

Chapter 4

Financing Neonatal Intensive Care

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INTRODUCTION

Neonatal intensive care is a very costly service for hospitals to provide. In the 12 children's hospitals studied by the National Association of Children's Hospitals and Related Institutions (NACHRI), neonates represented only 8 percent of the admissions, but 21 percent of the patient days and 25 percent of the hospitals' costs (110). Neonatal care was the most costly category of service provided by the children's hospitals and, except for organ transplantation, involved the most extreme lengths of stay.

Because neonatal intensive care is so expensive, it is important to examine the mix of third-party payers responsible for reimbursing providers and the extent to which payments cover the costs of providing care. Few studies directly examine the insurance status of neonatal intensive care unit (NICU) patients. Of 580 admissions to two NICUs in San Francisco in 1984, 30 percent were covered by Medicaid, 47 percent by commercial insurance, and the remaining 23 percent by other payers, self-pay, or were not covered under any plan (126). Of course there is considerable variation among hospitals. For example, while Medicaid admissions constituted 24 percent of the total cases in NACHRI's study, the proportion of Medicaid admissions to total admissions ranged from 11 to 42 percent in individual children's hospitals (110).

In general, hospitals consider the Medicaid program to be a poor payer. Data from the American Hospital Association survey show that while Medicaid paid only 19.8 percent of total net revenues in children's hospitals, Medicaid beneficiaries accounted for 23.3 percent of all inpatient days (107). Especially in the past, hospitals have financed the provision of such uncompensated care—charity care and bad debts—by “cost-shifting” and charging private sector payers—commercial insurers, some Blue Cross plans, and patients

who pay their own bills—proportionately more than their share of the costs of the care.

Hospitals typically charge a daily rate for general care in the NICU and add separate charges for ancillary and special services that accrue during the hospital stay. But these charges may be unrelated to actual costs. When particular services have unfavorable payer mixes or are so expensive that their costs cannot be fully reimbursed, hospitals may underprice or not fully allocate overhead costs to the services. In general, both intensive care services and pediatric services in general hospitals fall into this category. In practice hospitals often subsidize these losses by pricing other services, which are used by a greater proportion of charge-paying patients, much higher than their actual costs. The emergence of competitive forces in today's health care market, however, is curtailing the ability of hospitals to subsidize uncompensated care through cost-shifting among payers.

One reason is that the proportion of patients paying on the basis of charges is decreasing. To keep their occupancy levels high, more and more hospitals are participating in preferred provider organizations (PPOs). In return for negotiated lower prices, the PPO beneficiaries (usually former charge-paying patients) agree to use the designated “preferred providers.” A conservative estimate of the number of people enrolled in PPOs in the summer of 1986 was about 16.5 million (40). Health maintenance organizations (HMOs), which typically have risk-sharing or prospective payment arrangements with their hospitals, have also increased their share of the marketplace. HMO subscribers increased from 3.5 million in 1972 to 27.7 million by 1987 (73,169). Insurance companies that previously paid on the basis of charges for most patients are also using other methods to limit hospital payments. Like the public payment programs, Medicare and Medicaid, private insurers

are moving toward prospective methods of reimbursement. Prospective payment can take many forms (cavitation, per diem, or per case payment),

but, as payment rates are tightened to eliminate profit, all will ultimately limit the opportunity of providers to cost-shift.

REIMBURSEMENT PRACTICES

Since the enactment of the Medicare prospective payment system in 1983, seven Blue Cross/Blue Shield (BC/BS) plans have implemented payment systems based on diagnosis-related groups (DRGs), and another three plans are involved in pilot programs using DRGs (134). As of June 1985, 13 States had also adopted some form of prospective per case payment system in their Medicaid programs (see also the following section on Medicaid policies) (91). Although the mechanisms used by these systems to calculate the payment amounts for the DRGs usually differ from the Medicare system as well as among BC/BS plans and Medicaid programs, there is considerable concern in the provider community about how fairly DRG payments would reimburse hospitals for neonatal intensive care (110,130).

NACHRI simulated 1984 Medicare DRG payments in 12 children's hospitals and found the hospitals suffered their greatest financial losses from the neonatal cases (110). Without heavy reliance on special payments for outliers (cases with statistically unusual lengths of stay), Medicare's payments for neonatal cases would have fallen far below the hospitals' operating costs. The neonatal cases involved the highest incidence of outliers of any major DRG grouping in the children's hospitals. Similarly, another study analyzing NICU admissions in six teaching hospitals in California found that when the Medicare program's definition of outliers was used, half of all admissions were classified as outliers (130). A study of 1981 newborn discharges in Maryland also found 50 percent of charges in the three prematurity DRGs were generated by outliers (16).

NACHRI has proposed replacing Medicare's 6 neonatal DRGs with 30 new DRGs based on 6 birthweight categories and further subdivided by

the presence of major diagnoses, surgery, and the prolonged use of mechanical ventilation. Their proposed set of DRGs would explain 28 percent of the variation in length of stay among neonatal cases while the current Medicare DRGs explain only 16 percent of the variation (111). Overall, NACHRI concluded that, for children's hospitals, the measurement of neonatal care is the most critical issue in constructing a prospective payment system, and that the volume of neonatal cases is a major factor in determining the balance of costs and revenues under the various reimbursement schemes (110).

Even if payments for neonatal care equal costs under prospective payment methods, hospitals will continue to have revenue shortfalls because of their eventual inability to cost-shift under these payment methods. Hospitals have recourse to other sources of revenue for uncompensated neonatal care. Block grant funds available to States under the Maternal and Child Health Services Program are sometimes used to directly fund neonatal intensive care for children whose family incomes are not low enough to qualify them for Medicaid (135). Moreover, all States have general assistance programs that reimburse health providers for care rendered to certain Medicaid-ineligible population groups (12). The extent to which these State and county payment programs actually cover hospital losses depends heavily on geographic location, as States vary widely in coverage and level of payment. Finally, some State programs, instead of targeting indigent individuals, directly support hospitals providing substantial amounts of indigent care. These States generate revenues for uncompensated care through taxes or through surcharges on all hospitals' revenues (12).

MEDICAID

The Medicaid program is the major source of public funding for low-income women and babies. About 6 percent of all newborns whose deliveries are subsidized by Medicaid require neonatal intensive care, but this care is so expensive that it represents about 30 percent of all Medicaid expenditures for maternity care (77). Medicaid pays for about 10 percent of all births in the United States, but with wide variations across States. Within Federal guidelines, each State designs and administers its own program. As a result there are substantial State-to-State differences in eligibility requirements, benefits, limits on services, and reimbursement policies,

Policies

Medicaid coverage for newborns is dependent on the eligibility of their mothers. Although the income criteria for Medicaid eligibility are so strict that many poor people are excluded from coverage, family structure and employment status are no longer barriers to eligibility for pregnant women and their babies. Legislation passed in 1984 and 1986 relaxed eligibility restrictions on first-time mothers and married pregnant women with some income from employment. The Deficit Reduction Act of 1984 (Public Law 98-369) also required States automatically to cover the health costs of newborns in eligible families. Previously, each newborn infant had to be individually certified as eligible for Medicaid, sometimes leading to administrative delays in coverage with costly ramifications for providers (39). Furthermore, the Consolidated Omnibus Budget Reconciliation Act of 1986 (Public Law 99-272) mandates Medicaid coverage for women and newborns for **60 days** postpartum, regardless of changes in the eligibility status of the mother. Thus, any newborn whose mother met the income requirements for Medicaid prior to delivery is assured of at least **60 days** of automatic Medicaid coverage.

Inpatient hospital services, including neonatal intensive care, are mandated covered services under the Federal guidelines for Medicaid. However, some States place limits on the number of days per admission or per year that a beneficiary is cov-

ered for inpatient care. As of June 1985, 13 States had such day limits, although several programs allowed extensions for medical necessity (91). Coverage of inpatient days is also limited according to diagnosis in some Medicaid programs. Likewise, States can limit the number of covered physician visits. Thirteen States limit physicians' inpatient visits, but in general the limits are one or two visits per day for allowable hospital days (171).

Prior to the Omnibus Budget Reconciliation Act of 1981, which freed States from following traditional Medicare payment practices, States generally used reasonable cost-based reimbursement principles. By June 1985 only 14 Medicaid programs still used the retrospective per diem method (91). Because of both economic and political pressures, most States adopted alternative hospital reimbursement strategies in their Medicaid programs. As discussed earlier, 13 States use some form of prospective per case rate, either on a simple per admission basis or a discharge diagnosis basis. Except for Utah, all these programs use State-specific data, rather than Medicare data, to calculate DRG weights (134). The data sources used include hospital cost report data, paid claims files, and Medicaid claims data. Another 21 States use a prospective per diem as the unit of payment (91). Although diagnosis is not taken into account, some of these systems do provide different per diem rates for general inpatient care and for intensive care. Finally, five States use an annualized payment system whereby the hospitals receive a negotiated or contractual global fee from Medicaid. Twenty-four of the State Medicaid programs have developed special adjustments that recognize costs associated with the provision of uncompensated care.

Expenditures for Neonatal Intensive Care

Table 13 shows that of babies whose deliveries are reimbursed by Medicaid, the proportion requiring neonatal intensive care varies widely by State. In the 13 States responding to a survey by the Alan Guttmacher Institute, the proportion of

Table 13.—Medicaid Recipients in Neonatal Intensive Care Units (NICUs), and Medicaid Expenditures, Selected States, 1983-85^a

State and year	Number of Medicaid infants in NICUs ^a	Percent of total Medicaid births treated in NICUs	Total Medicaid expenditures for NICUs (\$ x 1,000) ^b	Medicaid expenditure per infant in NICU
California (FY84)	6,152	6.2	\$92,069	\$14,966
Florida (FY85)	3,965	20.3	12,256	3,091
Idaho (CY85)	—	—	880	—
Louisiana (CY83)	395	4.3	7,322	18,538
Maryland (FY85)	477	4.3	9,703	20,341
Massachusetts (FY83)	1,052	8.8	—	—
Michigan (FY85)	790	2.6	19,717	24,958
Missouri (FY85)	440	4.6	1,623	3,689
Nevada (CY84)	55	3.7	1,618	29,414
North Carolina (FY84)	—	—	3,012	—
Ohio (FY85)	—	—	48,410	—
Oregon (FY85)	285	6.2	578	2,028
Pennsylvania (FY85)	1,449	6.6	8,681	5,991
South Carolina (FY85)	418	5.7	3,718	8,894
Tennessee (FY85)	—	—	2,101	—
Vermont (FY85)	—	—	439	—
Washington (FY85)	359	2.9	1,776	4,947
Wisconsin (CY83)	428	3.2	2,164	5,056

^aMethodology for estimates: Louisiana—estimated neonatal intensive care data furnished by State; Massachusetts—reported neonatal intensive care data based on partial reporting by the State, reported data on infants in neonatal intensive care as a percentage of Medicaid births are only for facilities reporting both kinds of data; Ohio—reported neonatal intensive care expenditures, annualized from 13 months of data; South Carolina and Washington—estimated neonatal intensive care data furnished by the State; Vermont—reported neonatal intensive care expenditures, annualized from 14 months of data, excludes prepaid plans

SOURCE A M Kenny, A. Torres, N Dittes, et al., "Medicaid Expenditures for Maternity and Newborn Care in America," *Family Planning Perspectives* 18(3):103-110, May/June 1986

Medicaid babies admitted to NICUs averaged 6.1 percent but ranged from only 2.6 percent in Michigan to an overwhelming 20.3 percent in Florida. The 6.1 percent average for all surveyed States is consistent with national data on the proportion of all newborns who receive intensive care. (See ch. 2.) Because the Medicaid population is generally considered to be at higher risk, a greater incidence might have been expected (77).

Table 13 also shows enormous differences in the per-patient Medicaid payments for neonatal intensive care. Of the 12 Medicaid programs responding to the 1985 survey, average NICU expenditures range from \$2,000 in Oregon to **\$29,400** in Nevada. The average expenditure in the 12 States is \$11,800 (77). The average Medicaid expenditure is lower than the average hospital costs reported for NICU infants in children's hospitals and teaching hospitals, but higher than the average costs for all sick neonates in Maryland Level III hospitals. (See ch. 2.) The NACHRI study found that Medicaid patients in children's hospitals are more costly to treat than the general pediatric population and represent a more difficult case mix (110).

It is difficult to draw conclusions from the dramatic variation in expenditures among States in part because the scope of each State program is so different and in part because of the nature of neonatal intensive care. The NACHRI study of children's hospitals showed that neonatal care is the most costly service provided by the pediatric hospitals and involves the longest lengths of stay. Therefore, in States that extend Medicaid benefits to the medically needy (people who do not meet income requirements until they "spend-down" on medical expenses) babies not normally qualified for Medicaid may become eligible because they are in neonatal intensive care units. In addition, the clinical composition of the Medicaid NICU populations in the States responding to the survey is unknown. Because extreme outliers are common in neonatal intensive care, a few cases with extraordinary costs could severely skew a State's average expenditures in a single-year reporting period.

Through the "spend-down" provision, families or individuals, who meet all the categorical requirements for Medicaid except income, can become eligible for Medicaid under the medically needy program if they have high medical expenses that reduce income below the medically needy maximum.