#### EPIB 681 Data Analysis in health Sciences II

**Logistic Regression - Introduction** 

Key Points in / Commentary on ARL Ch 1

Additional items

- Maximum Likelihood estimation
  - the principle
  - examples: 2 mini & the CHD dataset in Chapter 1
- Fitting logistic regression models
  - in SAS, via GENMOD (generalized) & LOGISTIC (specific)
  - in Stata, via glm (generalized) & logistic (specific)

# Readings (\* = most relevant)

\* Chapter 1 of Hosmer and Lemeshow [2nd ed. of textbook; 1st edition OK too]

\* Introduction to the Logistic Regression Model [notes and commentary by JH, under http://www.epi.mcgill.ca/hanley/c681/alr\_1]

## Other Resources

### texts

Kleinbaum, DG, Klein M, Pryor ER (2002) Logistic Regression: A Self-Learning Text, Second Edition, Springer. ['good diagrams and summaries; assumes almost no familiarity with 'regular' regression]

Collett D. Modelling Binary Data (2003), Second edition, Chapman and Hall/CRC

## book chapters

Moore and McCabe (Ch 15 in 4th edition) Armitage et al. Rothman & Greenland (1998)

## articles

Brand & Keirse: pair of very good expository articles (from Pediatric and Perinatal Epidemiology 1990; 4: 22-38) on logistic regression [available on course 678 website, Resources/ Material for sessions 9-11]