Table 1.6 Code Sheet for the Variables in the Low Birth Weight Data

Variable	Description	Codes/Values	Name
1	Identification code	1–189	ID
2	Low birth weight	0 = ≥2500 g 1 = <2500 g	LOW
3	Age of mother	Years	AGE
4	Weight of mother at last menstrual period	Pounds	LWT
5	Race	1 = White 2 = Black 3 = Other	RACE
6	Smoking status during pregnancy	0 = No 1 = Yes	SMOKE
7	History of premature labor	0 = None 1 = One 2 = Two, etc.	PTL
8	History of hypertension	0 = No 1 = Yes	HT
9	Presence of uterine irritability	0 = No 1 = Yes	UI
10	Number of physician visits during the first trimester	0 = None 1 = One 2 = Two, etc.	FTV
11	Recorded birth weight	Grams	BWT

1.6.2 The Low Birth Weight Study

Low birth weight, defined as birth weight less than 2500 grams, is an outcome that has been of concern to physicians for years. This is because of the fact that infant mortality rates and birth defect rates are higher for low birth weight babies. A woman's behavior during pregnancy (including diet, smoking habits, and receiving prenatal care) can greatly alter the chances of carrying the baby to term, and, consequently, of delivering a baby of normal birth weight.

Data were collected as part of a larger study at Baystate Medical Center in Springfield, Massachusetts. This data set contains information on 189 births to women seen in the obstetrics clinic. Fifty-nine of these births were low birth weight. The variables identified in the code sheet given in Table 1.6 have been shown to be associated with low birth weight in the obstetrical literature. The goal of the current study was to determine whether these variables were risk factors in the clinic population being served by Baystate Medical Center. Actual observed variable values have been modified to protect subject confidentiality. We refer to this data set as the LOWBWT data.

1.6.3 The Global Longitudinal Study of Osteoporosis in Women

The Global Longitudinal Study of Osteoporosis in Women (GLOW) is an international study of osteoporosis in women over 55 years of age being coordinated at the

Table 1.7 Code Sheet for Variables in the GLOW Study

Variable	Description	Codes/Values	Name
1	Identification code	1–n	SUB_ID
2	Study site	1–6	SITE_ID
3	Physician ID code	128 unique codes	PHY_ID
4	History of prior fracture	1 = Yes 0 = No	PRIORFRAC
5	Age at enrollment	Years	AGE
6	Weight at enrollment	Kilograms	WEIGHT
7	Height at enrollment	Centimeters	HEIGHT
8	Body mass index	kg/m^2	BMI
9	Menopause before age 45	1 = Yes 0 = No	PREMENO
10	Mother had hip fracture	1 = Yes 0 = No	MOMFRAC
11	Arms are needed to stand from a chair	1 = Yes 0 = No	ARMASSIST
12	Former or current smoker	1 = Yes 0 = No	SMOKE
13	Self-reported risk of fracture	1 = Less than others of the same age 2 = Same as others of the same age 3 = Greater than others of the same age	RATERISK
14	Fracture risk score	Composite risk score[a]	FRACSCORE
15	Any fracture in first year	1 = Yes 0 = No	FRACTURE

[a]FRACSCORE = 0 × (AGE ≤ 60) + 1 × (60 < AGE ≤ 65) + 2 × (65 < AGE ≤ 70) + 3 × (70 < AGE ≤ 75) + 4 × (75 < AGE ≤ 80) + 5 × (80 < AGE ≤ 85) + 6 × (AGE > 85) + (PRIORFRAC = 1) + (MOMFRAC = 1) + (WEIGHT < 56.8) + 2 × (ARMASSIST = 1) + (SMOKE = 1).

Center for Outcomes Research (COR) at the University of Massachusetts/Worcester by its Director, Dr. Frederick Anderson, Jr. The study has enrolled over 60,000 women aged 55 and older in ten countries. The major goals of the study are to use the data to provide insights into the management of fracture risk, patient experience with prevention and treatment of fractures and distribution of risk factors among older women on an international scale over the follow up period. Complete details on the study as well as a list of GLOW publications may be found at the Center for Outcomes Research web site, www.outcomes-umassmed.org/glow.

Data used here come from six sites in the United States and include a few selected potential risk factors for fracture from the baseline questionnaire. The outcome variable is any fracture in the first year of follow up. The incident first-year fracture rate among the 21,000 subjects enrolled in these six sites is about 4 percent. In order to have a data set of a manageable size, $n = 500$, for this text we have over sampled the fractures and under sampled the non-fractures. As a

result associations and conclusions from modeling these data do not apply to the study cohort as a whole. Data have been modified to protect subject confidentiality. We thank Dr. Gordon Fitzgerald of COR for his help in obtaining these data sets. A code sheet for the variables is shown in Table 1.7. This data set is named the GLOW500 data.

1.6.4 The Adolescent Placement Study

Fontanella et al. (2008) present results from a study of determinants of aftercare placement for psychiatrically hospitalized adolescents and have made the data, suitably modified to protect confidentiality, available to us. It is not our intent to repeat

Table 1.8 Code Sheet for Variables in the Adolescent Placement Study

Variable	Description	Codes/Values	Name
1	Identification code	1–508	ID
2	Placement	0 = Outpatient 1 = Day treatment 2 = Intermediate residential 3 = Residential	PLACE
3	Placement combined	0 = Outpatient or day treatment 1 = Intermediate residential 2 = Residential	PLACE3
3	Age at admission	Years	AGE
4	Race	0 = White 1 = Nonwhite	RACE
5	Gender	0 = Female 1 = Male	GENDER
6	Neuropsychiatric disturbance	0 = None 1 = Mild 2 = Moderate 3 = Severe	NEURO
7	Emotional disturbance	0 = Not severe 1 = Severe	EMOT
8	Danger to others	0 = Unlikely 1 = Possible 2 = Probable 3 = Likely	DANGER
9	Elopement risk	0 = No risk 1 = At risk	ELOPE
10	Length of hospitalization	Days	LOS
11	Behavioral symptoms score[a]	0–9	BEHAV
12	State custody	0 = No 1 = Yes	CUSTD
13	History of violence	0 = No 1 = Yes	VIOL

[a]Behavioral symptom score is based on the sum of three symptom subscales (oppositional behavior, impulsivity, and conduct disorder) from the CSPI.