

Chapter 5

- 5-1. a. $(1 - 0.8593) = 0.1407$
b. at least 10 persons with $p = 0.0226$
c. virtually zero
- 5-2. probability of observing 10 or more cases: $1 - 0.9618 = 0.0382$; probability of observing 3 or less: 0.2426 (from Poisson with mean = 5.165).
- 5-3. 0.0146; 0.6057 (= 0.7073 - 0.1016)
- 5-4. no, over 90% of the population would have no hospital expenditure.
- 5-5. The rate for Harris County is 5.88 per 100,000; the probability of observing 173 or fewer is virtually zero (using normal approximation), indicating that the national rate might not apply to Harris County.
- 5-6. probability is 0.0116 (= $1 - 0.9884$); would investigate further.
- 5-10. $z = -1.3441$; $\Pr(x < 7) = 0.0895$; yes, it is normal distributed; can be verified by a normal probability plot.
- 5-11. Probability is virtually zero; those exposed may be older than those not exposed; 15 (= 79 - 64) firefighters who were exposed but not included in the study may not have any adverse symptoms.