

Online Supplementary Material

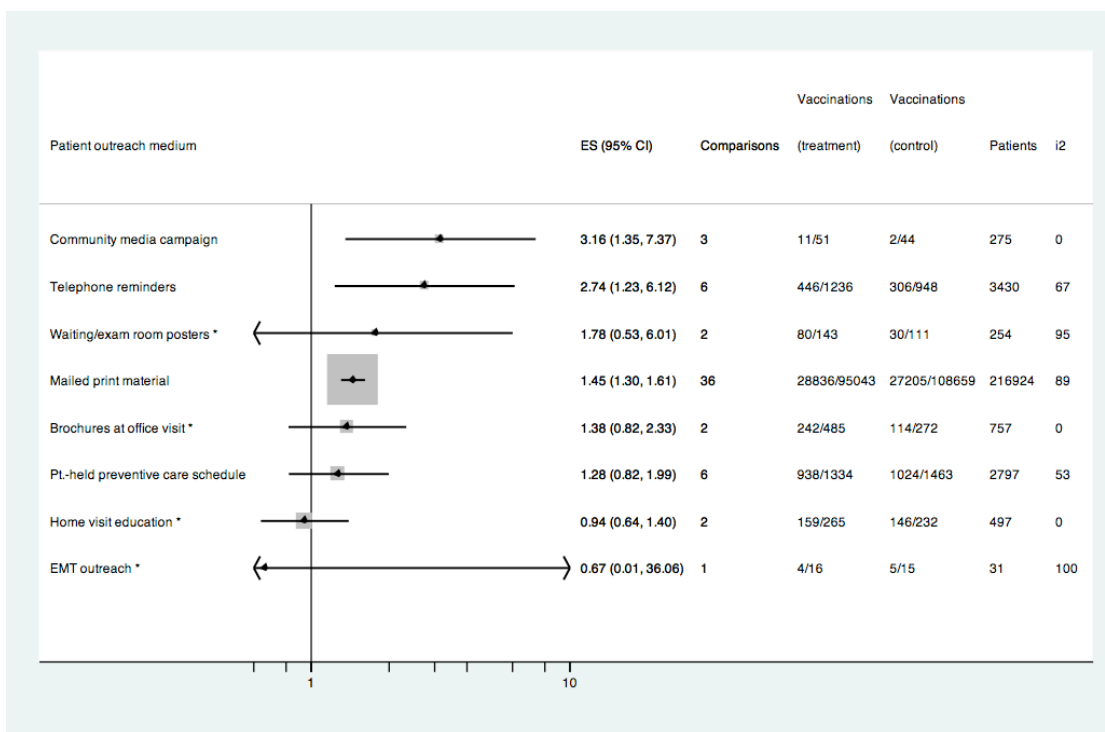
Lau D, Hu J, Majumdar SR, Storie DA, Rees SE, Johnson JA. Interventions to improve influenza and pneumococcal vaccination rates among community-dwelling adults: A systematic review and meta-analysis. *Ann Fam Med*. 2012;10(6):538-546.

<http://www.annfammed.org/content/10/6/538/suppl/DC1>

Supplemental Appendix C. These exhibits contain additional figures and tables from the data synthesis. Forest plots depicting the results of meta-analyses stratified by sub-categories of patient outreach and team change interventions are provided, as well as tables with numbers-needed-to-treat for a variety of baseline vaccination rates.

This supplement contains additional figures and tables from data synthesis. Exhibits C.1 and C.3 depict the results of meta-analyses for particular patient outreach strategies for influenza and pneumococcal vaccinations, respectively. Exhibits C.2 and C.4 depict the results of meta-analyses stratified by various team change approaches, for influenza and pneumococcal vaccinations, respectively. Finally, exhibits C.5 (a) and (b) list estimated numbers needed to treat for an additional vaccination, based on pooled intervention odds ratios.

Exhibit C.1(a). Effect of patient outreach methods on influenza vaccination rates



- Pooled odds ratios from fewer than 3 comparisons.

Exhibit C.1(b). Forest plots for patient outreach methods – influenza vaccination rates

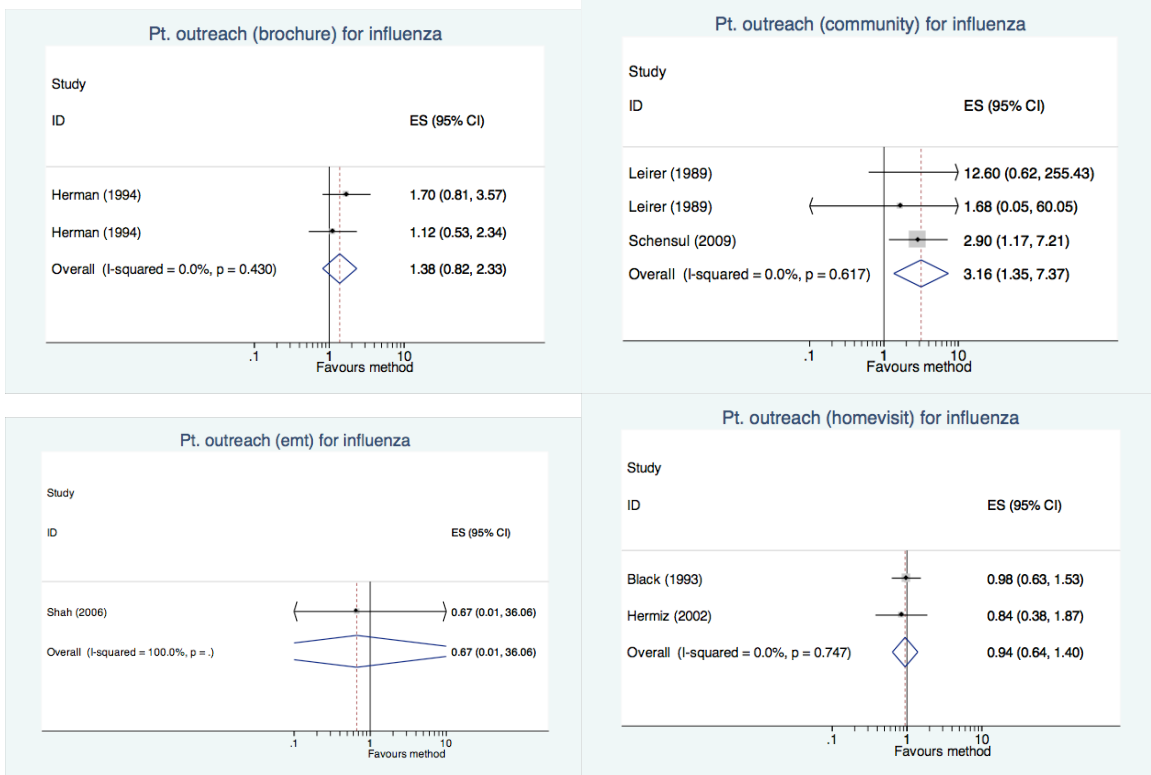


Exhibit C.1(b). Forest plots for patient outreach methods – influenza vaccination rates (continued)

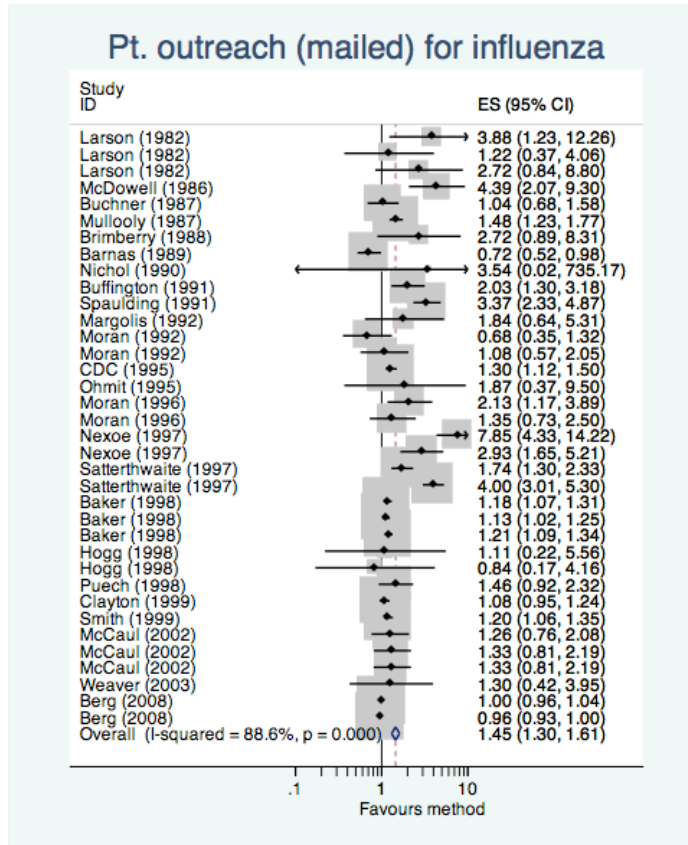
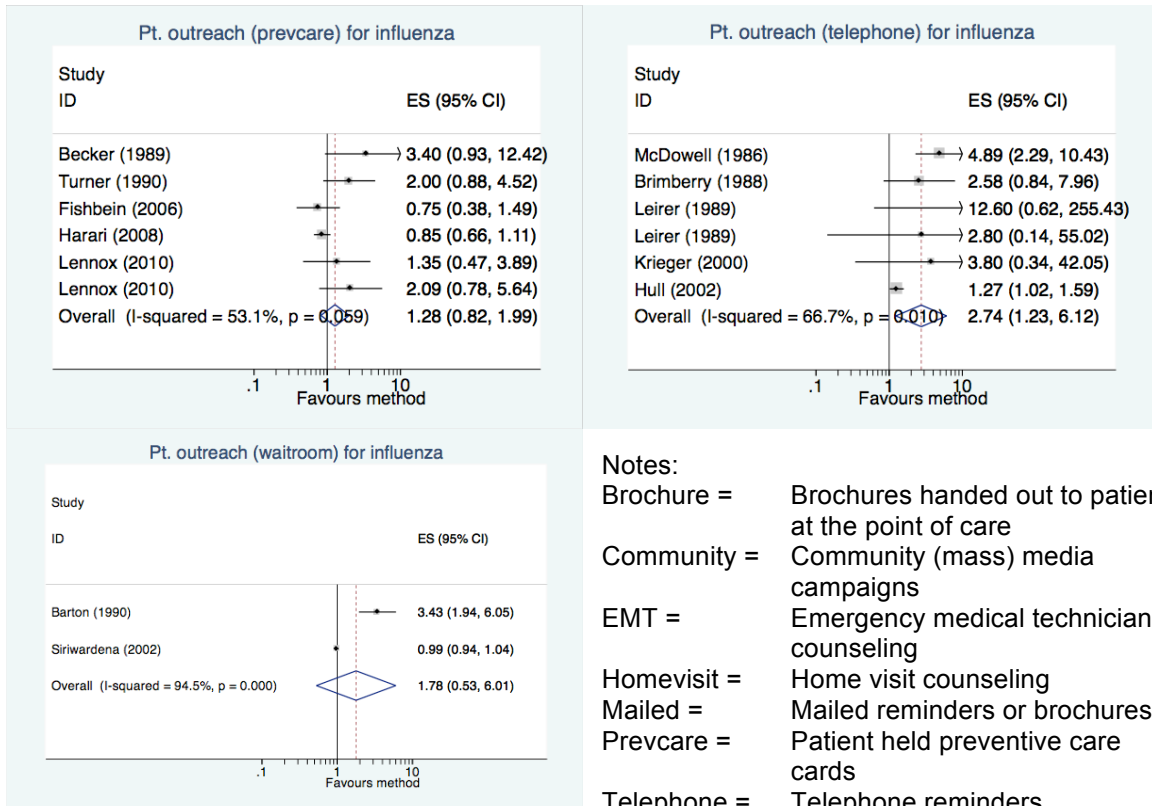
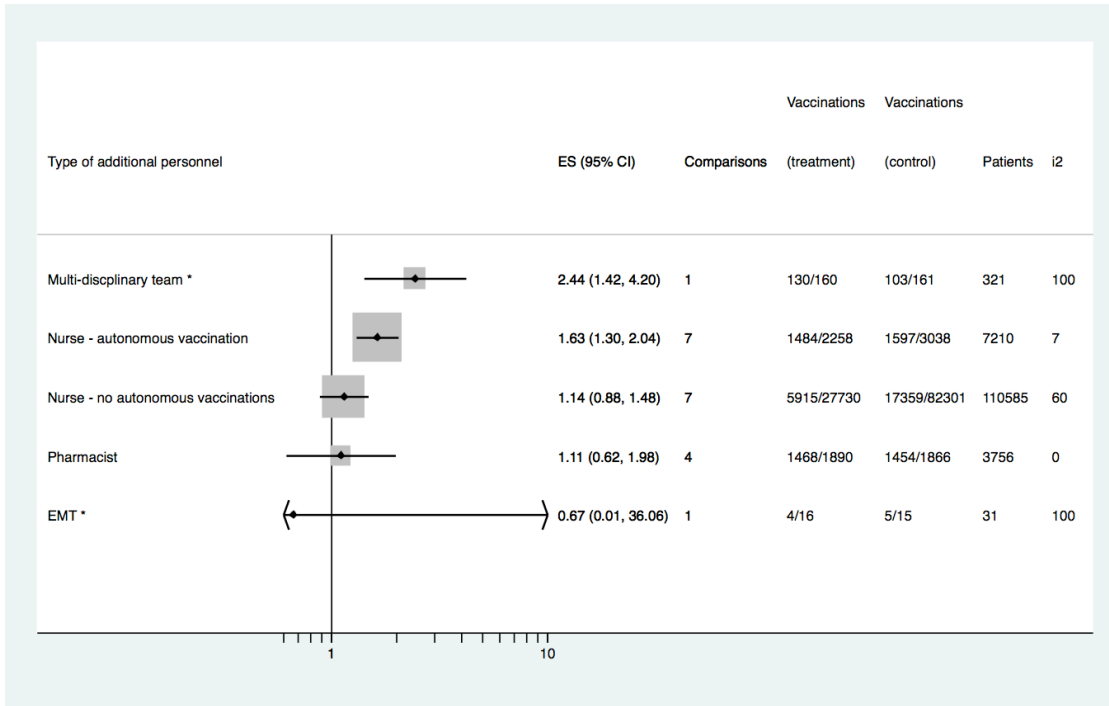


Exhibit C.1(b). Forest plots for patient outreach methods – influenza vaccination rates
(continued)



- Notes:
- Brochure = Brochures handed out to patients at the point of care
 - Community = Community (mass) media campaigns
 - EMT = Emergency medical technician counseling
 - Homevisit = Home visit counseling
 - Mailed = Mailed reminders or brochures
 - Prevcare = Patient held preventive care cards
 - Telephone = Telephone reminders
 - Waitroom = Waiting room materials

Exhibit C.2(a). Effect of team change on influenza vaccination rates



* Pooled odds ratios from fewer than 3 comparisons.

Exhibit C.2(b). Forest plots of team change characteristics on influenza vaccination rates

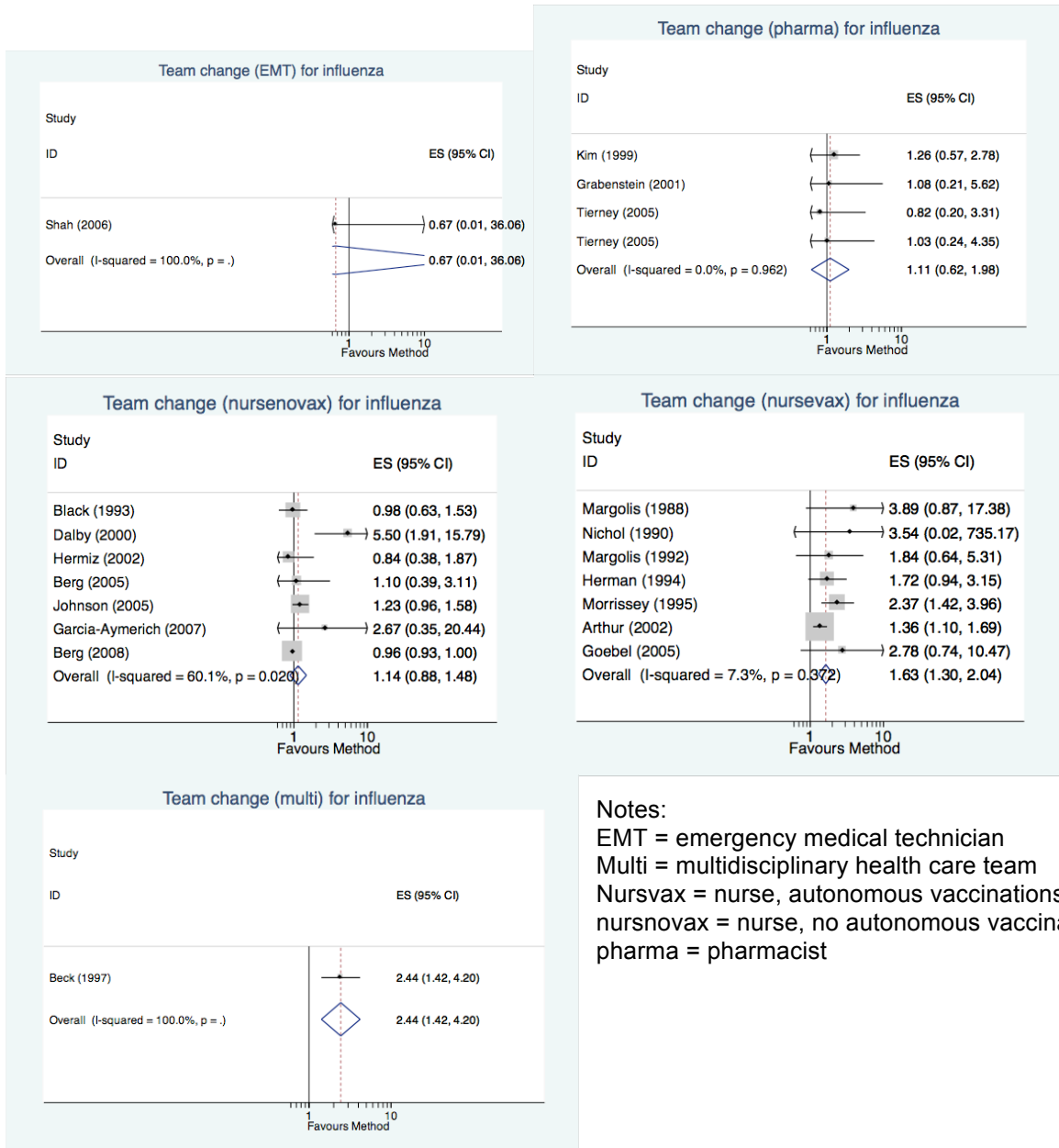
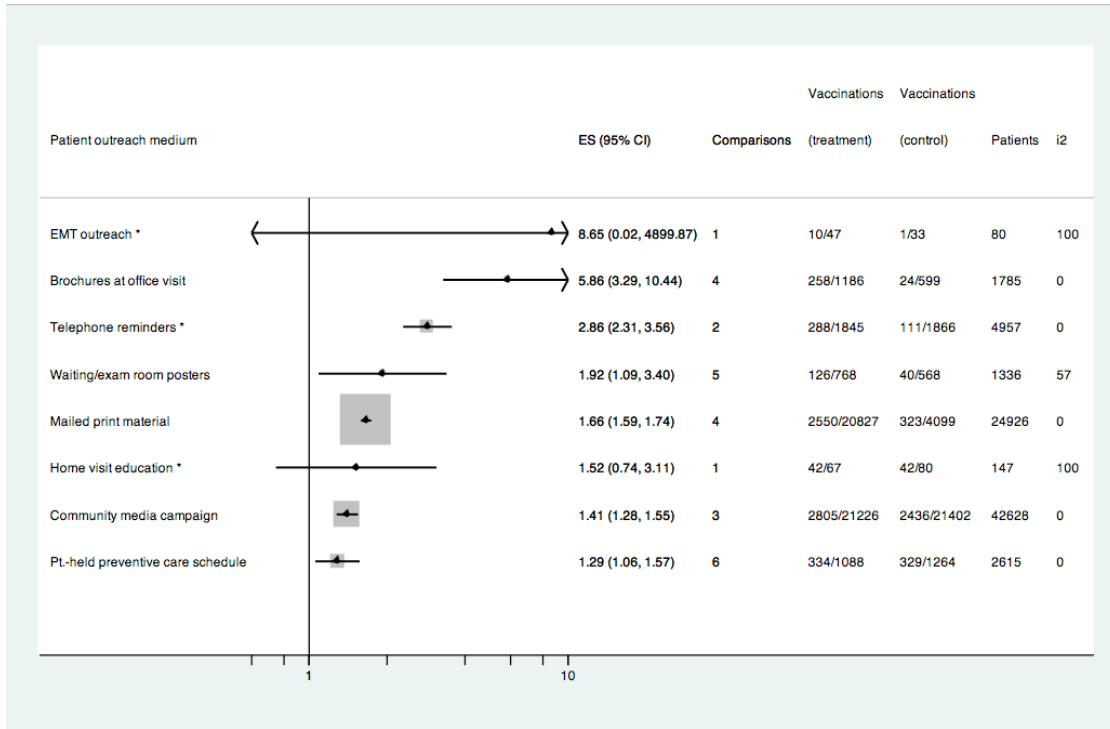


Exhibit C.3(a). Effect of patient outreach methods on pneumococcal vaccination rates



* Pooled odds ratios from fewer than 3 comparisons.

** The pooled odds ratio for waiting/exam room posters is likely over-estimated, since there were few comparisons and the highest performing comparisons combined posters with other effective interventions. Indeed, analysis of comparisons featuring waiting and exam room posters alone (n = 2) showed a pooled OR = 1.17 (95% CI [0.726, 3.566], I² = 0%).

Exhibit C.3(b). Forest plots for patient outreach methods – pneumococcal vaccination rates

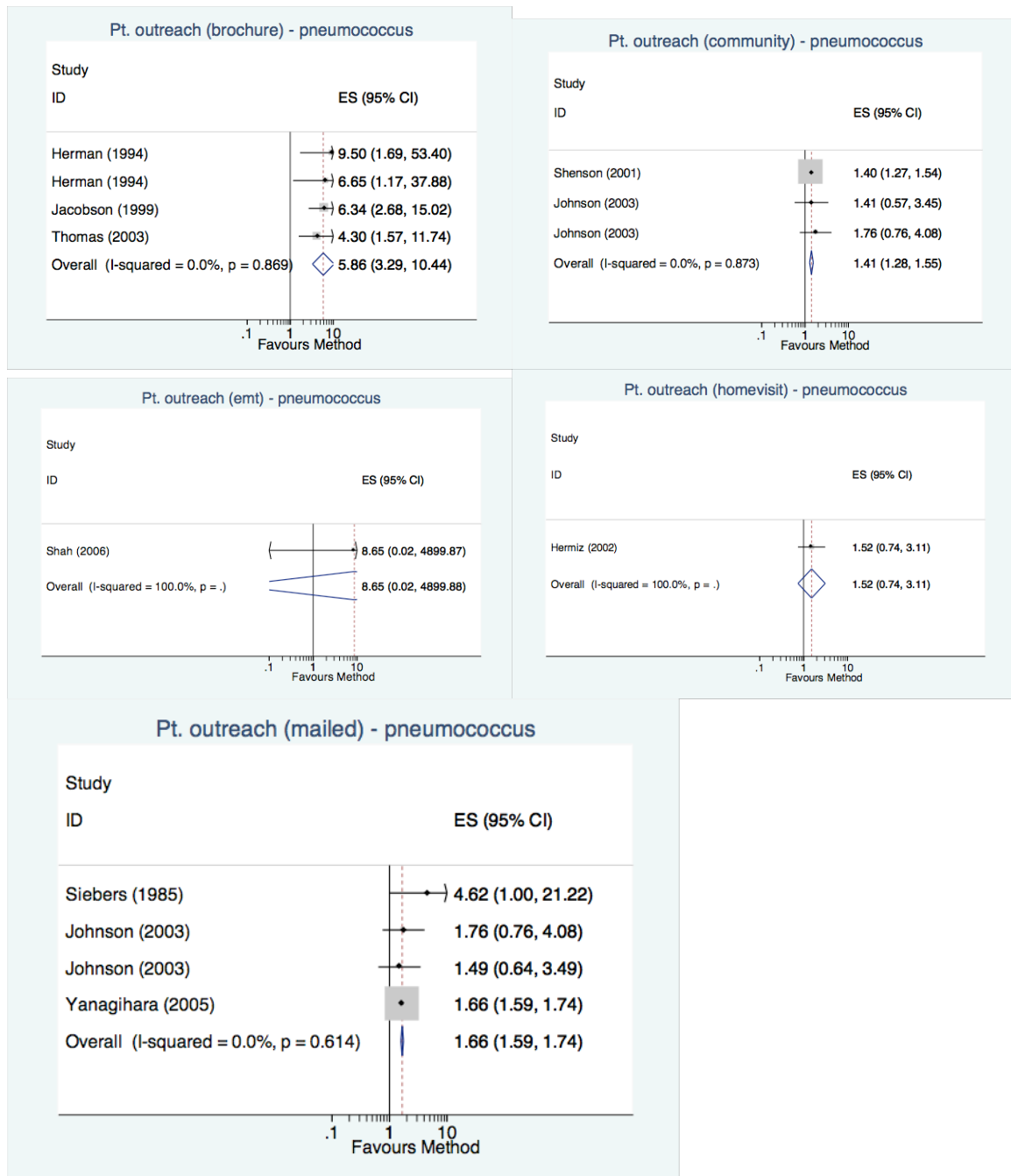


Exhibit C.3(b). Forest plots for patient outreach methods on pneumococcal vaccination rates (Continued)

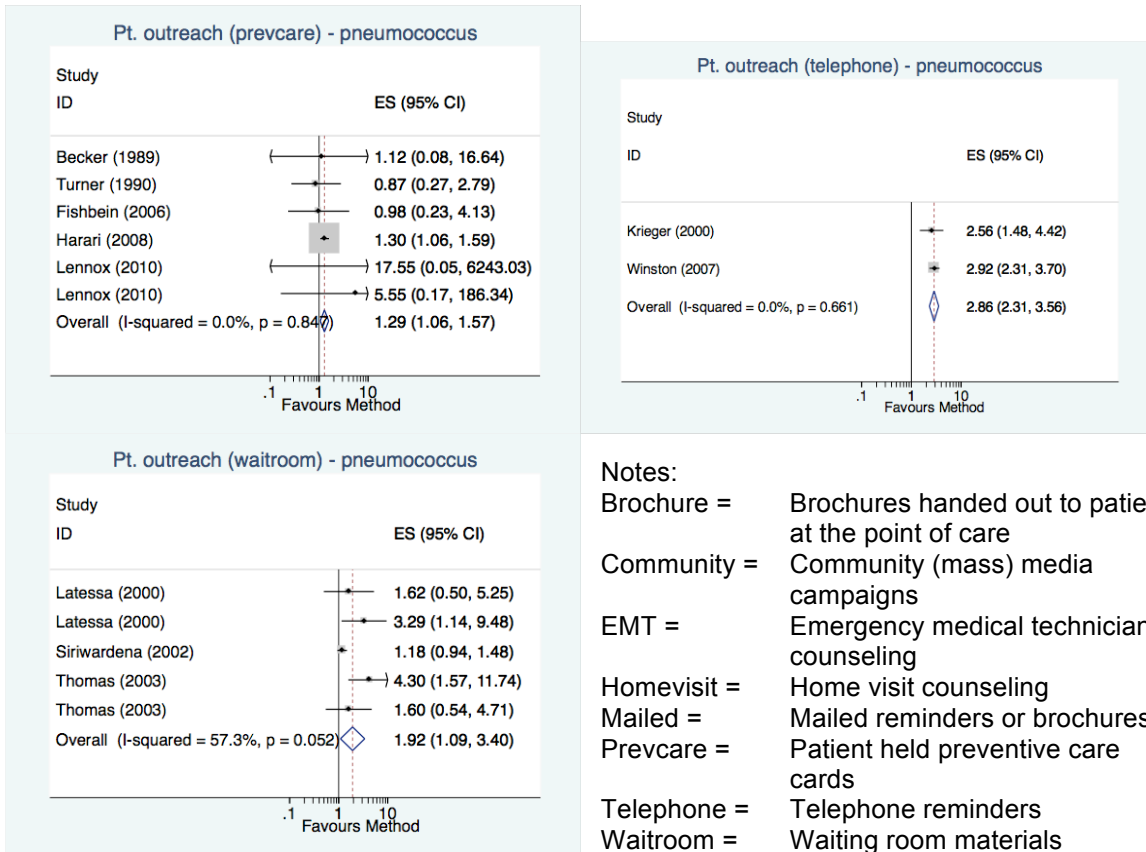
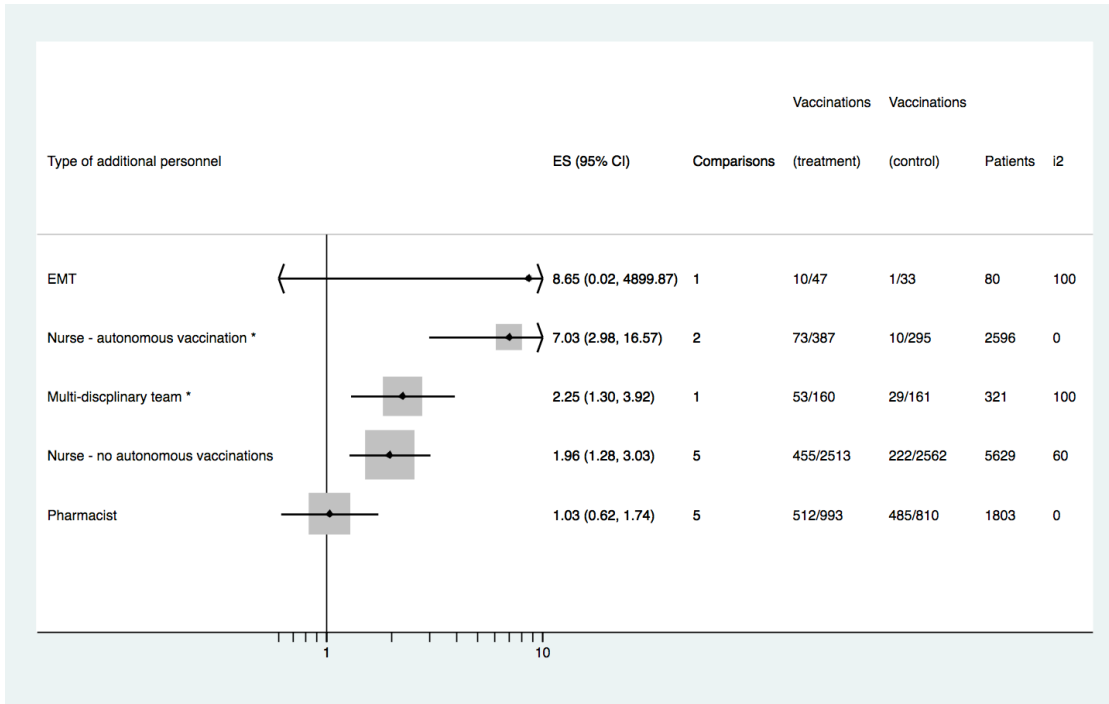
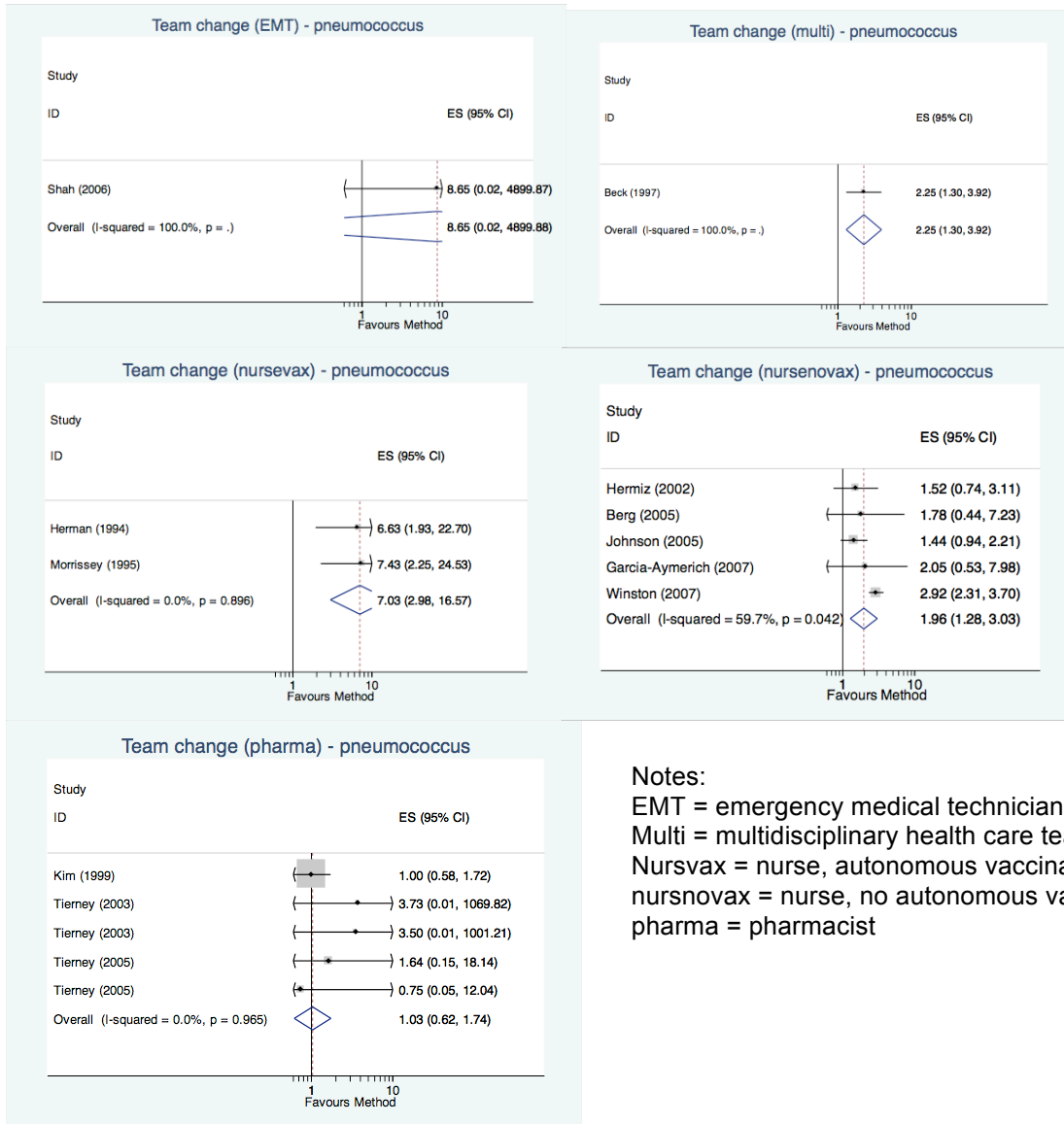


Exhibit C.4(a). Team change effects on pneumococcal vaccination rates



* Pooled odds ratios from fewer than 3 comparisons.

Exhibit C.4(b). Forest plots of team change characteristics – pneumococcal vaccination rates



Notes:
 EMT = emergency medical technician
 Multi = multidisciplinary health care team
 Nursvax = nurse, autonomous vaccinations
 nursnovax = nurse, no autonomous vaccinations
 pharma = pharmacist

Exhibit C.5(a). Numbers needed to treat for an additional influenza vaccination

Baseline vaccination rate	QI intervention	NNT
0.3	Patient outreach - community media	3.6
0.3	Patient outreach - telephone reminders	4.2
0.3	Financial incentives (patient)	6.3
0.3	Audit and feedback	7.2
0.3	Team change - nurse vaccine administration	9.0
0.3	Clinician reminders	10.4
0.3	Financial incentives (clinician)	10.6
0.3	Patient outreach - mailed print materials	12.0
0.3	Team change	12.3
0.3	Patient outreach	12.8
0.3	Delivery site change	16.3
0.4	Patient outreach - community media	3.6
0.4	Patient outreach - telephone reminders	4.1
0.4	Financial incentives (patient)	5.9
0.4	Audit and feedback	6.7
0.4	Team change - nurse vaccine administration	8.3
0.4	Clinician reminders	9.5
0.4	Financial incentives (clinician)	9.7
0.4	Patient outreach - mailed print materials	10.9
0.4	Team change	11.1
0.4	Patient outreach	11.6
0.4	Delivery site change	14.7
0.5	Patient outreach - community media	3.9
0.5	Patient outreach - telephone reminders	4.3
0.5	Financial incentives (patient)	6.1
0.5	Audit and feedback	6.8
0.5	Team change - nurse vaccine administration	8.3
0.5	Clinician reminders	9.5
0.5	Financial incentives (clinician)	9.7
0.5	Patient outreach - mailed print materials	10.9
0.5	Team change	11.1
0.5	Patient outreach	11.5
0.5	Delivery site change	14.5
0.6	Patient outreach - community media	4.4
0.6	Patient outreach - telephone reminders	4.9
0.6	Financial incentives (patient)	6.8
0.6	Audit and feedback	7.5
0.6	Team change - nurse vaccine administration	9.1
0.6	Clinician reminders	10.4
0.6	Financial incentives (clinician)	10.5

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0.6	Patient outreach - mailed print materials	11.8
0.6	Team change	12.0
0.6	Patient outreach	12.4
0.6	Delivery site change	15.5
0.7	Patient outreach - community media	5.5
0.7	Patient outreach - telephone reminders	6.1
0.7	Financial incentives (patient)	8.2
0.7	Audit and feedback	9.1
0.7	Team change - nurse vaccine administration	10.9
0.7	Clinician reminders	12.3
0.7	Financial incentives (clinician)	12.5
0.7	Patient outreach - mailed print materials	13.9
0.7	Team change	14.2
0.7	Patient outreach	14.7
0.7	Delivery site change	18.2

Online Supplementary Data

<http://www.annfammed.org/content/10/6/538/DC1>

Exhibit C.5(b). Numbers needed to treat for an additional pneumococcal vaccination

Baseline vaccination rate	QI intervention	NNT
0.3	Patient outreach - brochures handed out before appointments	2.4
0.3	Clinician reminders	5.2
0.3	Team change	5.8
0.3	Team change involving nurses without vaccination powers	6.4
0.3	Patient outreach - waiting / exam room posters	6.6
0.3	Patient outreach	7.4
0.3	Patient outreach - mailed print materials	8.6
0.3	Clinician education	10.2
0.3	Case management	11.1
0.3	Patient outreach - community media	13.0
0.3	Preventive care checklists	17.8
0.4	Patient outreach - brochures handed out before appointments	2.5
0.4	Clinician reminders	4.9
0.4	Team change	5.5
0.4	Team change involving nurses without vaccination powers	6.0
0.4	Patient outreach - waiting / exam room posters	6.2
0.4	Patient outreach	6.9
0.4	Patient outreach - mailed print materials	8.0
0.4	Clinician education	9.4
0.4	Case management	10.2
0.4	Patient outreach - community media	11.8
0.4	Preventive care checklists	16.0
0.5	Patient outreach - brochures handed out before appointments	2.8
0.5	Clinician reminders	5.1
0.5	Team change	5.7
0.5	Team change involving nurses without vaccination powers	6.2
0.5	Patient outreach - waiting / exam room posters	6.3
0.5	Patient outreach	7.0
0.5	Patient outreach - mailed print materials	8.1
0.5	Clinician education	9.4
0.5	Case management	10.2
0.5	Patient outreach - community media	11.8
0.5	Preventive care checklists	15.8
0.6	Patient outreach - brochures handed out before appointments	3.4
0.6	Clinician reminders	5.8
0.6	Team change	6.3
0.6	Team change involving nurses without vaccination powers	6.8
0.6	Patient outreach - waiting / exam room posters	7.0
0.6	Patient outreach	7.7
0.6	Patient outreach - mailed print materials	8.8

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0.6	Clinician education	10.2
0.6	Case management	11.0
0.6	Patient outreach - community media	12.7
0.6	Preventive care checklists	16.9
0.7	Patient outreach - brochures handed out before appointments	4.3
0.7	Clinician reminders	7.1
0.7	Team change	7.7
0.7	Team change involving nurses without vaccination powers	8.3
0.7	Patient outreach - waiting / exam room posters	8.5
0.7	Patient outreach	9.3
0.7	Patient outreach - mailed print materials	10.5
0.7	Clinician education	12.2
0.7	Case management	13.1
0.7	Patient outreach - community media	14.9
0.7	Preventive care checklists	19.8