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The 'July Phenomenon' in Obstetrics



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OBSTETRICS AND GYNECOLOGY



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What is the “July Phenomenon”?



July 2, 1966
By Arthur Getz



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The July Phenomenon in Medicine

- New academic year
- New interns begin training
- Inferior health care is provided by novice physicians





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MEDICINE

New Docs on the Block

According to medical lore, July is the worst time to be hospitalized because that's when inexperienced med students start clinical training. But is summer really riskier for patients?

By [Jesse Ellison](#) | Newsweek Web Exclusive

Jul 1, 2008 | Updated: 1:19 p.m. ET Jul 1, 2008



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Essay; It's July, the Greenest Month in Hospitals. No Need to Panic

By ABIGAIL ZUGER
Published: July 7, 1998

THIS is New Year's week at your local hospital, where July 1 marks a beginning just as fraught with symbolism and expectation as Jan. 1 is elsewhere. Medical schools end in June and hospital training programs start in July; last week everyone in them lurched a step forward.

In other words, thousands of medical workers at hospitals across the country -- from new interns to seventh-year surgical fellows -- have been at their present jobs for less than the blink of an eye.

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The New York Times

Wednesday, August 6, 2008

Health

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CASES; Their Coats Are White, but Their Hands Are Green

By RICHARD A. FRIEDMAN, M.D.
Published: June 29, 2004

July, popular belief has it, is a perilous time to get sick.

Come July 1 every year, thousands of newly minted medical school graduates flood teaching hospitals to begin residency programs. They have lots of enthusiasm, anxiety and book knowledge -- and extremely little clinical experience.

It is not just the lay public who is fearful of medical mishaps in July. Dr. Ann E. Hoenhaus, chairwoman of medicine at the Animal Medical Center in Manhattan, remembers taking a bad spill on her bicycle when she was a veterinary intern.

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White Coat Notes

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SHORT WHITE COAT

The July phenomenon

Posted by Joshua U. Klein July 18, 2008 01:22 PM

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Short White Coat is a blog about learning to be a doctor. Posts appear here as part of White Coat Notes. Joshua U. Klein, MD, is a fourth-year obstetrics and gynecology resident at Brigham and Women's and Massachusetts General hospitals.

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Is There a July Phenomenon in Obstetrics?





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MISSION

Education is an integral part of the tripartite mission of the Department of Obstetrics and Gynecology, along with patient care and research. As a world leader in women's health care, our mission is to provide the finest comprehensive training for future practitioners in our specialty by using the latest knowledge and innovative research and to provide to the community at large the





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the month of July.

Journal of Perinatology (2007) **27**, 73–76. doi:10.1038/sj.jp.7211635

Keywords: training; internship and residency; teaching hospitals; obstetrics; obstetrics and gynecology department; seasons

Introduction

The month of July is rumored to be a particularly dangerous time to be a patient in a teaching hospital.^{1–6} The concern is that the turnover of responsibility at the beginning of the academic year

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STUDY OBJECTIVE

To determine whether operator-dependent obstetric complications occur at higher rates in July at teaching hospitals using a large, nationwide sample of deliveries.



STUDY DESIGN

- **Data obtained from the Healthcare Cost and Utilization Project Nationwide Inpatient Sample (HCUP-NIS) from 1998-2002.**
- **Largest all-payer inpatient care database in US.**
- **Representative sample of discharges from non-Federal, acute care hospitals in US**
- **Database includes patient information coded at time of discharge, including age, race, primary expected payer and up to 15 diagnosis codes and procedure ICD-9 codes.**



STUDY DESIGN

- **Singleton deliveries and singleton livebirth admissions among Medicaid patients at teaching hospitals with Ob/Gyn residents working on Labor & Delivery were identified.**
- **Medicaid patient group most likely to be cared for by residents.**
- **Outcomes for various complications for these patients in July were compared to those occurring in the months from August to June.**



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STUDY RESULTS

- 217 hospitals variably sampled each year
- Majority were urban hospitals with > 500 beds

Table 1 Baseline hospital characteristics

<i>Total^a</i>	217
<i>Bed size^b</i>	16.6% (36)
Small	28.1% (61)
Medium	30.0% (65)
Large	55.3% (120)
<i>Location</i>	
Rural	2.3% (5)
Urban	97.7% (212)
<i>Region</i>	
Northeast	41.9% (91)
Midwest	23.0% (50)
South	13.8% (30)
West	21.2% (46)

^aThis group of 217 hospitals was variably sampled each year, such that the number of hospitals contributing cases to our cohort in a given year ranged from 68–86.

^bThe criteria for bed size vary according to location. For urban hospitals, the criteria are small = 1–299 beds, medium = 300–499 beds, and large = 500+beds. For rural hospitals, the criteria are small = 1–49 beds, medium = 50–99 beds, and large = 100+beds.

Note: when a hospital was assigned different bed sizes in different years, the larger size was reported here.



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STUDY RESULTS

- No differences in baseline maternal demographics

Table 2 Patient demographics

	<i>July</i>	<i>August-June</i>	<i>P-value</i>
Total	26 546	272 584	—
Mean age \pm s.d.	24.9 \pm 6.0	24.9 \pm 6.0	0.521
Non-Caucasian race ^a	56.2% (14929)	57.2% (156011)	0.419
Median income for patient's ZIP code less than \$45 000 ^b	73.2% (19439)	73.1% (199319)	0.705

^aRace is not coded for 76 075 (25.4%) of patients.

^bMedian income is not coded for 3017 (1.0%) of patients.



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STUDY RESULTS

- **26,546 patients delivered in the month of July**
- **272,584 patients delivered from August to June**
 - (Average of 24,780 deliveries per month)
- **No significant difference in the rates of any complications**
 - Caesarean delivery
 - Vacuum or forceps-associated vaginal delivery
 - Urethral or bladder injury
 - Third and fourth degree lacerations
 - Wound complications
 - Postpartum hemorrhage and transfusion
 - Shoulder dystocia
 - Chorioamnionitis
 - Anesthesia related events



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STUDY RESULTS

- No change in rates of birth asphyxia or brachial plexus injury during summer months

Table 3 Complications

<i>Maternal complications</i>	<i>July</i>	<i>August-June</i>	<i>P-value</i>	<i>Odds ratio (95% CI)</i>
Total singleton deliveries	26 546	272 584	—	
Cesarean delivery	19.6% (5193)	19.3% (52526)	0.249	1.02 (0.99, 1.05)
Urethral/bladder injury	3.7% (991)	3.6% (9878)	0.364	1.03 (0.96, 1.10)
Third degree laceration	2.6% (693)	2.7% (7404)	0.311	0.96 (0.89, 1.04)
Fourth degree laceration	0.8% (200)	0.8% (2267)	0.178	0.91 (0.78, 1.05)
Complication of cesarean or perineal wound	0.3% (68)	0.3% (740)	0.646	0.94 (0.72, 1.21)
Postpartum hemorrhage	3.0% (804)	3.0% (8105)	0.613	1.02 (0.95, 1.10)
Transfusion	0.6% (150)	0.5% (1476)	0.618	1.04 (0.88, 1.24)
Shoulder dystocia	1.6% (417)	1.5% (4209)	0.736	1.02 (0.92, 1.13)
Infection of the amniotic cavity	2.8% (745)	2.8% (7592)	0.841	1.01 (0.93, 1.09)
Anesthesia related complication	0.2% (61)	0.2% (647)	0.809	0.97 (0.73, 1.26)
<i>Neonatal complications</i>				
Total singleton livebirth admissions	26175	266158	—	
Brachial plexus injury	0.2% (56)	0.2% (552)	0.824	1.03 (0.77, 1.36)
Birth asphyxia	0.1% (38)	0.1% (357)	0.643	1.08 (0.75, 1.52)



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CONCLUSIONS

...It's Safe to Deliver in July!

- **No difference in obstetric complications between women delivered at teaching hospitals in the month of July as compared to women delivered during other months of the year.**
- **Given sampling technique of NIS and large sample size, our cohort is likely an accurate representation of current state of practice of obstetrics at teaching hospitals in the US.**
- **Post-hoc power calculation showed that the study was well powered to detect even subtle differences in clinical outcomes.**



WHY?

- **Increased supervision at the start of the academic year.**
- **Previous study investigating teaching hospitals found those with highest attending-to-resident ratios had less of a July phenomenon with regard to length of stay and risk-adjusted mortality.**



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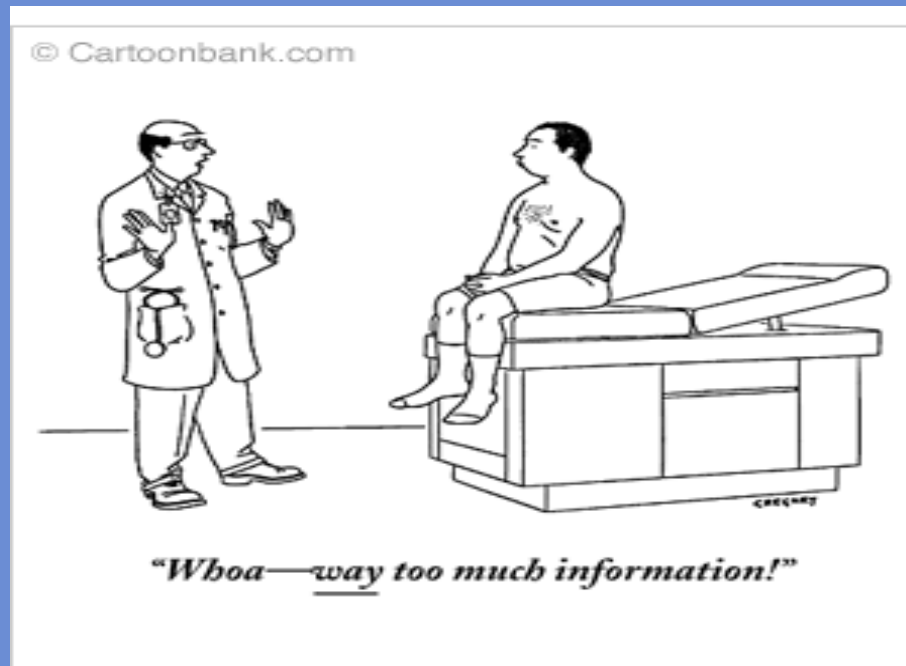
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THANK YOU

Questions?





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