NAME: Calcium, inorganic phosphorus and alkaline phosphatase levels in elderly patients
TYPE: Retrospective chart review
SIZE: 178 records by 8 variables

DESCRIPTIVE ABSTRACT:
Each record contains the results of a laboratory analysis of calcium, inorganic phosphorous, and alkaline phosphatase. The variable cammol is measured as millimoles per liter. Phosmol is inorganic phosphorous in millimoles per liter. Alkphos is meauring alkaline phosphatase in international units per liter. The purpose of the study was to determine if significant gender differences exist in the mean values of calcium, inorganic phosphorus, and alkaline phosphatase in subjects over age 65. A second purpose was to determine if analytical variation between laboratoreis would affect the mean values of the study variables. Calcium.dat contains incorrect records that have transcription errors. Calciumgood.dat contains the corrected values.

DATA SOURCE:
Used with permission from Joan Boyd, Maria Delost, and John Holcomb (1998). Boyd and Delost conducted the retrospective chart review for subjects tested in the greater Youngstown, OH area.

DATASETS LAYOUT:
Calcium.dat

Columns	Variable	Comment
9-11	OBSNO	Patient Observation Number
21-22	AGE	Years
33	SEX	1=Male, 2=Female
42-44	ALKPHOS	Alkaline Phosphatase International Units/Liter
55	Lab	Lab: 1=Metpath; 2=Deyor; 3=St. Elizabeth's; 4=CB Rouche; 5=YOH; 6=Horizon
63-66	CAMMOL	Calcium mmol/L
74-77	PHOSMMOL	Inorganic Phosphorus mmol/L
88	AGEGROUP	Age group 1=65-69; 2=70-74; 3=75-79; 4=80-84; 5=85-89 Years

Calciumgood.dat

Columns	Variable	Comment
9-11	OBSNO	Patient Observation Number
20-22	AGE	Years
32-33	SEX	1=Male, 2=Female
42-44	ALKPHOS	Alkaline Phosphatase International Units/Liter
54-55	Lab	Lab: 1=Metpath; 2=Deyor; 3=St. Elizabeth's; 4=CB Rouche; 5=YOH; 6=Horizon
62-66	CAMMOL	Calcium mmol/L
74-77	PHOSMMOL	Inorganic Phosphorus mmol/L
88	AGEGROUP	Age group 1=65-69; 2=70-74; 3=75-79; 4=80-84; 5=85-89 Years

PEDAGOGICAL NOTES:
Have students use graphical and summary analysis techniques to discover "problem" values in calcium.dat. The file calciumgood.dat contains the corrected values. A full description of how to use this data can be found in the "Datasets and Stories" article "Teaching Students to Use Summary Statistics and Graphics to Clean and Analyze Data". To utilize the grid for obtaining psuedo patient records to learn the correct data values, click on http://www.amstat.org/publications/jse/v13n3/grid/bigtable.htm

REFERENCES:
Boyd, J., Delost, M., and Holcomb, J., (1998). "Calcium, phosphorus, and alkaline phosphatase laboratory values of elderly subjects," Clinical Laboratory Science, 11, 223-227.

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