



# HEALTH CARE ADVISORY BOARD

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FACT BRIEF

## BENCHMARKING OBSTETRICS (OB) STAFF

JULY 1999

### **Research Methodology**

### **Executive Summary**

### **Source Information**

### **Research Findings**

- Background
- C-section Staffing
- Prenatal Education Staffing
- Department Staffing

This project was researched and written to fulfill the specific research request of a single member of the Health Care Advisory Board and as a result may not satisfy the information needs of other members. In its short answer research, the Health Care Advisory Board refrains from endorsing or recommending a particular product, service or program in any respect. Sources are contacted at random within the parameters set by the requesting member, and the resulting sample is rarely of statistically significant size. That said, it is the goal of the Health Care Advisory Board to provide a balanced review of the study topic within the parameters of this project. The Health Care Advisory Board encourages members who have additional questions about this topic to assign custom research projects of their own design.

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## THE ADVISORY BOARD COMPANY

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### **FACT BRIEF**

#### **Benchmarking Obstetrics (OB) Staff** **July 27, 1999**

### **RESEARCH METHODOLOGY**

During the course of research, staff members contacted OB administrators in hospitals that deliver between 1,200 and 1,700 infants annually in order to obtain benchmarking information regarding OB staff. Hospitals that deliver the specified range of annual births were identified through the American Hospital Association's 1998 *Healthcare QuickDisc* CD-ROM.

### **EXECUTIVE SUMMARY**

All profiled hospitals' OB departments share the following characteristics:

#### **CHARACTERISTICS OF PROFILED HOSPITAL'S OB DEPARTMENTS**

- ✓ A primary circulating nurse from labor and delivery recovers c-section patients
- ✓ Average length of stay of 2 days for delivering mother's
- ✓ Mother/baby care is available
- ✓ Prenatal education classes do not adversely affect productivity
- ✓ Secretaries are maintained in various units of the department
- ✓ The primary nurse circulates during a c-section
- ✓ Time spent with outpatients is included in an estimation of nurse staffing levels

In addition, the number of cost centers at profiled hospitals range between two and four, and the majority of prenatal education classes at profiled hospitals are taught by RNs. Administrators approximated that between six and ten hours are spent monthly on prenatal education. Finally, nursery staffing levels varied significantly.

### **SOURCE INFORMATION**

Information concerning the hospitals profiled within this report is outlined, in pseudonym form, below.

- **Hospital A** is a 300-bed, not-for-profit hospital located in a small city in the South.
- **Hospital B** is a 300-bed, not-for-profit hospital located in a small city in the South.
- **Hospital C** is a 200-bed, not-for-profit hospital located in a small city in the Midwest.
- **Hospital D** is a 200-bed, not-for-profit hospital located in a small city in the East.

### **BACKGROUND**

*What is the average number of deliveries performed per year? What is the average length of stay (ALOS) for a delivering mother? How many cost centers do profiled hospitals maintain for labor and delivery (L&D), mother/baby (M/B) and the nursery? Which units do the cost centers include? Do the profiled hospitals provide M/B care?*

The majority of profiled hospitals maintain a two day ALOS for delivering mothers. In addition, the number of cost centers at profiled hospitals range between two and four, and all hospitals provide mother/baby care. The table on the following page presents additional background information for the profiled hospitals:

BACKGROUND INFORMATION OF PROFILED HOSPITALS				
	Average annual deliveries	ALOS <sup>1</sup> for mother's	Cost centers	Availability of M/B care
<b>A</b>	1,550	2 days	2 cost centers: • L&D • M/B and nursery	✓
<b>B</b>	1,440	2 days	2 cost centers: • L&D • M/B and nursery	✓
<b>C</b>	1,310	Vaginal delivery: 1-2 days C-section delivery: 3 days	3 cost centers: • L&D • LDRP (labor, delivery, recovery and post-partum) • Nursery	✓
<b>D</b>	1,420	2 days	4 cost centers: • L&D • M/B • NICU <sup>2</sup> • Nursery	✓
<sup>1</sup> ALOS is defined as delivery through discharge. <sup>2</sup> NICU = Neonatal Intensive Care Unit				

*Is the time nurses spend with outpatients used to assist in the calculation of staffing levels?*

All hospitals profiled incorporate the time nurses spend with outpatients into estimations of staffing levels.

Administrators at **Hospital A** track the amount of time nurses spend with outpatients, and use previously recorded average times to predict future staffing needs.

Outpatients at **Hospital B** are included in productivity calculations as requiring approximately 1/3 of the time of an inpatient. Therefore, staffing levels are projected using the following formula:

$$\frac{\# \text{ of inpatients} + \# \text{ of outpatients}}{3} = \text{projected statistics for upcoming year}$$

**Hospital C** maintains the following patient to nurse ratio:

$$1.5 \text{ patients} : 1 \text{ nurse}$$

This ratio includes a time adjustment for outpatients; otherwise, the ratio would be two patients for every nurse.

At **Hospital D**, time spent with outpatients is calculated according to the procedure being performed. For example, post-partum visits require two nurse hours, while non-stress tests are calculated to require 45 minutes. Average times nurses spent with outpatients during past visits are used to predict future staffing levels.

**C-SECTION STAFFING**

*Staff from which hospital departments perform c-sections? What is the typical staffing for c-sections? Who recovers the patient?*

All hospitals combine staff from various departments in order to perform a c-section. In addition, a primary circulating nurse from L&D recovers the patient at all profiled hospitals. C-section staffing information is outlined in tabular format below.

<b>C-SECTION STAFFING INFORMATION</b>		
	<b>Hospital department</b>	<b>Typical staffing levels for C-sections</b>
<b>A</b>	OR	<ul style="list-style-type: none"> <li>➤ 1 rotating anesthesiologist</li> <li>➤ 1 certified registered nurse anesthetists (CRNA)</li> </ul>
	L&D	<ul style="list-style-type: none"> <li>➤ 1 scrub technician</li> <li>➤ 1 circulating RN**</li> </ul>
	OB	<ul style="list-style-type: none"> <li>➤ 1 primary OB physician</li> <li>➤ 1 secondary OB physician</li> </ul>
	M/B	<ul style="list-style-type: none"> <li>➤ 1 nurse for baby</li> </ul>
<b>B</b>	L&D	<ul style="list-style-type: none"> <li>➤ 1 circulating RN**</li> <li>➤ 1 scrub nurse <sup>1</sup></li> <li>➤ 1 first assist RN</li> </ul>
	NICU	<ul style="list-style-type: none"> <li>➤ 1 respiratory therapist</li> <li>➤ 1 NICU RN</li> </ul>
	OR	<ul style="list-style-type: none"> <li>➤ 1 CRNA</li> <li>➤ 1 anesthesiologist</li> </ul>
<b>C</b>	L&D	<ul style="list-style-type: none"> <li>➤ 1 circulating RN**</li> <li>➤ 1 OB technician</li> <li>➤ 1 circulating RN for baby</li> <li>➤ 1 CRNA</li> </ul>
	Private practice	<ul style="list-style-type: none"> <li>➤ 2 physicians</li> </ul>
<b>D</b>	L&D	<ul style="list-style-type: none"> <li>➤ 1 scrub RN</li> <li>➤ 1 circulating RN**</li> </ul>
	NICU	<ul style="list-style-type: none"> <li>➤ 1 NICU RN for baby</li> </ul>
	OB	<ul style="list-style-type: none"> <li>➤ 2 OB physicians</li> </ul>
	OR	<ul style="list-style-type: none"> <li>➤ 1 anesthesiologist</li> </ul>

\*\* In order to maintain continuity of care, this position is also responsible for recovering the patient.

<sup>1</sup> This position is filled by either an RN or a technician.

*Are certified surgical technicians costed to L&D or to the OR?*

At both **Hospital A** and **C**, surgical technicians are costed to L&D. **Hospital B** does not maintain surgical technicians; instead, the hospital employs OB technicians who are costed to L&D. **Hospital D** does not maintain technicians.

**PRENATAL EDUCATION STAFFING**

*Who teaches prenatal education? What is their background and to what budget is the position costed? Approximately how many hours per month are spent in prenatal education? Does this adversely affect productivity?*

At the majority of profiled hospitals, an RN teaches prenatal education. Hospitals reported that between six and ten hours are spent monthly on prenatal education; however, administrators concurred that classes do not interfere with productivity.

At **Hospital A**, the education coordinator provides prenatal education. This RN position is costed to the education department.

RNs from all units of the maternal and child department provide prenatal education at **Hospital B**. With the exception of the education coordinator, who maintains responsibilities such as scheduling and evaluating materials, all RNs and classes are costed to the maternal and child health department. A total of between six and ten hours are spent monthly on prenatal education. According to sources at Hospital B, prenatal education does not affect productivity. RNs are typically scheduled for 36 hours per week, which allows adequate time to teach classes.

A clinical nurse specialist, who holds a master's of science in nursing, teaches prenatal education at **Hospital C**. Approximately six hours per month are costed to L&D for this position. The source at Hospital C indicated that prenatal education does not affect productivity, as the clinical nurse specialist's primary responsibility is staff and community education.

Prenatal education classes at **Hospital D** are taught by those RNs within the maternal and child health department who are certified instructors. Classes are a private enterprise; therefore, RNs are paid directly by the patients. RNs rent classroom space from the hospital and teach classes on a volunteer basis.

## **DEPARTMENT STAFFING**

### *What is the staffing for the nursery?*

Nursery staffing levels varied significantly at profiled hospitals.

The nursery at **Hospital A** maintains the staffing levels listed below during the day shift, which includes the hours between 6 a.m. and 2 p.m.

- ❖ 3 RNs
- ❖ 1 OB scrub technician
- ❖ 1 secretary

After 2 p.m., the nursery maintains the following staffing levels:

- ❖ 3 RNs
- ❖ 1 on-call RN
- ❖ 1 OB scrub technician

In the evening, the OB scrub technician also performs secretarial duties.

Since **Hospital B** provides mother/baby care, there is no nursery in the traditional sense. The nursery is only staffed with one admissions nurse; all other assignments are to mother/baby couplets. Staffing ratios for mother/baby couplets are presented below.

- ❖ Day (7 a.m.–7 p.m.): 1 nurse : 3-4 couplets
- ❖ Night (7 p.m.–7 a.m.): 1 nurse : 4-5 couplets

Nurses may be either RNs or LPNs; in addition, ratios vary depending on the acuity of the patients. Finally, two secretaries are employed by the mother/baby unit who work the following shifts:

- ❖ Weekdays: 6:30 a.m.–11 p.m.
- ❖ Weekends: 7 a.m.–7 p.m.

One full-time intensive care nurse and one circulating LDRP nurse is assigned to the nursery at **Hospital C**. However, the source noted that during busy periods, staff from the entire birth center spend time helping in the nursery. Average staffing levels for the entire birth center are listed below.

- ❖ Day: 6 RNs, 2 OB technicians, 1 unit secretary
- ❖ Evening/Night: 5 RNs, 2 OB technicians, 1 unit secretary from 3 p.m. to 11 p.m. only
- ❖ Weekends: 3 RNs, 1 on-call RN, 1 OB technician, 1 unit secretary

Since **Hospital D** provides mother/baby care, the nursery maintains only one infant care technician.

*Are there secretaries on the units? What units and during what hours?*

All profiled hospitals maintain secretaries in various units of the department. The table below outlines secretary staffing information.

SECRETARY STAFFING INFORMATION		
	Units that maintain secretaries	Hours of employment
<b>A</b>	<ul style="list-style-type: none"> <li>• M/B</li> <li>• Nursery</li> </ul>	Day shift (6 a.m.–2 p.m.)
<b>B</b>	<ul style="list-style-type: none"> <li>• NICU</li> </ul>	7 a.m.–3 p.m.
	<ul style="list-style-type: none"> <li>• Nursery and post-partum</li> </ul>	6:30 a.m.–11 p.m.
<b>C</b>	<ul style="list-style-type: none"> <li>• Birth center</li> </ul>	6:30 a.m.–11 p.m.
<b>D</b>	<ul style="list-style-type: none"> <li>• L&amp;D<sup>1</sup></li> <li>• M/B<sup>2</sup></li> </ul>	6:45 a.m.–11 p.m. <sup>3</sup>

<sup>1</sup> The source noted that L&D maintains 4.2 secretary FTEs.  
<sup>2</sup> The source noted that M/B maintains 2.4 secretary FTEs.  
<sup>3</sup> L&D maintains secretaries 24 hours per day.

*Is there a lactation consultant, birth certificate secretary or OB educator on staff? If so, during what hours and to what budget is the position costed?*

The table below includes staffing information regarding lactation consultants, birth certificate secretaries and OB educators.

PRESENCE/ABSENCE OF LACTATION CONSULTANTS, BIRTH CERTIFICATE SECRETARIES AND OB EDUCATORS			
	Lactation consultant	Birth certificate secretary	OB educator
<b>A</b>	✓	✓	
<b>B</b>	✓	✓	
<b>C</b>		✓	
<b>D</b>	✓		✓

Both positions at **Hospital A** are costed to the mother/baby unit. While the lactation consultant at **Hospital B** is employed part-time (12-16 hours/week) and is costed to the mother/baby unit, the birth certificate secretary is costed to the medical records department. The birth certificate secretary at **Hospital C** is employed part-time and is costed to L&D. At **Hospital D**, the lactation consultant is employed full-time and is costed to the mother/baby unit, while the OB educator is also employed full-time, yet costed to L&D.



*What is the average amount of registered nurse (RN) time spent with a non-stress test, oxytocin challenge test and prenatal check?*

The table below presents the average amount of time RNs spend with the aforementioned tests.

<b>AVERAGE AMOUNT OF TIME RNs SPEND WITH NON-STRESS TESTS, OXYTOCIN CHALLENGE TESTS AND PRENATAL CHECKS (HOURS)</b>			
	<b>Non-stress test</b>	<b>Oxytocin challenge test</b>	<b>Prenatal check</b>
<b>A</b>	2	2-3	2
<b>B</b>	1-2	N/A <sup>1</sup>	N/A <sup>2</sup>
<b>C</b>	.50	1-1.5	N/A <sup>2</sup>
<b>D</b>	.50-1.5	N/A <sup>2</sup>	1-2

<sup>1</sup> The source at Hospital B stated that the amount of time spent with an oxytocin test varies considerably.  
<sup>2</sup> This test is not performed at the hospital.

Professional Services Note

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