

Adolescent Pregnancy: Thailand's National Agenda

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Background: Unintended pregnancy during adolescence can have profound effects on adolescents, their parents and family, the child and the country's developing population.

Objective: To analyze the adolescent pregnancy situation in Thailand in order to provide data and suggestions for refining the nation's medical curricula and enhancing health services for adolescents.

Material and Method: National data from Thailand's 3 major health care systems, regarding; adolescent pregnancy complications, deliveries, outcomes and deaths in the 2010 fiscal year were analyzed and compared to women 20-34 years of age.

Results: There were 80,523 adolescent pregnancies, comprising 25.9% of all pregnancies. The pregnancy rate for 15-19 year-olds was 33.4 per 1,000 and abortion was the outcome in 14.4%, (18.0% of all abortions). The adolescent birth rate was 28.7 in women 15-19 years of age on average, there were 188.8 adolescent deliveries per day. Adolescents gave birth to 37.2% of all preterm infants: the preterm birth rate was significantly greater than in women in the optimum reproductive age. Most deliveries were spontaneous vertex deliveries with lower complications and mortality rates than for women in the optimum reproductive age.

Conclusion: Unintended pregnancy can have profound effects on adolescent parents, their parents and families, the child and the country's developing population. It should, therefore, be considered a major public health problem that warrants immediate intervention at the national level.

Keywords: Adolescent, Pregnancy, Abortion, Preterm

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In 2010, Thailand's leading cause for admissions in adolescents was pregnancy-related (34.4%). Adolescent pregnancy is recognized as a vicious cycle of ill-health and poverty^(1,2). It can have a great impact on the adolescent mother, father, the child born to the adolescent parents and the grandparents. Giving birth during adolescence is associated with health risks and negative consequences. Many adolescent parents drop out of school and decrease their earning potential⁽³⁾. Adolescent childbearing has an effect on the health of the infants, with higher rates of perinatal deaths and low birth weights. Unwanted pregnancies may end in unsafe abortions. To reduce the maternal and perinatal mortality, the WHO called for an action plan to prevent early pregnancy and poor

reproductive outcomes among adolescents in 2011⁽²⁾.

Objective

To analyze the adolescent pregnancy situation in Thailand, the magnitude of the problem, pregnancy outcomes and complications; in order to provide data and suggestions for calibrating Thailand's medical curriculum to current issues and enhance health services for adolescents.

Material and Method

This is a retrospective descriptive study. National in-patient data, collected between October 1, 2009 and September 30, 2010 were retrieved from the 3 main health systems; the Universal Health Insurance Coverage, the Civil Servant Medical Benefit Scheme and Social Security, which covered 96% of the population. Details are as described in the study concept and protocol article "Health Situation Analysis of Thai People 2010: Implications for Health Education

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and Health service Reform” published in the same issue. Data was categorized into age groups as shown in Table 1. Due to the uniqueness of the adolescent age group, data were sub-categorized into younger adolescents (10-14 years of age) and older adolescents (15-19 years of age) for further analysis. Pregnancy outcomes, complications, mode of delivery, birth outcomes subsequent to primary diagnoses of delivery, maternal mortality (ICD-10 codes and details as shown in Table 1), length of hospital stay and hospital charges per visit in adolescents (10-19 year-olds) were compared to those of women in the optimum reproductive age (20-34 year-olds). The ICD-10 codes were: Pregnancy-O00-O08, O60.1, O60.2 and O80-O84; Abortion-O00-O08; Delivery-O60.1, O60.2 and O80-O84; and Preterm birth-O60.2. Basic descriptive statistics including: means, percentages, odds ratios and confidence intervals were used to analyze the data. Generalized estimating equation (GEE) was used to analyze the length of stay and hospital charges. Approval for the present study was obtained from the Research Ethics Committee, Khon Kaen University.

Results

Pregnancy outcomes, mode of delivery, birth outcomes complications and deaths by age groups are shown in Table 1. Basic descriptive statistics of pregnancy outcomes, birth outcomes and mode of delivery are presented as odds ratios (OR), 95% confidence intervals and p-values (Table 2). Statistic analyses of mean length of stay and hospital charges are presented as mean difference, 95% confidence intervals and p-values in Table 3.

Pregnancy

There were 80,523 adolescent pregnancies, 96.9% of which were in 15-19 year-olds. Adolescent pregnancies comprised 25.9% of all pregnancies in the presented data. The pregnancy rate was 33.4 per 1,000 women 15-19 years of age.

Pregnancy outcome

Delivery was the outcome in 85.6% of adolescent pregnancies, while the rest resulted in abortion. Five pregnancies occurred in girls under 10 years of age; 2 of which resulted in abortion and 3 in spontaneous vertex term deliveries. At the time of delivery, the youngest girl was 9 years and 2 months old.

There were 11,622 adolescent abortions, 95.1% of which occurred in 15-19 year-olds. Adolescent

abortions comprised 18.0% of all abortions in the presented data. In the younger adolescent group, 23.0% of pregnancies resulted in abortion. The abortion rate in adolescents was less than for the 20-34 year-olds group. When compared to women in the optimum reproductive age group, the abortion ratio was significantly higher (23.0%) in the younger adolescents but lower (14.2%) in the older adolescents groups.

There were 68,901 adolescent deliveries. The adolescent birth rate-calculated as deliveries per 1,000 women in the population of the same age group-was 28.7 per 1,000 15-19 year-olds, which was higher than in women in the optimum reproductive age. On average, there were 188.8 adolescent deliveries per day.

There were 4,281 adolescent preterm deliveries. The preterm birth rate was 13.3% and 6.6% per 100 live births in younger and older adolescents, greater than the rate for women in the optimum reproductive age group. Of all preterm deliveries, 37.2% were delivered by adolescents. The still birth rate was less than for women in the optimum reproductive age group.

Mode of delivery

The majority of adolescents underwent spontaneous delivery (97.6%). The rate of delivery by forceps and/or vacuum and caesarean section was 1.4% and 0.8% of total deliveries, respectively. Adolescents had a lower percentage of non-spontaneous deliveries than women in the optimum reproductive age group.

Complications

There were 70,667 adolescent admissions due to pregnancy-related complications; this comprised 20.8% of all admissions due to pregnancy-related complications for all age groups. Most of the complications were complications of labour and delivery (42.9%) including premature delivery. Adolescents (10-14 year-olds) were admitted with preterm labour without delivery 63.7 per 1,000 pregnant women the same age; which is 1.3 times more than for women in the optimum reproductive age group. When corrected for the number of pregnancies and age group, adolescents were admitted due to pregnancy related complications (877.6 episodes per 1,000 pregnancies) less frequently than were women in the optimum reproductive age group (1,146.3 episodes per 1,000 pregnancies).

Maternal mortality

There were 13 adolescent maternal deaths; all

Table 1. Pregnancy outcomes, mode of delivery, birth outcomes complications and deaths by maternal age group

Maternal age group	Number											% of age group									
	10-19	%	<10	%	10-14	%	15-19	%	20-34	%	>35	%	Total	10-19	15-19	20-34	>35	Total			
O00-O08 Pregnancy with abortive outcome	11,622	18.0	2	0.0	574	0.9	11,048	17.1	38,846	60.1	14,133	21.9	64,603	14.43	40.00	22.98	14.16	20.24	36.98	20.79	
O80-O84 Delivery	64,407		3	1,689		62,718		146,717		22,806		233,933									
O60 Preterm labour	8,772	0	0	394	0	8,378	0	15,748	0	2,772	0	27,292									
O60.0 Preterm labour without delivery	4,278	0	0	159	0	4,119	0	9,384	0	1,491	0	15,153									
O60.1 Preterm labour with preterm delivery	4,281	37.2	0	222	1.9	4,059	35.3	6,017	52.3	1,209	10.5	11,507	6.23	0.00	11.62	6.08	3.94	5.03	4.69		
O60.2 Preterm labour with term delivery	213	0	0	13	0	200	0	347	0	71	0	631									
Total term deliveries	68,901	28.0	3	1,702	0.8	62,918	27.2	147,064	62.2	22,877	9.8	234,564	85.57	60.00	77.02	85.84	79.76	63.02	79.21		
Total Pregnancies	80,523	25.9	5	2,498	0.8	78,025	25.1	191,927	61.8	38,219	12.3	310,674									
Pregnancy rate*	17.54			1.11		33.39		30.48		6.17											
Abortion rate*	2.53			0.25		4.73		6.17		0.85											
Birth rate*	15.01			0.85		28.66		24.31		5.41											
Preterm birth rate*	6.73	0.00		13.31		6.55		4.16													
Mode of delivery																					
O80 Spontaneous delivery	62,845	28.0	3	1,652	0.7	61,193	27.3	140,804	62.7	20,901	9.3	224,553	97.57	100.00	97.81	97.57	95.97	91.65	95.99		
O81 Forceps or vacuum	923	23.1	0	21	0.5	902	22.6	2,625	65.8	444	11.1	3,992	1.43	0.00	1.24	1.44	1.79	1.95	1.71		
O82 Caesarean section	540	11.4	0	12	0.3	528	11.1	2,875	60.5	1,336	28.1	4,751	0.84	0.00	0.71	0.84	1.96	5.86	2.03		
O83 Other assisted delivery	58	16.5	0	3	0.9	55	15.7	218	62.1	75	21.4	351	0.09	0.00	0.18	0.09	0.15	0.33	0.15		
O84 Multiple delivery	41	14.3	0	1	0.3	40	14.0	195	68.2	50	17.5	286	0.06	0.00	0.06	0.06	0.13	0.22	0.12		
Total Deliveries	64,407		3	1,689		62,718		146,717		22,806		233,933									
Outcomes																					
Z37.0 Single live birth	63,589	27.6	3	1,667	0.7	61,922	26.9	144,309	62.7	22,286	9.7	230,187	99.87	100.00	99.94	99.87	99.77	99.68	99.79		
Z37.1 Single stillbirth	35	22.0	0	0	0.0	35	22.0	98	61.6	26	16.4	159	0.05	0.00	0.00	0.06	0.07	0.12	0.07		
Z37.2 Twins, both live born	36	12.4	0	1	0.3	35	12.0	212	72.9	43	14.8	291	0.06	0.00	0.06	0.06	0.15	0.19	0.13		
Z37.3 Twins, one live born and one stillborn	4	44.4	0	0	0.0	4	44.4	5	55.6	0	0.0	9	0.01	0.00	0.00	0.01	0.00	0.00	0.00		
Z37.4 Twins, both stillborn	3	100	0	0	0.0	3	100.0	0	0.0	0	0.0	3	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Z37.5 Other multiple births, all live born	0	0.0	0	0	0.0	0	0.0	5	100.0	0	0.0	5	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Z37.6 Other multiple births, some live born	2	15.4	0	0	0.0	2	15.4	9	69.2	2	15.4	13	0.00	0.00	0.00	0.00	0.01	0.01	0.01		
Total births	63,669	27.6	3	1,668	0.7	62,001	26.9	144,638	62.7	22,357	9.7	230,667									
Total live births	63,629	27.6	3	1,668	0.7	61,961	26.9	144,538	62.7	22,331	9.7	230,501									
Total stillbirths	40	24.6	0	0	0.0	40	24.6	101	60.2	26	15.2	167									
Still birth rate*	0.63	0.00		0.00		0.65		0.69		1.16		0.72									

*Rates calculated by:

Pregnancy, abortion, and delivery rates; events per 1,000 women in population of the same age group. Abortion ratio; percent of pregnancies that ended with abortion per total pregnancies in women of the same age group (including spontaneous and induced abortions). Preterm birth rate; percent of preterm delivery per 100 live births in women of the same age group. Still birth rate; still births per 1,000 total births by women of the same age group. Mode of delivery ratio; percent per total deliveries in women of the same age group

Table 1. Cont.

Maternal age group	Number											% of age group					Total		
	10-19	%	<10	%	10-14	%	15-19	%	20-34	%	>35	%	Total	<10	10-14	15-19		20-34	>35
Complications O10-O16 Oedema, proteinuria and hypertensive disorders in pregnancy, childbirth and the puerperium	2,705	16.3	0	0.0	68	0.4	2,637	15.9	9,504	57.2	4,413	26.5	16,622	0.00	3.14	3.85	4.32	8.85	4.88
O20-O29 Other maternal disorders predominantly related pregnancy	7,377	16.4	0	0.0	284	0.6	7,093	15.8	29,913	66.5	7,689	17.1	44,979	0.00	13.11	10.35	13.60	15.43	13.21
O30-O48 Maternal care related to the fetus and amniotic cavity and possible delivery problems	23,140	18.4	1	0.0	611	0.5	22,529	17.9	83,972	66.7	18,699	14.9	125,812	50.00	28.20	32.89	38.17	37.51	36.95
O60-O75 Complications of labour and delivery	30,284	24.3	0	0.0	964	0.8	29,320	23.5	78,594	62.9	15,995	12.8	124,873	0.00	44.49	42.80	35.72	32.09	36.67
O85-O92 Complications predominantly related to the puerperium	909	25.5	0	0.0	35	1.0	874	24.6	2,253	63.3	397	11.2	3,559	0.00	1.62	1.28	1.02	0.80	1.05
O95-O99 Other obstetric conditions, not elsewhere classified	6,252	25.3	1	0.0	205	0.8	6,047	24.5	15,778	63.9	2,653	10.7	24,684	50.00	9.46	8.83	7.17	5.32	7.25
Total Complications	70,667	20.8	2	0.0	2,167	0.6	68,500	20.1	220,014	64.6	49,846	14.6	340,529						
Complication rate*	877.60	400.00	867.49	877.92	1,146.34	1,304.22	1,096.10												
Deaths	0	0	0	0	0	0	0	0	8	66.7	4	33.3	12	0.00	0.00	0.00	11.76	12.50	10.62
O00-O08 Pregnancy with abortive outcome	1	6.7	0	0	0	0	1	6.7	7	46.7	7	46.7	15	7.69	0.00	7.69	10.29	21.88	13.27
O10-O16 Oedema, proteinuria and hypertensive disorders in pregnancy, childbirth and the puerperium	1	7.7	0	0	0	0	1	7.7	8	61.5	4	30.8	13	7.69	0.00	7.69	11.76	12.50	11.50
O30-O48 Maternal care related to the fetus and amniotic cavity and possible delivery problems	2	8.3	0	0	0	0	2	8.3	16	66.7	6	25.0	24	15.38	0.00	15.38	23.53	18.75	21.24
O60-O75 Complications of labour and delivery	1	20.0	0	0	0	0	1	20.0	2	40.0	2	40.0	5	7.69	0.00	7.69	2.94	6.25	4.42
O80-O84 Delivery	2	13.3	0	0	0	0	2	13.3	8	53.3	5	33.3	15	15.38	0.00	15.38	11.76	15.63	13.27
O85-O92 Complications predominantly related to the puerperium	6	20.7	0	0	0	0	6	20.7	19	65.5	4	13.8	29	46.15	0.00	46.15	27.94	12.50	25.66
O95-O99 Other obstetric conditions, not elsewhere classified	13	11.5	0	0	0	0	13	11.5	68	60.2	32	28.3	113						
Total Deaths	20.43	0.00	20.98	47.05	143.30	49.02													
Maternal mortality rate*	2.6	5.3	2.6	2.8	3.1	2.8													
Mean length of hospital stay (days)	5.723	10.240	5.166	5.676	6.744	8.150	6.686												
Mean cost of hospital charge (baht)	830.43	0.07	22.88	807.54	2,735.33	707.27	5,103.52												
Sum cost of hospital charge (million baht)	4.59		2.25	2.34	6.30														

*Rates calculated by: Complication rates: complications per 1,000 pregnant women in population of the same age group. Maternal mortality rates: maternal deaths per 100,000 live births from women of the same age group

Table 2. Odds ratio (OR), the 95% confidence interval and p-values of adolescent pregnancy outcomes, birth outcomes and mode of delivery compared to women in the optimum reproductive age group

Age group (Year)	Pregnancy outcome					Birth outcome					Mode of Delivery				
	About (n)	Deliveries (n)	OR	95% CI	p-value	Pre-term (n)	Term (n)	OR	95% CI	p-value	Intervention (n)	Spontaneous (n)	OR	95% CI	p-value
10-14	574	1,924	1.18	1.07	<0.001	222	1,702	3.19	2.76	<0.001	36	1,652	0.54	0.37	<0.001
15-19	11,048	66,977	0.65	0.64	-0.67	4,059	62,918	1.58	1.51	-1.64	1,485	61,193	0.60	0.56	-0.63
20-34	38,846	153,081	1.00			6,017	147,064	1.00			5,718	140,804	1.00		

Table 3. Mean difference, the 95% confidence interval and p-values of the mean length of stay and hospital charges in pregnant adolescents compared to women in the optimum reproductive age group

Age group (Year)	Hospital charge 95%CI			Length of stay 95%CI		
	Mean Difference	Upper Bound	Lower Bound	Mean Difference	Upper Bound	Lower Bound
10-14	-1578.70	-3645.61	488.20	-0.26	-0.34	-0.18
15-19	-1067.92	-1489.52	-646.32	-0.20	-0.22	-0.19

of which were among the 15-19 year-olds group. The causes of death included: other maternal diseases classifiable elsewhere but complicating pregnancy childbirth and the puerperium (30.8%); Postpartum hemorrhage (15.4%); Maternal infectious and parasitic diseases classifiable elsewhere but complicating pregnancy childbirth and the puerperium (15.4%); Obstetric embolism (15.4%); Single spontaneous delivery (7.7%); Gestational hypertension with significant proteinuria (7.7%); and Maternal care for other known or suspected fetal problems (7.7%). The maternal mortality rate among adolescents (20.4) was less than that for women in the optimum reproductive age group (47.0).

Length of stay and hospital charges

The mean length of stay, for admissions related to pregnancy among adolescents was 2.6 days, which was significantly less than that of women in the optimum reproductive age (2.8 days).

The mean hospital charges per admission and cumulative cost for admissions related to pregnancy among adolescents was 5,723 Baht and 830.4 million Baht, which was less than for women in the optimum reproductive age group (*viz.*, 6,744 Baht and 2,635.4 million Baht). Though less, it was without statistical significance in the 10-14 age group and with statistical significance in the 15-19 age group, because data in the 10-14 age group had more deviation (Table 3).

Discussion

In Thailand, induced abortions are generally prohibited (in the Criminal Code) and currently considered legal only if necessary for the sake of the woman's health AND must be performed by a medical practitioner. There is evidence, however, that illegal abortions are performed^(4,5); thus, the actual number of pregnancies and abortions would be under-accounted. Moreover, since adolescent pregnancy can be stigmatizing, pregnant adolescents may seek antenatal and medical care from private clinics or hospitals, the data for which were not included in the present study and hence again the data would be underestimated.

Even though the data presented was retrieved from the three public health insurance schemes, which provided coverage for 96% of the population, the present study accounted for one-third (246,071) of the 761,689 deliveries reported by the Ministry of Public Health (MOPH) in 2010⁽⁶⁾. The number of deliveries and births in the presented data were not equivalent, this could possibly due to incomplete data registration or

coding misclassification. Low birth weight (P07) and prematurity (P70) were not included in this article due to the data's not being linked with maternal age.

The pregnancy and abortion rates have possibly been underestimated due to unreported abortion data. The data presented, nevertheless, does show that adolescent pregnancies comprised 25.9% of all pregnancies and that abortion was the outcome for 23.0% and 14.2% of younger and older adolescents, respectively. These statistics reflect a trend that 1 in 4 and 1 in 7 pregnancies in younger and older adolescents result in abortion. Among 10-14 year-olds, there was a significantly higher probability of abortion (OR = 1.18) than among women in the optimum reproductive age group while 15-19 year-olds had a significantly lower probability of abortion (OR = 0.65).

Since 1989, Thailand's adolescent birth rate has declined from 70 to 43 births per 1,000 among 15-19 year-olds in 2008⁽⁷⁾. According to the current data, the adolescent birth rate was 28.7, which although lower than reported previously remains higher than the rate in East Asia and Pacific sub-region (18 per 1,000)⁽⁷⁻⁹⁾. The percentage of adolescent births compared to total births, previously reported at 13.3% in 2000⁽¹⁰⁾ has increased to 18.0%. On average, that would be 1 adolescent mother for every 3.6 women who delivered in hospital. Throughout the year, that would average 188 deliveries by adolescent mothers per day; 11 of which would be preterm infants.

Preterm birth results in increased perinatal and infant morbidity and mortality. Consistent with previous reports, adolescents had a significantly higher preterm birth rate (13.3 and 6.6 in 10-14 and 15-19 year olds) than other age groups^(2,11,12). This was even more pronounced among younger adolescents where the rate as 2-fold greater than older adolescents (OR = 3.19, 1.58). One of 2.6 preterm deliveries in the current data occurred among adolescents.

Some reports have demonstrated an increase in caesarean section, forceps/vacuum-assisted deliveries, maternal complications and maternal mortality⁽¹⁾. The current research had contrasting results; as the rate of forceps and/or vacuum-assisted deliveries, caesarean section and multiple deliveries among adolescents was significantly lower than for 20-34 year-olds. There was, however, no statistical significance between the maternal mortality rate for adolescents and women in the prime reproductive age group.

Girls younger than 10 years old had the longest hospital stays and expenses per admission

across all age groups. Although the length of stay and hospital expenses among adolescents were less than among girls younger than 10 and women of optimum reproductive age, the future cost and burden that may develop due to long-term medical and psychosocial effects of adolescent pregnancy cannot be disregarded and is beyond the scope of our data.

Suggestions

In addition to the suggestions made in the article, "Thailand's Adolescent Health Situation: Prevention is the Key" published in the same issue, comprehensive understanding of the medical and psychosocial aspects and outcomes of adolescent pregnancy should be included in the medical curriculum for medical students. Given the lowest age at delivery in the presented data was below 10 years old, pediatricians have an important role through health supervision visits for school age children and/or school health programs. Maintaining open positive communication with adolescents should be emphasized to teachers, healthcare providers and parents in order to facilitate early detection and best outcomes and reduce complications regarding adolescent pregnancy⁽¹³⁾. Comprehensive sex education programs-effective in prevention of unintended adolescent pregnancies-should be provided to adolescents⁽¹⁴⁾. Similarly, developmentally-appropriate sex education programs should be provided to pre-adolescents. Ideal adolescent-friendly clinics with multidisciplinary services would (a) teach pregnancy options counseling (b) provide continuous medical and psychosocial services (c) promote supportive parenting and (d) aid adolescent and child growth and development⁽¹⁵⁻¹⁷⁾. In addition, the importance and value of breastfeeding should be emphasized.

Since unintended pregnancy can have profound effects on mother and child and society as a whole, adolescent pregnancy health statistics should be collected continuously in order to monitor changing trends and improve provided care. Crucial information includes: decisions made after options counseling, obstetric outcomes, perinatal outcomes and long-term developmental and psychosocial outcomes of the adolescent parents and child. This is indeed a major public health concern affecting our youth and future generations and it needs focused and immediate attention at the national level.

Limitation and strength

The data for the present study was retrieved

from primary through tertiary care hospitals throughout the country, thus represents a sample on the national level. The data includes younger adolescents of 10-14 years old, which is not frequently reported. Though the presented data is objective from the registry system, the numbers of deliveries represent but one-third of those reported from the MOPH, possibly causing a sample bias. The reliability and validity of the results also depend upon correct diagnosis and coding. Caution should therefore be exercised when extrapolating the results.

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Potential conflicts of interest

None.

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สถานการณ์การตั้งครรภ์ในวัยรุ่นไทย: วาระแห่งชาติ

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ภูมิหลัง: การตั้งครรภ์ไม่พึงประสงค์ในวัยรุ่นสามารถส่งผลกระทบต่อตัววัยรุ่นเอง พ่อแม่ ครอบครัว และทารกที่เกิดจากมารดาวัยรุ่นและการพัฒนาประชากรของประเทศเป็นอย่างมาก

วัตถุประสงค์: เพื่อวิเคราะห์สถานการณ์การตั้งครรภ์ในวัยรุ่นไทย เพื่อเป็นข้อมูลประกอบการปรับปรุงการเรียนการสอนในโรงเรียนแพทย์ และการให้บริการสุขภาพให้สอดคล้องกับสถานการณ์ปัจจุบันยิ่งขึ้น

วัสดุและวิธีการ: ได้นำข้อมูล พ.ศ. 2553 มาวิเคราะห์ และเปรียบเทียบการตั้งครรภ์ ภาวะแทรกซ้อน การคลอด และการเสียชีวิตของวัยรุ่นอายุน้อยกว่า 20 ปี กับหญิงในวัยเจริญพันธุ์อายุ 20-34 ปี

ผลการศึกษา: มีวัยรุ่นตั้งครรภ์ 80,523 คน คิดเป็นร้อยละ 25.9 ของการตั้งครรภ์ทั้งหมด อัตราการตั้งครรภ์ในวัยรุ่นเท่ากับ 33.4 ต่อหญิงอายุ 15-19 ปี 1,000 คน ร้อยละ 14.4 ของการตั้งครรภ์ในวัยรุ่นสิ้นสุดด้วยการแท้ง ซึ่งคิดเป็น 18% ของการแท้งทั้งหมด อัตราการเกิดจากมารดาวัยรุ่นเท่ากับ 28.7 ต่อหญิงวัยรุ่น 1,000 คน โดยเฉลี่ยมีทารกเกิดจากมารดาวัยรุ่นวันละ 188.8 คน และพบว่ามารดาวัยรุ่นมีความเสี่ยงที่จะคลอดทารกก่อนกำหนดมากกว่าหญิงวัยเจริญพันธุ์อย่างมีนัยสำคัญทางสถิติ โดยร้อยละ 37.2 ของทารกที่คลอดก่อนกำหนดเกิดจากมารดาวัยรุ่น

สรุป: การตั้งครรภ์ไม่พึงประสงค์ยังส่งผลกระทบต่อหลายด้าน การตั้งครรภ์ไม่พึงประสงค์ในมารดาวัยรุ่นจึงควรเป็นวาระระดับชาติที่ต้องได้รับการแก้ไขอย่างเร่งด่วน
