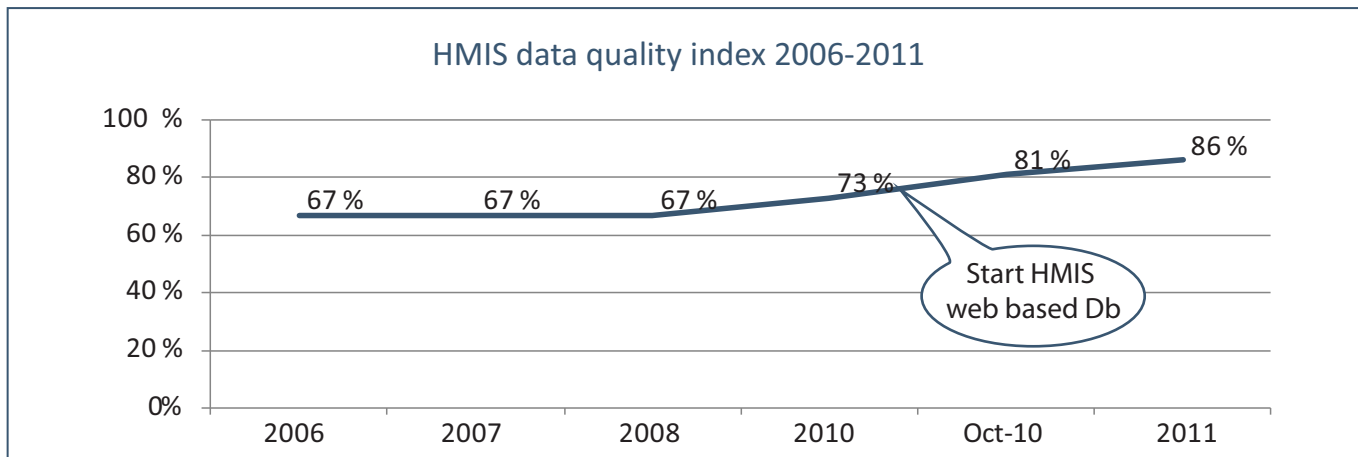
HMIS Daily User Rate

The HMIS daily user rate has increased significantly since the database was first introduced in August 2010. Similarly, the monthly user frequency (which is measured as the total number of user logins per month) has increased from 2999 in May 2011 to 5293 in July 2011.



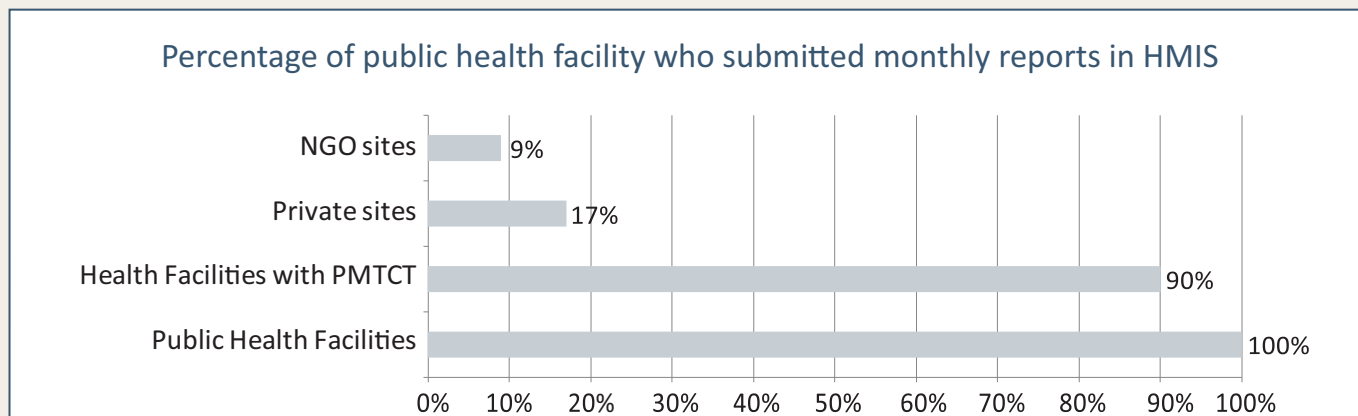
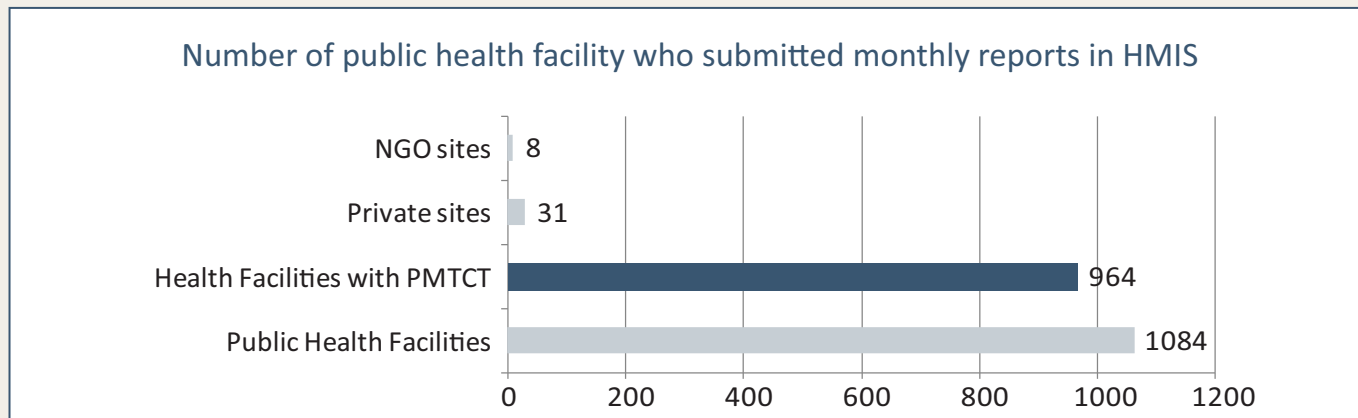
HMIS Data Quality

The HMIS database can monitor the quality of data by cross-checking entered data with data from the monthly reports produced by health facilities. The following figure demonstrates that the quality of data has increased from 67% in 2006 to 86% in 2011.



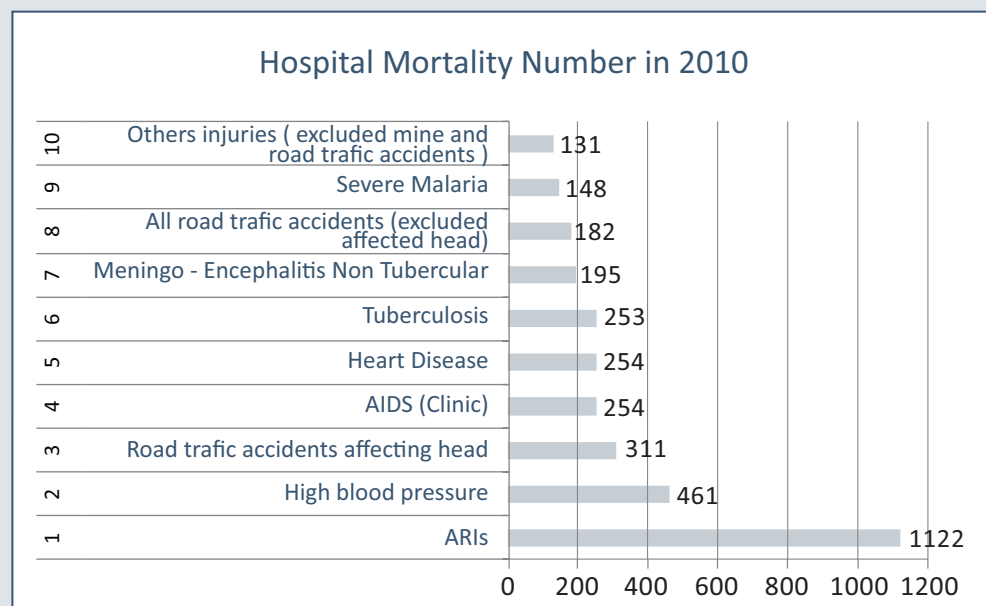
Monthly Reports Status in HMIS web based database

As of September 2011, the aggregated data of 1084 MoH public health facilities (health centers and hospitals), 964 PMTCT and Linked Response service outlets, 31 private providers and 8 NGO health facilities are being reported through HMIS web based database.



Top Ten Cause of Deaths in 2010

The following figure displays the top ten causes of death at the hospital level in 2010. ARI disease was the number one cause of death in 2010 and therefore remains a major public health concern in Cambodia.



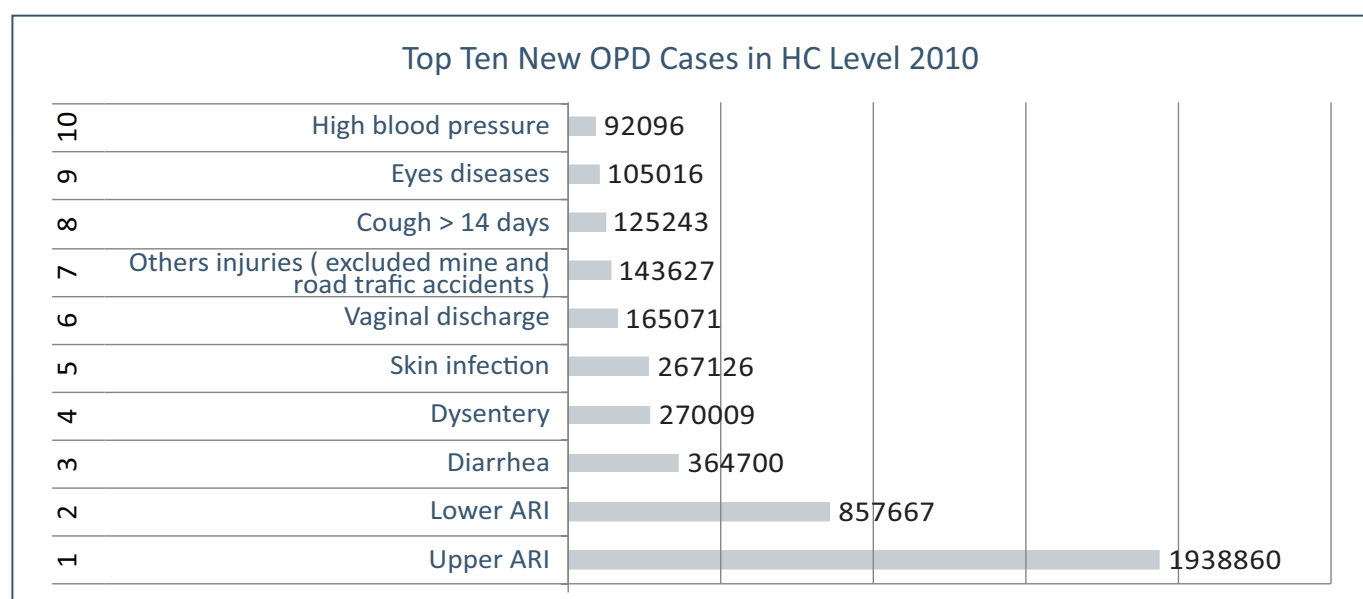
Morbidity and Mortality

Morbidity Rate: The proportion of people suffering from a particular disease or condition out of a 1000 population.

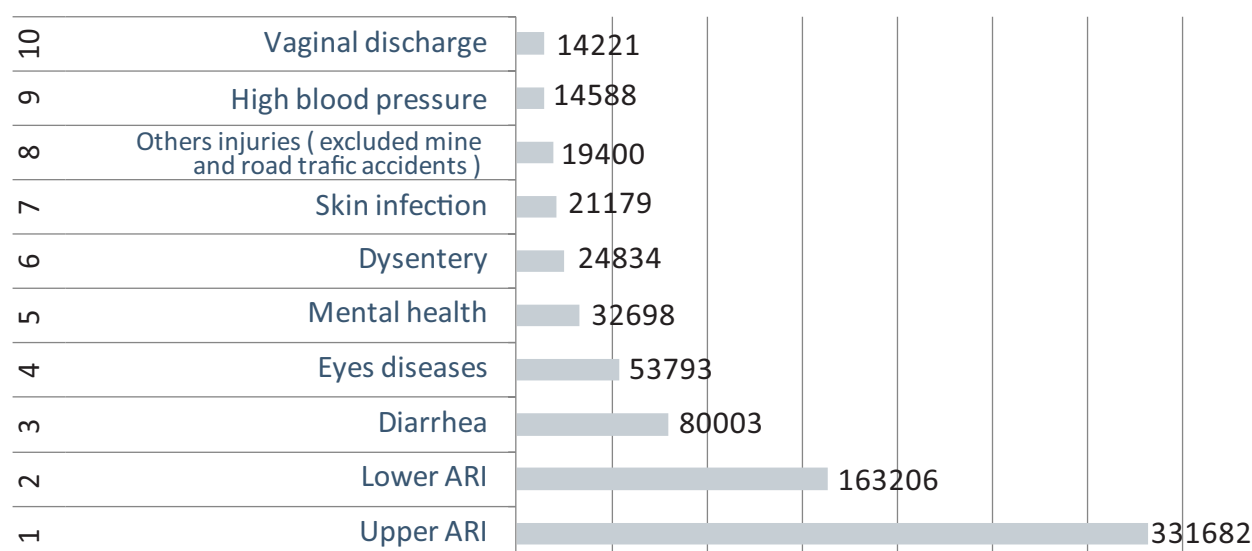
Mortality Rate: The proportion of people dying of a particular disease out of a 1000 admissions.

Top Ten Morbidity in 2010

The following two figures display the top ten most common OPD cases at the health center level and the hospital level, respectively, in 2010. ARI disease was the number one most common reason for an OPD visit at both health centers and hospitals in 2010. In fact, the top three most common reasons for an OPD visit – Upper ARI, Lower ARI and Diarrhea – were the same at both the health center and hospital level. Eye disease, however, was the fourth most common OPD case at the hospital level, while Dysentery was the fourth most common OPD case at the health care level.

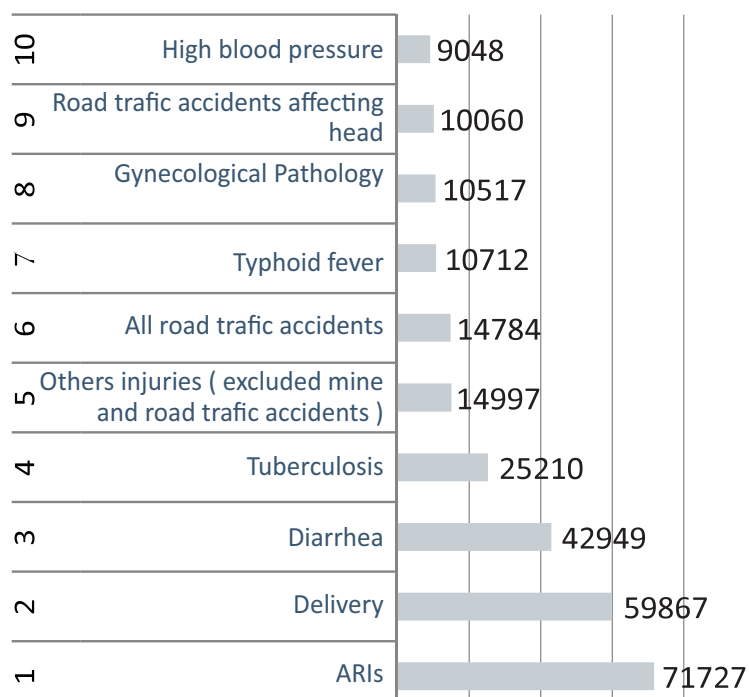


Top Ten New OPD Cases in 2010 in the Hospital Level



ARI remained the number one reason for inpatient hospital care in 2010. Delivery was the second most common cause for inpatient hospital care in 2010.

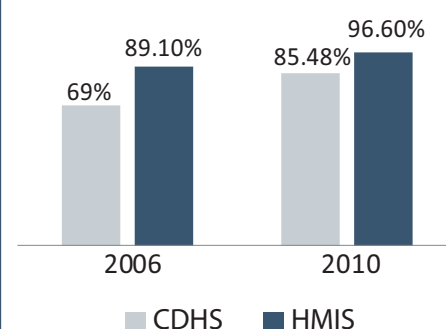
Top Ten Inpatient in 2010 in the hospital level



Maternal and Child Health

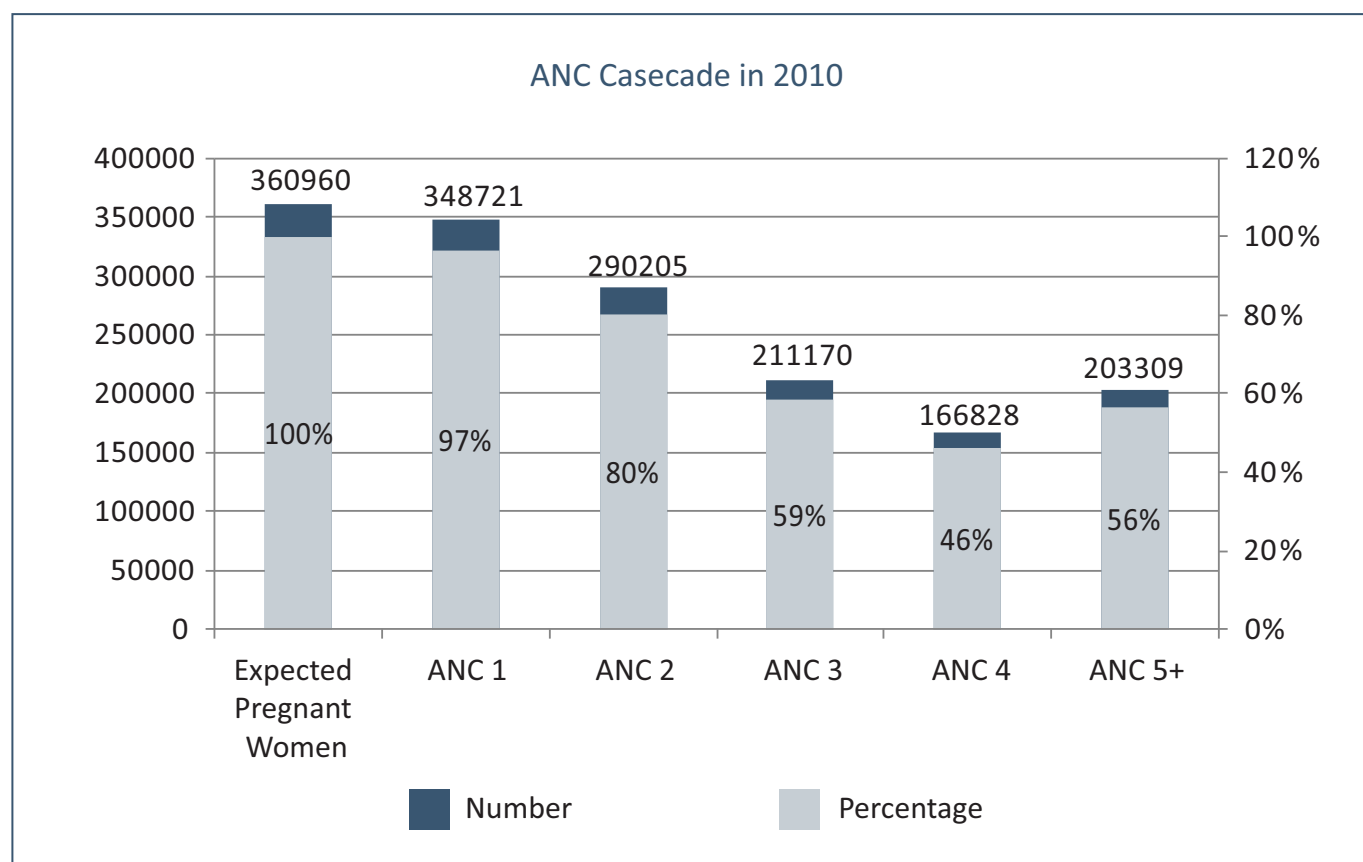
Maternal health issues are among the major public health concerns in Cambodia. Maternal health and well-being sets the foundation for the subsequent success of a child's health. The risks of pregnancy to both the mother and un-born child need to be identified early so that effective interventions can be implemented.

First Antenatal Care Coverage as %

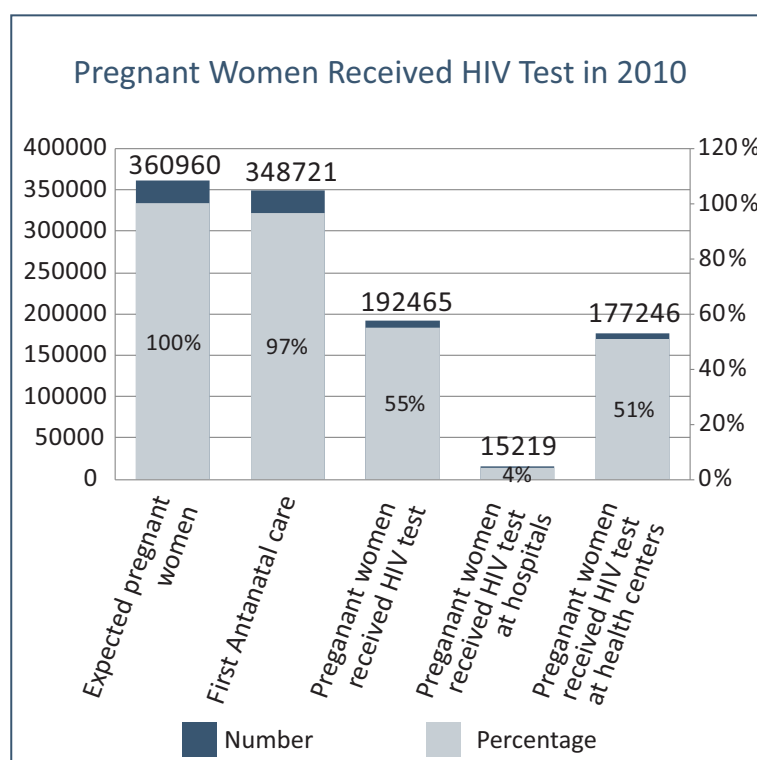


Antenatal Care

First Antenatal Care Visit (ANC1): First time a pregnant woman attends antenatal services during a specific pregnancy.



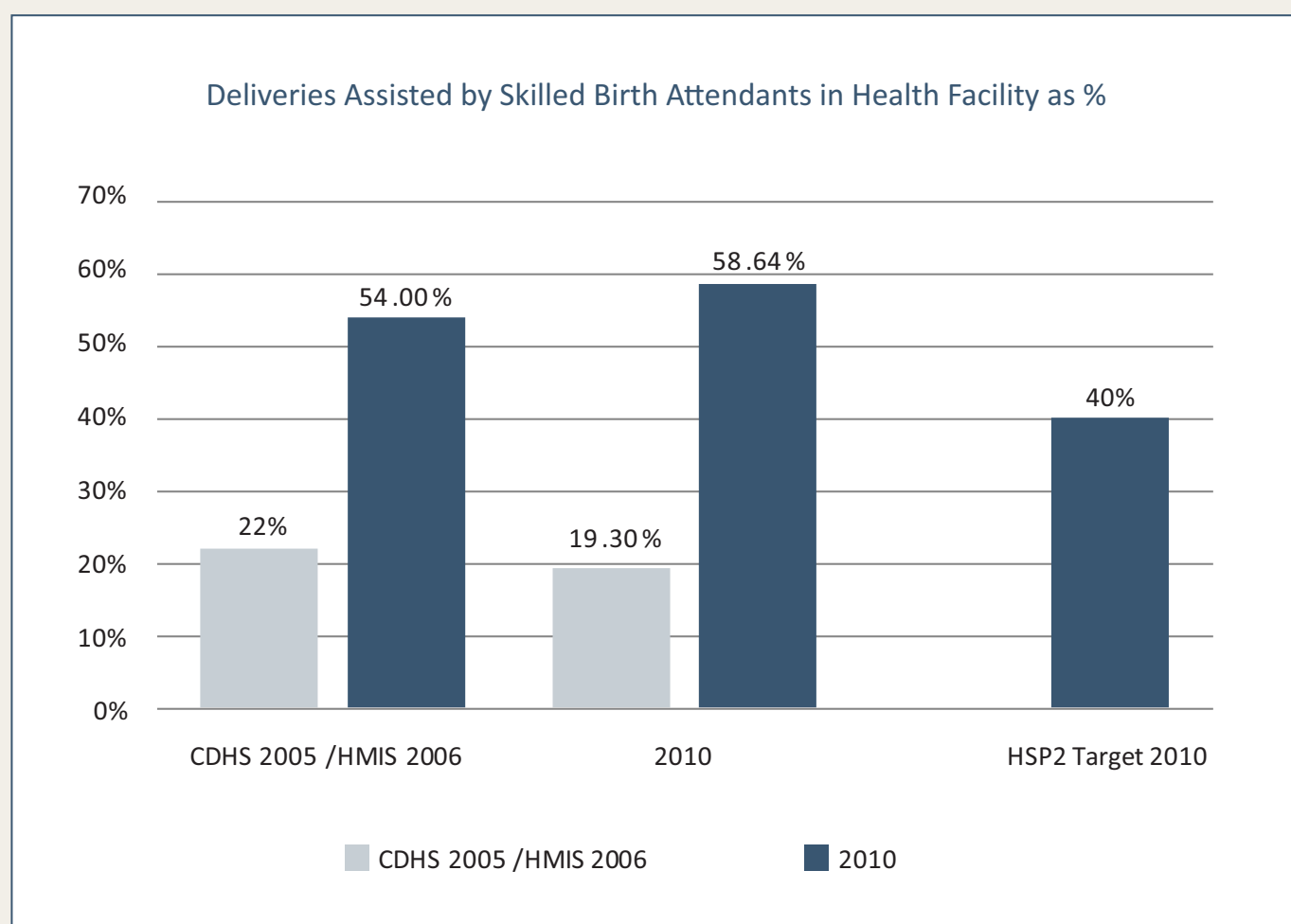
Pregnant women should receive antenatal care throughout the duration of their pregnancy, lasting until the time of labor. This section presents data on first antenatal coverage. In 2010, 327,278 pregnant women (94% of total ANC1 = 348,721) attended a first antenatal care visit in the health centers and 21,443 pregnant women (6% of total ANC1) attended a first antenatal care visit in the hospitals. It is suspected that as the population in Cambodia continues to increase, the number of pregnancies per year should increase as well.



HMIS data shows that 98% of expected pregnant women received first antenatal care at a public health facility in 2010. Of these women, 55% received voluntary a HIV test at the facilities. Approximately 92% of the women who were tested received the HIV test at the health centers and 8% received the HIV test at the hospitals.

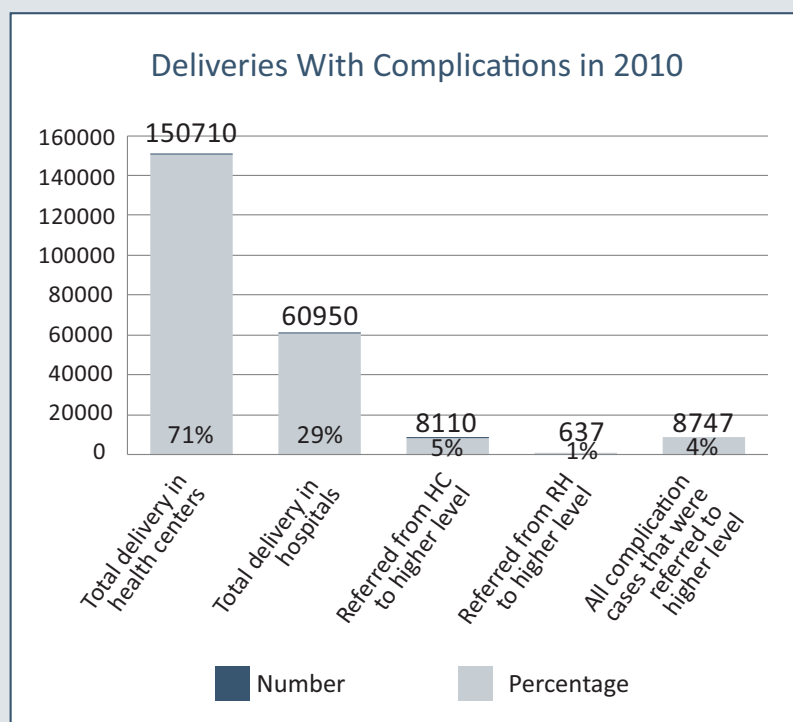
Deliveries Assisted by Skilled Birth Attendants

The proportion of estimated deliveries taking place in a public health facility in Cambodia has increased tremendously in recent years; from 11% in 2001, to 58.64% in 2010. In 2010, 150710 deliveries (71% of total public facility delivery) occurred at the health centers and 60950 deliveries (29% of total public facility delivery) occurred at the hospitals. The following figure displays the proportion of estimated deliveries that took place in a public health facility with assistance from trained or skilled health personnel.



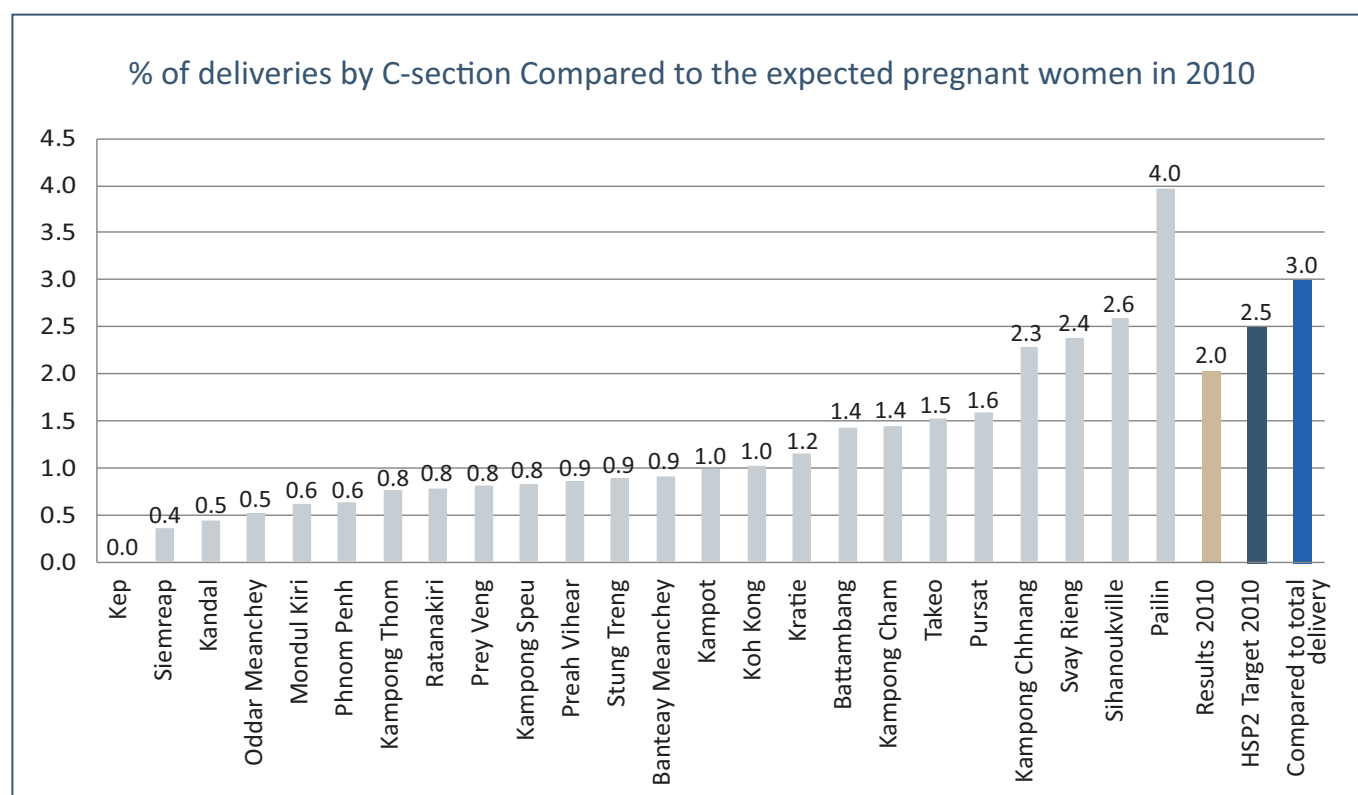
Deliveries with Complications

While most deliveries are normal, some births are complicated by various factors. WHO estimates that 15% of all pregnancies or births are complicated in some way. The following figure demonstrates the number and percentages of deliveries that were referred to higher level public health facilities due to delivery complications in 2010. Of the 150710 deliveries that occurred at health centers in 2010, 8110 (or 5%) were referred to the hospitals. Of the 60950 deliveries that occurred at hospitals in 2010, 637 (or 1%) were referred to higher level hospitals for care.



C section rate compared to the expected pregnant women

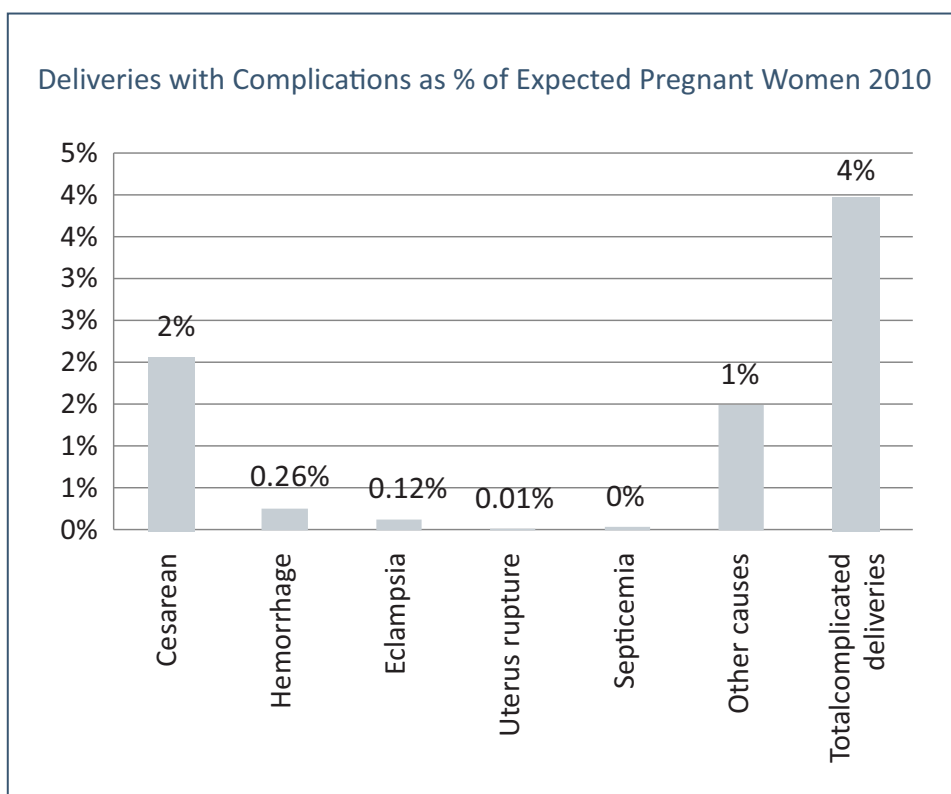
HMIS data demonstrates that 51% of the total number of complicated deliveries at the hospital level resulted in a C section.



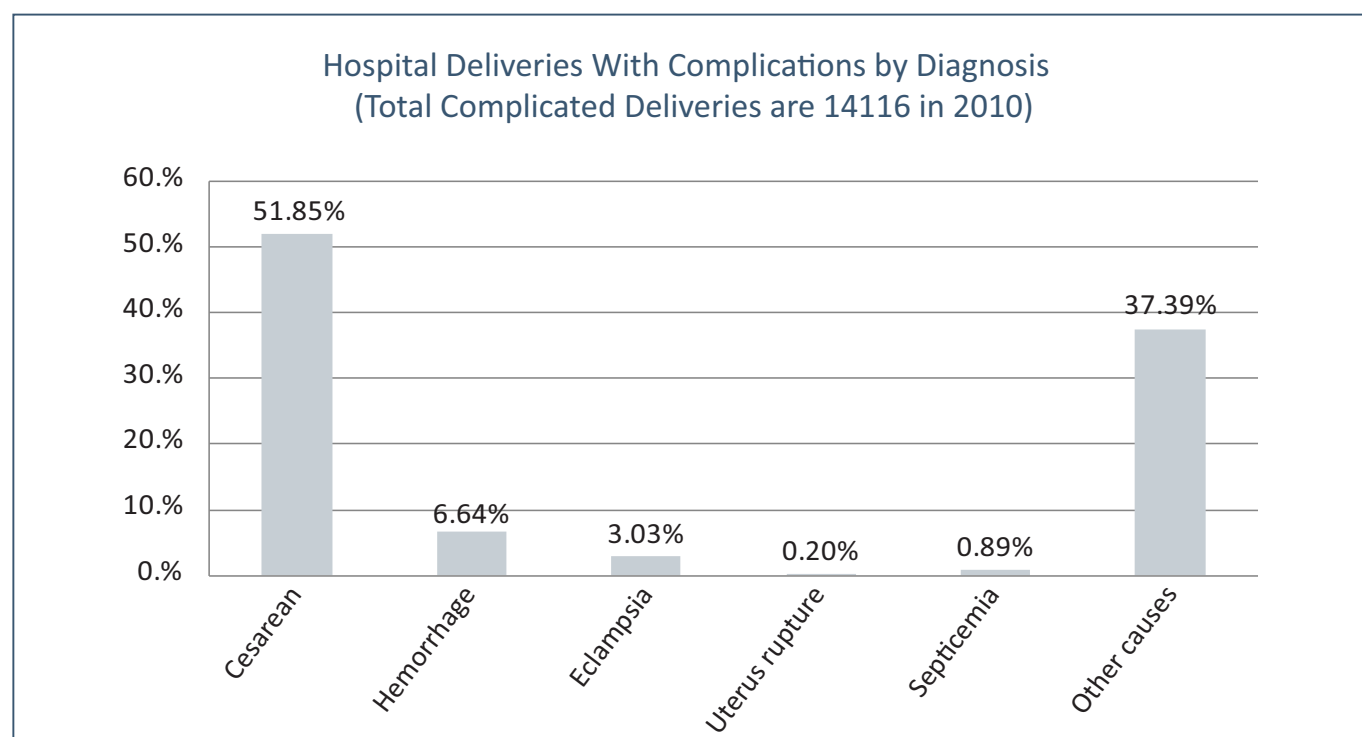
In 2010, 3% of all births that took place in a public health facility in Cambodia occurred by cesarean section. This represents 2.03% of all the estimated births in the country for 2010.

It is estimated that globally at least 2% of pregnant women need a major operation in order to survive. In parts of Cambodia, C-sections (CS) are difficult to access and many women who need a C-section are unable to

receive one. As demonstrated in the figure below, in many provinces the rate of CS was under 1% for 2010.



The MoH has set a target of a 4% national C-section rate by 2015. Although the CS rate was slightly above 2% in 2010, it is unclear whether these operations were in fact all necessary C-sections. Therefore, the CS rate for 2010 may not reflect the actual number of C-sections that were needed and received. When reading the graph above, it is important to note that C-sections carried out in the non-government Kantha Bopha hospital are not included in the numbers reported for Siem Reap Province.



Events:

- 6 October 2011: National Launching Workshop on Official Introduction HMIS Database
- 11-14 October 2011: OpenMRS implementer meeting in Kigali, Rwanda, Four Cambodia team members attended
- 26-27 October 2011: HMIS training course for private and NGO providers in Kampong Cham provinces

For more information, visit the Health Management Information System website, www.hiscambodia.org, or contact us at www.hiscambodia.org



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