

Eighty Hours and Counting:
The Effects of Duty Hour Regulations
on Medical Education - Now and in the
Future"

Hilary M. Haftel, MD, MHPE

Disclosure

- I have no relevant financial relationships with the manufacturer(s) of any commercial product(s) and/or provider of commercial services discussed in this CME activity.
- I do not intend to discuss commercial products or services and unapproved/investigative uses of a commercial product/device in my presentation.

Overview

- History of Duty Hours: How did this all start?
- History of Duty Hours in the Department of Pediatrics at UM
- Outcomes in the Department
- Outcomes nationally
- Where do we go from here?

The Timeline

- October 1984: Libby Zion checks into a New York Hospital and dies 24 hours later. Her father, a newspaper columnist and lawyer, blames the medical education system that led to physician fatigue and lack of supervision for the “murder” of his daughter.
- May 1986: Manhattan District Attorney Robert Morgenthau agreed to let a grand jury consider murder charges. Although it declined to indict, the jury issued a report strongly criticizing "the supervision of interns and junior residents at a hospital in New York County”
- 1987: New York State Health Commissioner David Axelrod established a blue-ribbon panel of experts headed by Bertrand M. Bell, an outspoken primary care physician at the Albert Einstein College of Medicine in the Bronx, to evaluate the training and supervision of doctors in the state. Bell had long criticized the lack of supervision of residents.

The Timeline

- 1989: New York state adopts the Bell Commission's recommendations that residents could not work more than 80 hours a week or more than 24 consecutive hours and that senior physicians needed to be physically present in the hospital at all times. Come to be known of the 405 Law.
- Winter 1994, *Zion v. New York Hospital* finally went to trial. Defense allegations include that Ms. Zion snorted cocaine prior to admission. Jury awards \$375,000, but no punitive damages.
- The 405 law was largely ignored. However, in 1997, then-public advocate Mark Green released a report that exposed the defiance on the part of the hospitals and embarrassed the state Health Department. Since then, the state has cracked down with serious financial penalties for hospitals that don't comply.
- 2003: ACGME implements national Duty Hour

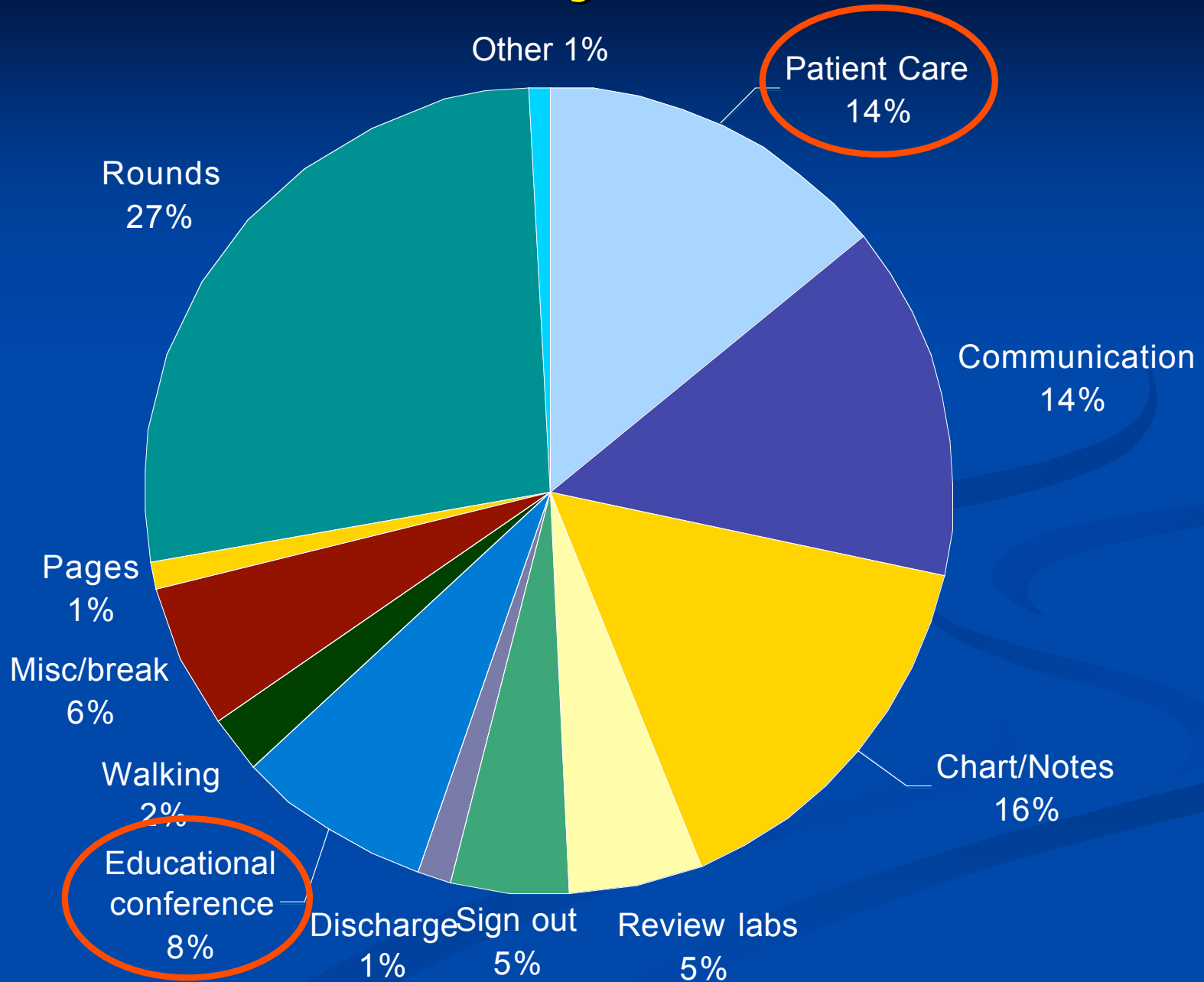
Time Study

- In March-April 2003, UM Pediatrics Dept conducted a time study of two of its general inpatient pediatrics services
- Goals
 - Identify process inefficiencies that affect patient care and resident education.
 - Highlight patient care tasks that could be more appropriately assigned to non-physician staff.
 - Develop more efficient methods to direct/improve patient care and resident education.

Time Study

- Study consisted of three phases:
 - Time Study
 - Work Sampling Study
 - Interviews
- Intern/resident responsibilities categorized into 47 different tasks.
- Interns shadowed and tasks recorded over a six week period.
- Data verified using sampling with random pagers

Time Study: Results



Conclusions of Time Study

- Very little of resident time was spent in direct patient care or education
- Most of a resident's day was spent rounding, charting, and on clerical tasks to facilitate patient care
- Solutions to shift non-physician tasks away from residents may be a potential solution to reducing resident work hours

Resident Assistants

- In September 2003, the Department of Pediatrics instituted a Resident Assistants (RA) program by hiring one clerical-level person per inpatient team to be responsible for all clerical tasks that the residents themselves had performed prior to the initiation of the program.
- The services involved included the four general inpatient services, heme/onc, and NICU

Results

- 6 RAs participated in the data collection (100%)
- An average of 2329 minutes was logged by each RA (range 1630-2950)
- All tasks performed by the RAs were previously performed by the Pediatric Residents.
- Certain tasks performed by the Neonatal ICU RA were unique to that environment, while the 5 other RA's tasks were similar.

RAs: Most Frequent Tasks

Scheduling inpt tests/procedures	15.5% (\pm 6.45)
Chart-related tasks	12.8% (\pm 2.6)
Rounding with team	12.5% (\pm 1.4)
Scheduling post-DC appt/proced	11.6% (\pm 5.7)
Obtain outside records/results	7.0% (\pm 2.9)
Paging	6.3% (\pm 1.0)
Providing info during rounds	6.0% (\pm 3.5)

RAs: Other Tasks

Insurance/preauthorization/scripts	4.4% (\pm 1.0)
Discharge facilitation	4.0% (\pm 3.3)
Education and Communication	3.1% (\pm 0.6)
Faxing and Tubing	3.0% (\pm 1.9)
Checking appointment times	2.5% (\pm 0.9)
Followup for discharged patients	2.5% (\pm 1.4)
Verifying accuracy of information	2.3% (\pm 2.4)
Other	6.5% (\pm 3.4)

Goals

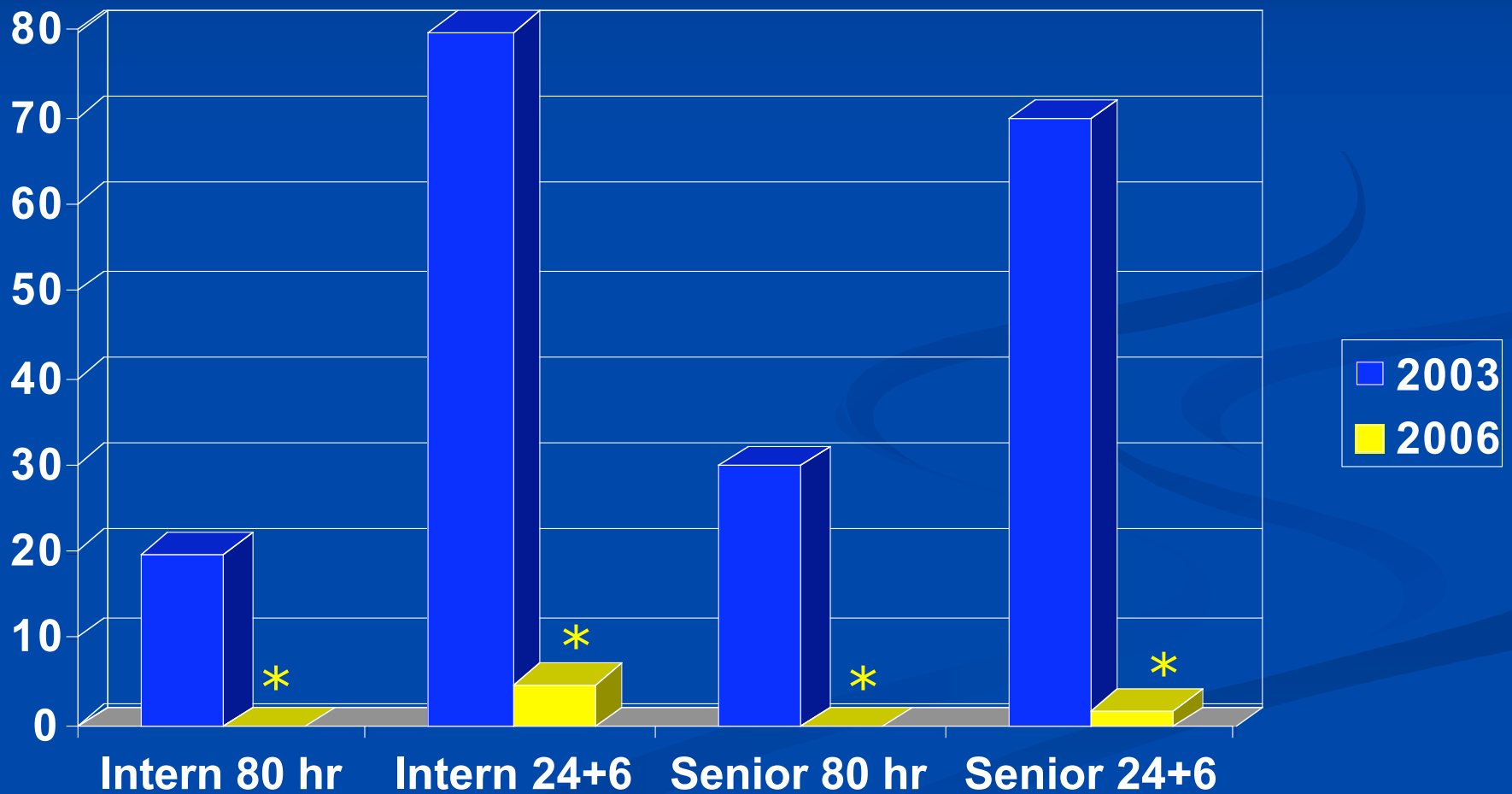
- The purpose of this project was to study the effects of the Resident Assistants on overall quality of rotations and the frequency of duty hour violations

Methodology

- Duty hour logs for all Pediatric Residents for October-November 2003 and 2006 were analyzed for frequency of duty hour violations
- Rotation evaluations for General Inpatient Services for AY 2003 and AY 2006 were obtained
- Data entered into database and descriptive statistics and t-tests calculated using SPSS 14.0

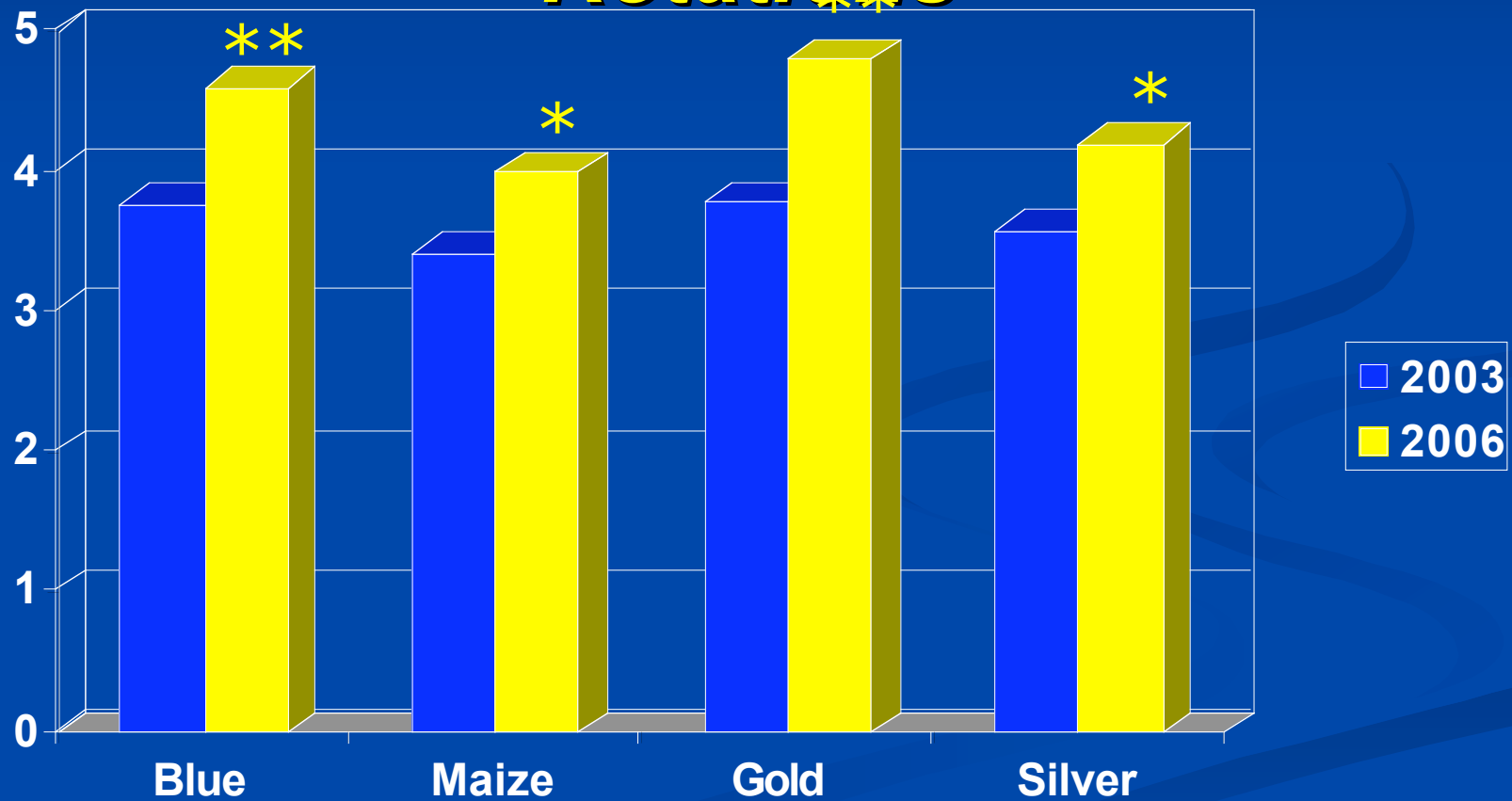
Results

Percentage of Residents with Duty Hour Violations 2003 and 2006



* $p < 0.01$

Quality of General Inpatient Rotations



* $p < 0.05$
** $p < 0.01$

Results

- There was a statistically significant reduction in the number of residents with duty hour violations following the institution of the Resident Assistant Program, both in >80 hour/week rule and 24+6 rule
- The quality of Inpatient rotations increased significantly following institution of the RA program
- Qualitative analysis revealed that residents considered the RAs to be important to the quality of the inpatient rotations
- Some duty hour violations still occurred, but only of the 24+6 rule

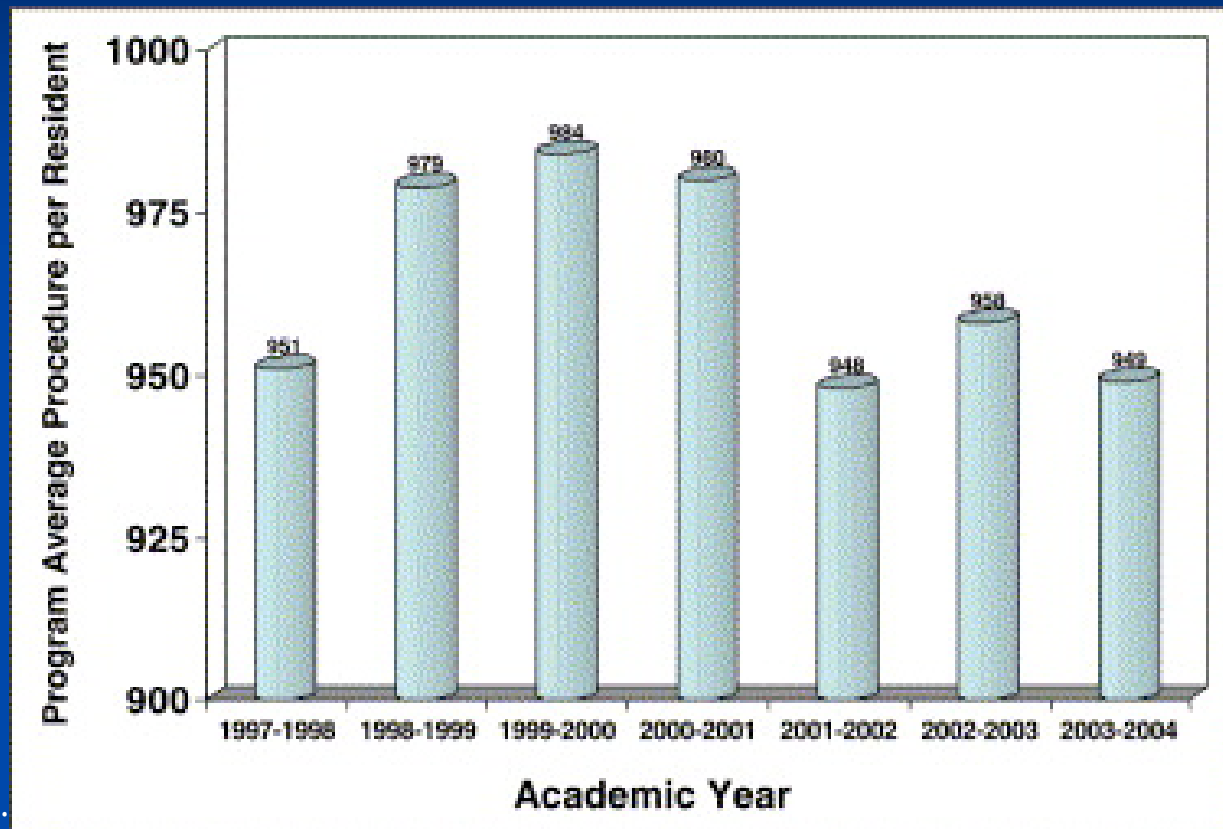


Fig. 1. Program Average Procedure per Resident for the academic years 1997–1998 to 2003–2004. These data indicate a sharp decrease in the average number of total procedures (both resident and program averages) in the academic year 2001–2002. This reduction is hypothesized to occur secondary to an ACGME database system conversion that began in the academic year 2001.

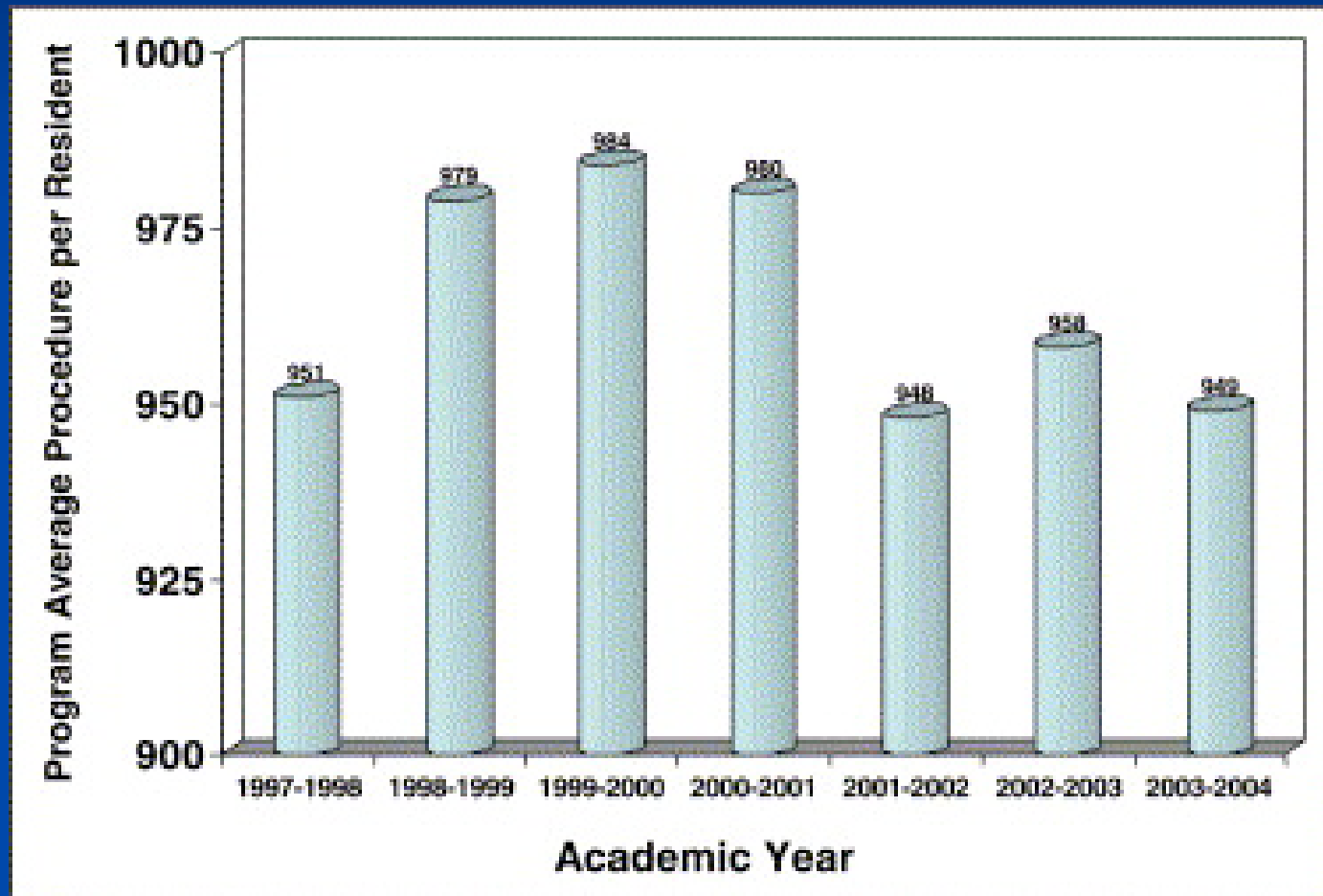


Fig. 2. Indicates the average (of averages) for the major surgical procedures completed per resident (per program) in the academic years 1997–2004.

Limitations of study

- Data collected for duty hour violations occurred over a two month period, may not be fully representative
- Duty hour data is self-reported
- Other factors may have also impacted on the quality of the rotation
- Single center study

Conclusions

- Residents Assistants are a viable alternative to residents in performing clerical tasks necessary for hospitalized patient care.
- The institution of RAs has significantly decreased the frequency of duty hour violations.
- The use of RAs on inpatient services improves the quality of inpatient rotations.
- This model may be generalizable to other inpatient services and other hospital programs.