

List of corrections for ME3

September 1, 2009

(Note that corrections to p. 76 have been updated; see errata 18 and 19)

1. Page 8, line 10 in the 3rd paragraph, "B=0 and C=0" should be "B=0 and E=0".
2. Page 11, Table 2-1 caption: "Fig. 2-1" should be "Fig. 2-2".
3. Page 12, 1st full paragraph, lines 1-2: "it is evident" should be "it would appear".
4. Page 12, 1st full paragraph, line 3, "B = 1 increases" should be "B = 1 appears to increase".
5. Page 12, 1st full paragraph, line 7, "are" should be "appear".
6. Page 12, 1st full paragraph, line 8, "has" should be "appears to have".
7. Page 12, 1st full paragraph, last 3 lines: "the fact that A, B, and E have no association with one another in either population, and their index levels (A = 1, B = 1 and E = 1) and reference levels (A = 0, B = 0, and E = 0) are each present or have occurred in exactly half of each population." should be "the fact that B and E are not associated in either population, as is evident from the prevalence of E=1 being 50% for those with B=1 and for those with B=0. The effect of E, but not of B, is estimable from Tables 2-2 and 2-3. The effect of B is not estimable because it is confounded by A, but we will ignore that here. The topic of confounding is introduced in Chapter 4.
8. Page 12, 2nd full paragraph, lines 5-6: "(When A = 0 and B = 1, E = 1 completes all three sufficient causes in Figure 2-2; it thus does not increase anyone's risk, although" should be "(When A=0 and B=1, the first of the three sufficient causes in Figure 2-2 is already completed. With E=1 the second and third are also completed, but as the risk is already 1, E=1 does not increase anyone's risk, though".
9. Page 12, 3rd full paragraph, line 5, delete sentence that begins "This dependence"
10. Page 12, 3rd full paragraph, line 7, "Nevertheless, a factor will appear to have" should be "A factor will have".
11. Page 12, 3rd full paragraph, next to last line, "will appear to have a weak" should be "will have a weak".
12. Page 12, 5th line from bottom of page, delete phrase "given the ubiquity of U₁".
13. Page 16, 2nd full paragraph, last sentence, change "The latter possibility illustrates an important general point: Component causes that do not change with time, as opposed to events, all have induction times of zero." to the following: "In general, conditions and events can be component causes and two or more component causes can have the same

induction time, including zero."

14. Page 16, 4th full paragraph, line 7, change "cause that acts" to "causes that act".
15. Page 37, line 4, move the right parenthesis from after the word "allowed." to after the word "dying." at the end of line 5.
16. Page 61, line 5, second expression in first equation: $(I_1/\Delta t)/(I_0/\Delta t)$ should be $(I_1\Delta t)/(I_0\Delta t)$.
17. Page 74, eq. 5-9, the denominator of the left-hand side, " $R_{01}(1-R_{01})$ " should be " $R_{01}/(1-R_{01})$ ".
18. P. 48, second equation (line 5): the final D should have a bar over it.
19. Page 76, paragraph 3, fourth sentence: "For type 10, each factor causes the disease if and only if the other factor is absent; thus each factor blocks the effect of the other." should be "For type 10, each factor causes the disease if the other factor is absent but prevents the disease if the other factor is present."
20. Page 76, line 3 from bottom: "(D = 0 or 1)" should be "(Y = 0 or 1)".
21. Page 81, line 9 from top: "Z=1 and X=0" should be "Z=1 and Z=0".
22. Page 82, line 22 from top: "sufficient-cause model" should be "potential-outcome model".
23. Page 83, third line after equation: " $0.001(10,000)=20$ " should be " $0.001(10,000)=10$ ".
24. Page 149, line 3 of first full paragraph: Insert this sentence before "For example": Sources of systematic errors also abound.
25. Page 151, third line from bottom: "different" should be "the same".
26. Page 152, 5th full paragraph, lines 2 and 3: "(assumption 1) or the statistical model (assumption 2)" should be "(assumption a) or the statistical model (assumption b)".
27. Page 160, lines 11-12: citation "(Smith and Bates, 1992; Goodman and Berlin, 1994; Hoening and Heisey, 2001)" should be "(Cox, 1958; Smith and Bates, 1992; Goodman and Berlin, 1994; Hoening and Heisey, 2001; Senn, 2002)".
28. Page 165, in the likelihood function below the third line of text, all three occurrences of " $86(IR)$ " should be replaced by " $186(IR)$ ".
29. Page 172, table 11-1, the 1-yr risk for unexposed women should be "0.0001" rather than "0.001".

30. Page 185, the last sentence of section headed “Causation and Association,” the word “focus” should be deleted.
31. Page 229: Line 8 from bottom up: “If $\hat{\pi}_{ml}, N\pi,$ ” should be “If $N\hat{\pi}_{ml}, N\pi,$ ”
32. Page 261, in the equation, 0.0188 should be 0.188.
33. Page 263, line 6 under the first heading: “Greenland et al., 2000” should be “Greenland et al., 2000a”.
34. Page 268, final equation calculating the variance of the standardized rate difference for Table 15-2: The second “=” should be “+” and the ensuing “+” should be “=” (the plus sign and second equals sign should be transposed).
35. Page 295, formula 16-20, the expression “ $p(RR-1) - I$ ” should be “ $p(RR-1) + I$ ”.
36. Page 298: In the expression for IC-hat (3rd equation), the last minus sign should be a plus sign.
37. Page 305, paragraph 2, line 7: replace “example, one may replace each cell count with an average of that count and the count expected” with “example, we may replace each count with a weighted average of the count and its expectation”
38. Page 340, line 8 from bottom: at start of line, 427 should be 854.
39. Page 375, delete the last sentence of the fifth paragraph and replace with: “The magnitude could be bounded by the (absurd) extremes in which either all 71 missing cases were exposed and all 787 missing controls were unexposed, which yields a bias factor of $45(945)/((45+71)(945+787)) = 0.21$, or all 71 missing cases were unexposed and all 787 missing controls were exposed, which yields a bias factor of $((94+71)(257+787))/94(257) = 7.1$.”
40. Page 379, line 3 of second paragraph after the bullets: the first capital Y in the line should be italicized.
41. Page 387, in the equation under paragraph 2: “ $E_w(Y=y | X=x) = E(Y=y | \text{Set}[X=x])$ ” should be “ $E_w(Y | X=x) = E(Y | \text{Set}[X=x])$ ”
42. Page 390, 4th paragraph, 2nd sentence: “regress and” should be “regressand”.
43. Page 413, 2nd line under the heading “*POLYTOMOUS LOGISTIC MODELS*”: “ y_0, \dots, y_1 ” should be “ y_0, \dots, y_l ”
44. Page 426, line 5 (2nd equation on page): insert “L(” after the second minus sign, before the second alpha-hat.

45. Page 431, line after first equation: "the observed case-control ratio by the overall disease rate" should be "the observed case-control ratio divided by the overall disease rate"
46. Page 433, second line of final paragraph: 21-5 should be 20-5.
47. Page 435, line 2 of first full paragraph: 21-5 should be 21-7.
48. Page 435, line 3 of first full paragraph: 21-4 should be 21-6.
49. Page 447, line 1: "Y and X" should be "Z and X".
50. Page 521, Table 25-2: The number of exposed cases in group 2 should be 30 (not 20, as shown). The number of unexposed cases in group 2 should be 20 (not 10, as shown).
51. Page 644, footnote to the table 32-2, "(a+b)/n" should be "(a+c)/n".
52. Page 653, line 8 from bottom: "Senn, 2002" should be "Senn, 2000"
53. Page 683, insert missing reference: "Ali M, Eunch M, von Seidlein L, et al. Herd immunity conferred by killed oral cholera vaccines in Bangladesh: a reanalysis. *Lancet* 2005;366:44-49."
54. Page 688: "Brumback BA, Berg A. On effect-measure modification: Relations among changes in the relative risk, odds ratio, and risk difference. *Stat Med* 2008; in press" is now published in vol. 27:3453–3465.
55. Page 691, Dales and Ury reference, replace "4:373-375." with "7:373-376."
56. Page 691: Insert "Cox DR. *The Planning of Experiments*. New York: Wiley, 1958:161."
57. Page 699: "Greenland S. Variable selection and shrinkage in the control of multiple confounders (invited commentary). *Am J Epidemiol* 2008;167: in press", replace "in press" by "523-529."
58. Page 700: "Greenland S, Lanes SF, Jara M. Estimating efficacy from randomized trials with discontinuations: The need for intent-to-treat design and g-estimation. *Clinical Trials* 2008;5: in press", replace "in press" by "5-13."
59. Page 703: "Holland PW: Statistics and causal inference. *J Am Stat Assoc* 1986; 81:945–960" should be "Holland PW: Statistics and causal inference (with discussion). *J Am Stat Assoc* 1986;81:945–970."
60. Page 705: In the reference to Kang and Shafer, the material following the title should read "(with discussion). *Stat Sci* 2007;22:523-580."

61. Page 707: In “Kuhn TS. *The structure of scientific revolutions*, 2nd ed. Chicago: University of Chicago Press, 1962”, change “1962” to “1970”.
62. Page 716, omit this duplicate reference: “Pearl J. *Causality*. New York: Cambridge University Press. 2000.”
63. Page 717: The reference “Poole C: Exceptions to the rule about nondifferential misclassification (abstract). *Am J Epidemiol* 1985;122:508.” should be moved up to be the first reference listed under “Poole C”.
64. Page 719, omit this duplicate reference: Robins JM, Hernan MA, Brumback B. Marginal structural models and causal inference in epidemiology. *Epidemiology* 2000;11:561–570.
65. Page 720, omit this duplicate reference: Rothman KJ. Causes. *Am J Epidemiol* 1976;104:587–592.
66. Page 722: "Senn S. The many modes of meta. *Drug Inf J* 2002;34:535–549." should be "Senn S. The many modes of meta. *Drug Inf J* 2000;34:535–549."
67. Page 722: Insert "Senn S. Power is indeed irrelevant in interpreting completed studies. *BMJ* 2002;325:1304."
68. Page 750, under "Power of statistical test, 153-154": insert sub-entry "in data analysis, 160".
69. Add the following references to the reference list (these are all cited in chapter 31).

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