

Appendix 1. Prevalence of any prescription medication, any category D or X medication, and any category X medication dispensed during pregnancy, overall and stratified by pregnancy period. Medicaid Analytic eXtract, 2000-2007 (N=1,106,757).

| Pregnancy period | Any Medication % | Category D or X Medication % | Category X Medication % |
|-----------------------|------------------------|---------------------------------------|-------------------------------|
| During Pregnancy | 82.5 | 42.0 | 5.3 |
| 3 Months prepregnancy | 52.3 | 39.8 | 14.1 |
| 1st Trimester | 53.9 | 25.7 | 5.0 |
| 2nd Trimester | 54.8 | 18.7 | 0.46 |
| 3rd Trimester | 57.3 | 18.2 | 0.25 |

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Appendix 2. Prevalence of any prescription medication, any category D or X medication, and any category X medication dispensed during pregnancy by age group. Medicaid Analytic eXtract, 2000-2007 (N=1,106,757).

| Age Group | Total N | Any | Category | Category X |
|-----------|---------|------------|----------|------------|
| | | Medication | D or X | Medication |
| | | % | % | % |
| Age <20 | 272407 | 82.3 | 36.2 | 5.3 |
| Age 20-24 | 396039 | 83.0 | 42.9 | 5.5 |
| Age 25-29 | 251632 | 82.9 | 44.9 | 5.3 |
| Age 30-34 | 117963 | 81.8 | 44.7 | 5.1 |
| Age ≥35 | 68716 | 80.6 | 44.3 | 4.4 |

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Appendix 3. Prevalence of any prescription medication, any category D or X medication, and any category X medication dispensed during pregnancy by race/ethnicity. Medicaid Analytic eXtract, 2000-2007 (N=1,106,757).

| Race/ethnicity | Total | Any | Category | Category |
|------------------|--------|------------|----------|----------|
| | | Medication | D or X | X |
| | | % | % | % |
| White | 441524 | 85.3 | 50.5 | 6.1 |
| Black | 373252 | 83.8 | 38.1 | 4.8 |
| Hispanic | 180598 | 77.4 | 33.1 | 4.8 |
| Asian | 38557 | 69.7 | 30.6 | 4.0 |
| American Indian | 20261 | 74.6 | 39.9 | 3.7 |
| Other or Unknown | 52565 | 80.2 | 37.3 | 5.6 |

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Appendix 4. Prevalence of any prescription medication, any category D or X medication, and any category X medication dispensed during pregnancy by year of birth. Medicaid Analytic eXtract, 2000-2007 (N=1,106,757).

| Year of Birth | Total | Any | Category | Category |
|---------------|--------|------------|----------|----------|
| | | Medication | D or X | X |
| | | % | % | % |
| 2000-2001 | 109268 | 81.7 | 39.5 | 4.1 |
| 2002 | 124517 | 81.7 | 40.8 | 4.1 |
| 2003 | 157838 | 82.8 | 42.5 | 4.9 |
| 2004 | 187378 | 82.8 | 42.8 | 5.9 |
| 2005 | 185380 | 82.8 | 42.6 | 6.0 |
| 2006 | 186814 | 82.8 | 42.4 | 5.8 |
| 2007 | 155562 | 82.3 | 41.8 | 5.4 |

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Appendix 5. The 10 most commonly dispensed category D and X medications, excluding fertility treatments, during pregnancy by age group; prevalence, prevalence ratio (PR), and 95% confidence intervals (CI).

| Medication | Age ≥35 N=68,716 Reference | Age <20 N=272,407 | | | Age 20-29 N=647,671 | | | Age 30-34 N=117,963 | | |
|-------------------------------|----------------------------------|----------------------|------|-----------|------------------------|------|-----------|------------------------|------|-----------|
| | % | % | PR | 95% CI | % | PR | 95% CI | % | PR | 95% CI |
| Category D Medications | | | | | | | | | | |
| Codeine* | 10.6 | 8.9 | 0.84 | 0.82-0.86 | 13.3 | 1.26 | 1.23-1.29 | 12.0 | 1.13 | 1.10-1.16 |
| Hydrocodone* | 8.7 | 7.4 | 0.84 | 0.82-0.86 | 11.6 | 1.32 | 1.29-1.36 | 10.4 | 1.19 | 1.16-1.23 |
| Ibuprofen† | 6.1 | 4.3 | 0.71 | 0.68-0.73 | 4.9 | 0.80 | 0.77-0.82 | 5.6 | 0.92 | 0.89-0.96 |
| Sulfamethoxazole * | 3.0 | 4.5 | 1.51 | 1.44-1.58 | 4.0 | 1.36 | 1.30-1.42 | 3.4 | 1.14 | 1.08-1.20 |
| Hydrocortisone* | 5.7 | 3.7 | 0.64 | 0.62-0.66 | 3.8 | 0.66 | 0.64-0.68 | 4.9 | 0.85 | 0.82-0.89 |
| Triamcinolone* | 4.8 | 2.9 | 0.61 | 0.59-0.64 | 3.2 | 0.66 | 0.64-0.69 | 4.0 | 0.85 | 0.81-0.89 |
| Propoxyphene* | 1.9 | 2.1 | 1.11 | 1.05-1.18 | 3.2 | 1.67 | 1.58-1.76 | 2.5 | 1.32 | 1.23-1.40 |
| Sertraline* | 2.6 | 1.4 | 0.56 | 0.53-0.59 | 2.4 | 0.92 | 0.88-0.97 | 2.7 | 1.05 | 0.99-1.11 |
| Oxycodone† | 2.2 | 1.2 | 0.57 | 0.54-0.61 | 2.5 | 1.17 | 1.11-1.23 | 2.5 | 1.17 | 1.10-1.25 |
| Prednisone* | 2.5 | 1.6 | 0.66 | 0.63-0.70 | 1.9 | 0.78 | 0.74-0.82 | 2.3 | 0.95 | 0.90-1.01 |
| Category X Medications | | | | | | | | | | |
| Hormonal Contraceptives | 3.0 | 5.2 | 1.71 | 1.64-1.79 | 5.1 | 1.70 | 1.63-1.77 | 4.3 | 1.43 | 1.36-1.50 |
| Temazepam | 0.26 | 0.04 | 0.17 | 0.13-0.21 | 0.11 | 0.41 | 0.35-0.48 | 0.20 | 0.78 | 0.64-0.95 |
| Atorvastatin | 0.38 | 0.02 | 0.04 | 0.03-0.06 | 0.04 | 0.11 | 0.10-0.13 | 0.18 | 0.47 | 0.39-0.56 |
| Warfarin‡ | 0.08 | 0.02 | 0.21 | 0.14-0.31 | 0.04 | 0.59 | 0.44-0.79 | 0.07 | 0.94 | 0.67-1.33 |
| Simvastatin | 0.22 | 0.01 | 0.04 | 0.03-0.07 | 0.02 | 0.10 | 0.08-0.12 | 0.11 | 0.49 | 0.39-0.62 |
| Estrogens | 0.06 | 0.02 | 0.28 | 0.19-0.43 | 0.02 | 0.37 | 0.26-0.52 | 0.03 | 0.57 | 0.37-0.88 |
| Tazarotene | 0.02 | 0.03 | 1.32 | 0.79-2.22 | 0.02 | 0.81 | 0.49-1.33 | 0.03 | 1.13 | 0.63-2.03 |
| Misoprostol | 0.07 | 0.01 | 0.14 | 0.08-0.22 | 0.02 | 0.29 | 0.21-0.41 | 0.04 | 0.64 | 0.44-0.95 |
| Flurazepam | 0.07 | 0.01 | 0.15 | 0.10-0.24 | 0.02 | 0.27 | 0.19-0.38 | 0.04 | 0.62 | 0.42-0.91 |
| Lovastatin | 0.10 | NA | NA | NA | 0.01 | 0.09 | 0.06-0.12 | 0.05 | 0.45 | 0.32-0.64 |

NA indicates cell sizes that are too small for display per the Centers for Medicare and Medicaid Services cell size suppression policy.

*Medications are also classified as category C depending on circumstances of use.

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†Medications are also classified as category B depending on circumstances of use.

‡Medication is classified as category X by manufacturer and as category D by Briggs et al.¹

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Appendix 6. The 10 most commonly dispensed category D and X medications, excluding fertility treatments, during pregnancy by race/ethnicity group; prevalence, prevalence ratio (PR), and 95% confidence intervals (CI).

| Medication | White N=441,524 Reference | Black N=373,252 | | | Hispanic N=180,598 | | | Asian N=38,557 | | | American Indian N=20,261 | | | Other or Unknown N=52,565 | | |
|-------------------------------|---------------------------------|--------------------|------|-----------|-----------------------|------|-----------|-------------------|------|-----------|-----------------------------|------|-----------|------------------------------|------|-----------|
| | % | % | PR | 95% CI | % | PR | 95% CI | % | PR | 95% CI | % | PR | 95% CI | % | PR | 95% CI |
| Category D Medications | | | | | | | | | | | | | | | | |
| Codeine* | 15.0 | 10.7 | 0.72 | 0.71-0.73 | 8.9 | 0.59 | 0.58-0.60 | 6.9 | 0.46 | 0.45-0.48 | 13.1 | 0.88 | 0.85-0.91 | 8.6 | 0.57 | 0.56-0.59 |
| Hydrocodone* | 15.1 | 7.9 | 0.52 | 0.51-0.53 | 5.6 | 0.37 | 0.36-0.38 | 3.2 | 0.21 | 0.20-0.22 | 11.8 | 0.78 | 0.75-0.81 | 6.9 | 0.46 | 0.44-0.47 |
| Ibuprofen† | 4.6 | 5.1 | 1.11 | 1.08-1.13 | 5.3 | 1.14 | 1.11-1.16 | 4.3 | 0.92 | 0.88-0.97 | 5.0 | 1.09 | 1.02-1.16 | 4.4 | 0.96 | 0.92-1.00 |
| Sulfamethoxazole* | 4.5 | 4.3 | 0.95 | 0.93-0.97 | 2.9 | 0.65 | 0.63-0.67 | 1.8 | 0.40 | 0.37-0.43 | 3.5 | 0.77 | 0.71-0.83 | 3.1 | 0.69 | 0.66-0.72 |
| Hydrocortisone* | 3.9 | 3.4 | 0.87 | 0.86-0.89 | 4.7 | 1.19 | 1.16-1.22 | 6.1 | 1.56 | 1.49-1.62 | 3.1 | 0.80 | 0.74-0.86 | 4.4 | 1.12 | 1.07-1.17 |
| Triamcinolone* | 3.4 | 2.9 | 0.87 | 0.85-0.89 | 3.3 | 0.99 | 0.96-1.02 | 5.9 | 1.74 | 1.67-1.82 | 3.2 | 0.96 | 0.89-1.04 | 3.3 | 0.99 | 0.94-1.04 |
| Propoxyphene* | 4.6 | 2.1 | 0.45 | 0.43-0.46 | 0.80 | 0.17 | 0.17-0.18 | 0.32 | 0.07 | 0.06-0.08 | 2.9 | 0.63 | 0.58-0.69 | 1.3 | 0.29 | 0.27-0.31 |
| Sertraline* | 4.0 | 1.0 | 0.24 | 0.23-0.25 | 0.87 | 0.22 | 0.21-0.23 | 0.59 | 0.15 | 0.13-0.17 | 2.2 | 0.55 | 0.50-0.60 | 1.9 | 0.47 | 0.44-0.50 |
| Oxycodone† | 3.2 | 1.9 | 0.58 | 0.57-0.60 | 0.72 | 0.23 | 0.21-0.24 | 0.42 | 0.13 | 0.11-0.15 | 2.6 | 0.83 | 0.76-0.90 | 2.0 | 0.62 | 0.59-0.66 |
| Prednisone* | 2.3 | 1.7 | 0.76 | 0.74-0.78 | 1.3 | 0.58 | 0.56-0.61 | 1.4 | 0.61 | 0.56-0.66 | 1.6 | 0.69 | 0.62-0.77 | 2.3 | 0.99 | 0.94-1.06 |
| Category X Medications | | | | | | | | | | | | | | | | |
| Hormonal Contraceptives | 5.6 | 4.5 | 0.80 | 0.78-0.81 | 4.4 | 0.78 | 0.76-0.80 | 3.4 | 0.60 | 0.57-0.64 | 3.4 | 0.60 | 0.56-0.65 | 5.2 | 0.92 | 0.89-0.96 |
| Temazepam | 0.16 | 0.07 | 0.41 | 0.35-0.47 | 0.11 | 0.66 | 0.56-0.77 | 0.06 | 0.39 | 0.26-0.58 | 0.07 | 0.46 | 0.28-0.77 | 0.07 | 0.44 | 0.32-0.61 |
| Atorvastatin | 0.07 | 0.05 | 0.76 | 0.63-0.90 | 0.09 | 1.20 | 0.99-1.45 | 0.11 | 1.48 | 1.07-2.04 | NA | NA | NA | 0.12 | 1.72 | 1.32-2.24 |
| Warfarin‡ | 0.06 | 0.04 | 0.75 | 0.61-0.91 | 0.02 | 0.33 | 0.23-0.48 | NA | NA | NA | NA | NA | NA | 0.02 | 0.37 | 0.20-0.68 |
| Simvastatin | 0.05 | 0.04 | 0.75 | 0.60-0.93 | 0.02 | 0.43 | 0.31-0.61 | 0.05 | 1.12 | 0.71-1.75 | 0.06 | 1.22 | 0.68-2.17 | 0.04 | 0.86 | 0.55-1.33 |
| Estrogens | 0.03 | 0.02 | 0.78 | 0.58-1.04 | 0.03 | 1.15 | 0.83-1.58 | 0.03 | 1.17 | 0.65-2.13 | NA | NA | NA | NA | NA | NA |
| Tazarotene | 0.03 | 0.02 | 0.84 | 0.64-1.12 | 0.01 | 0.33 | 0.20-0.55 | NA | NA | NA | NA | NA | NA | 0.07 | 2.47 | 1.69-3.60 |
| Misoprostol | 0.03 | 0.02 | 0.61 | 0.45-0.84 | 0.02 | 0.88 | 0.62-1.26 | 0.07 | 2.81 | 1.86-4.25 | NA | NA | NA | 0.03 | 1.03 | 0.59-1.80 |
| Flurazepam | 0.03 | 0.01 | 0.41 | 0.29-0.58 | 0.04 | 1.50 | 1.12-2.01 | 0.04 | 1.44 | 0.84-2.47 | NA | NA | NA | NA | NA | NA |
| Lovastatin | 0.01 | 0.01 | 0.75 | 0.50-1.14 | 0.03 | 2.57 | 1.79-3.68 | 0.06 | 4.74 | 2.95-7.62 | NA | NA | NA | NA | NA | NA |

NA indicates cell sizes that are too small for display per the Centers for Medicare and Medicaid Services cell size suppression policy.

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*Medications are also classified as category C depending on circumstances of use.

†Medications are also classified as category B depending on circumstances of use.

‡Medication is classified as category X by manufacturer and as category D by Briggs et.¹

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Appendix 7. The 10 most commonly dispensed prescription medication classes during pregnancy, overall prevalence and stratified by pregnancy period. Medicaid Analytic eXtract, 2000-2007 (N=1,106,757).

| AHFS Class | During Pregnancy % | 3 Months Pre- Pregnancy % | 1st Trimester % | 2nd Trimester % | 3rd Trimester % |
|--|--------------------------|---------------------------------|--------------------|--------------------|--------------------|
| Antibacterials | 49.7 | 24.5 | 23.8 | 23.3 | 22.9 |
| Analgesics & Antipyretics | 29.6 | 23.1 | 15.6 | 13.0 | 12.1 |
| Skin & Mucous Membrane Anti-infectives | 28.7 | 6.4 | 9.8 | 12.9 | 13.9 |
| Urinary Anti-infectives | 21.7 | 1.5 | 7.1 | 9.1 | 9.9 |
| 1st Generation Antihistamines | 18.6 | 4.5 | 10.4 | 6.8 | 6.2 |
| Respiratory Tract Antihistamines | 18.1 | 6.5 | 9.7 | 7.2 | 6.2 |
| Anxiolytics, Sedatives & Hypnotics | 17.1 | 5.5 | 10.0 | 6.3 | 6.2 |
| Sympathomimetic (Adrenergic) Agents | 15.5 | 6.6 | 5.8 | 6.4 | 8.5 |
| Antiprotozoals | 15.2 | 3.6 | 3.9 | 7.1 | 6.3 |
| Bronchodilators | 14.3 | 6.1 | 5.5 | 6.0 | 7.7 |

Medications may be included in multiple AHFS classes. Respiratory antihistamines included first generation antihistamines, sympathomimetic agents, and bronchodilators. Bronchodilators included sympathomimetic agents, antihistamines, and other agents.

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Appendix 8. The 10 most commonly dispensed prescription medication classes during pregnancy by age group; prevalence, prevalence ratio (PR), and 95% confidence intervals (CI). Medicaid Analytic eXtract, 2000-2007 (N=1,106,757).

| AHFS Class | Age ≥35 N=68,716 Reference | Age <20 N=272,407 | | | Age 20-29 N=647,671 | | | Age 30-34 N=117,963 | | |
|--|----------------------------------|----------------------|------|-----------|------------------------|------|-----------|------------------------|------|-----------|
| | % | % | PR | 95% CI | % | PR | 95% CI | % | PR | 95% CI |
| Antibacterials | 41.7 | 52.3 | 1.26 | 1.24-1.27 | 50.2 | 1.20 | 1.19-1.21 | 45.3 | 1.09 | 1.08-1.10 |
| Analgesics & Antipyretics | 31.0 | 24.0 | 0.77 | 0.76-0.78 | 31.5 | 1.02 | 1.00-1.03 | 31.5 | 1.02 | 1.00-1.03 |
| Skin & Mucous Membrane Anti-infectives | 27.1 | 28.6 | 1.06 | 1.04-1.07 | 29.0 | 1.07 | 1.06-1.08 | 28.2 | 1.04 | 1.03-1.06 |
| Urinary Anti-infectives | 15.5 | 24.0 | 1.55 | 1.52-1.58 | 22.1 | 1.43 | 1.40-1.45 | 18.1 | 1.17 | 1.14-1.19 |
| 1st Generation Antihistamines | 15.3 | 18.8 | 1.23 | 1.21-1.25 | 19.1 | 1.25 | 1.22-1.27 | 17.1 | 1.11 | 1.09-1.14 |
| Respiratory Tract Antihistamines | 17.4 | 18.7 | 1.08 | 1.06-1.09 | 18.0 | 1.04 | 1.02-1.06 | 18.0 | 1.04 | 1.01-1.06 |
| Anxiolytics, Sedatives & Hypnotics | 14.5 | 15.8 | 1.09 | 1.07-1.11 | 18.0 | 1.24 | 1.21-1.26 | 16.6 | 1.14 | 1.11-1.17 |
| Sympathomimetic (Adrenergic) Agents | 15.8 | 15.4 | 0.97 | 0.95-0.99 | 15.4 | 0.97 | 0.95-0.99 | 16.2 | 1.02 | 1.00-1.04 |
| Antiprotozoals | 8.8 | 16.7 | 1.90 | 1.85-1.95 | 15.8 | 1.79 | 1.75-1.84 | 11.5 | 1.30 | 1.26-1.33 |
| Bronchodilators | 15.0 | 14.0 | 0.93 | 0.91-0.95 | 14.3 | 0.95 | 0.93-0.97 | 15.2 | 1.01 | 0.99-1.04 |

Age groups 20-24 and 25-29 were combined because results were similar.

Medications may be included in multiple AHFS classes. Respiratory antihistamines included first generation antihistamines, sympathomimetic agents, and bronchodilators. Bronchodilators included sympathomimetic agents, antihistamines, and other agents.

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Appendix 9. The 10 most commonly dispensed prescription medication classes during pregnancy by race/ethnicity group; prevalence, prevalence ratio (PR), and 95% confidence intervals (CI). Medicaid Analytic eXtract, 2000-2007 (N=1,106,757).

| AHFS Class | White N=441,524 Reference | Black N=373,252 | | | Hispanic N=180,598 | | | Asian N=38,557 | | | American Indian N=20,261 | | | Other or Unknown N=52,565 | | |
|---|---------------------------------|-----------------|------|-----------|--------------------|------|-----------|----------------|------|-----------|-----------------------------|------|-----------|------------------------------|------|-----------|
| | % | % | PR | 95% CI | % | PR | 95% CI | % | PR | 95% CI | % | PR | 95% CI | % | PR | 95% CI |
| Antibacterials | 55.6 | 49.2 | 0.89 | 0.88-0.89 | 42.3 | 0.76 | 0.76-0.76 | 31.9 | 0.57 | 0.57-0.58 | 45.7 | 0.82 | 0.81-0.83 | 42.5 | 0.76 | 0.76-0.77 |
| Analgesics & Antipyretics | 33.9 | 27.4 | 0.81 | 0.80-0.81 | 26.2 | 0.77 | 0.77-0.78 | 23.6 | 0.70 | 0.68-0.71 | 30.4 | 0.90 | 0.88-0.92 | 25.4 | 0.75 | 0.74-0.76 |
| Skin & Mucous Membrane Anti- infectives | 26.2 | 33.2 | 1.27 | 1.26-1.28 | 27.8 | 1.06 | 1.05-1.07 | 20.1 | 0.77 | 0.75-0.78 | 20.2 | 0.77 | 0.75-0.79 | 30.3 | 1.16 | 1.14-1.17 |
| Urinary Anti-infectives | 22.5 | 22.3 | 0.99 | 0.99-1.00 | 21.6 | 0.96 | 0.95-0.97 | 12.7 | 0.57 | 0.55-0.58 | 17.7 | 0.79 | 0.76-0.81 | 19.9 | 0.88 | 0.87-0.90 |
| 1st Generation Antihistamines | 22.2 | 18.2 | 0.82 | 0.81-0.83 | 13.9 | 0.63 | 0.62-0.63 | 14.1 | 0.64 | 0.62-0.65 | 15.3 | 0.69 | 0.67-0.71 | 11.3 | 0.51 | 0.50-0.52 |
| Respiratory Tract Antihistamines | 21.7 | 16.6 | 0.77 | 0.76-0.77 | 14.9 | 0.68 | 0.68-0.69 | 16.1 | 0.74 | 0.72-0.76 | 15.1 | 0.69 | 0.67-0.72 | 12.5 | 0.57 | 0.56-0.59 |
| Anxiolytics, Sedatives & Hypnotics | 23.1 | 15.4 | 0.67 | 0.66-0.67 | 9.8 | 0.42 | 0.42-0.43 | 7.6 | 0.33 | 0.32-0.34 | 14.5 | 0.63 | 0.61-0.65 | 10.6 | 0.46 | 0.45-0.47 |
| Sympathomimetic (Adrenergic) Agents | 18.5 | 12.8 | 0.69 | 0.69-0.70 | 14.7 | 0.80 | 0.79-0.81 | 13.9 | 0.75 | 0.73-0.77 | 13.1 | 0.71 | 0.68-0.74 | 13.7 | 0.74 | 0.72-0.76 |
| Antiprotozoals | 11.0 | 24.6 | 2.24 | 2.21-2.26 | 9.1 | 0.83 | 0.82-0.84 | 4.9 | 0.45 | 0.43-0.47 | 12.5 | 1.14 | 1.09-1.18 | 12.1 | 1.10 | 1.07-1.13 |
| Bronchodilators | 17.1 | 11.8 | 0.69 | 0.68-0.70 | 13.5 | 0.79 | 0.78-0.80 | 13.1 | 0.77 | 0.75-0.79 | 12.0 | 0.70 | 0.67-0.73 | 13.2 | 0.77 | 0.75-0.79 |

Medications may be included in multiple AHFS classes. Respiratory antihistamines included first generation antihistamines, sympathomimetic agents, and bronchodilators. Bronchodilators included sympathomimetic agents, antihistamines, and other agents.

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Supplementary Material Figure Legends

Appendix 10. Medication class prevalence by year of birth for the five classes with at least a 20% increase or decrease between years, among the 10 most commonly dispensed prescription medication classes during pregnancy. Medicaid Analytic eXtract, 2000-2007 (N=1,106,757). Medications may be included in multiple AHFS classes. Respiratory antihistamines included first generation antihistamines, sympathomimetic agents, and bronchodilators. Bronchodilators included sympathomimetic agents, antihistamines, and other agents.

Appendix 11. Proportion of pregnancies with a prescription medication dispensing during pregnancy, by study cohort. Missing bars indicate that the proportion was not reported in the article.² Abbreviations: APAP, acetaminophen; MAX, Medicaid Analytic eXtract.

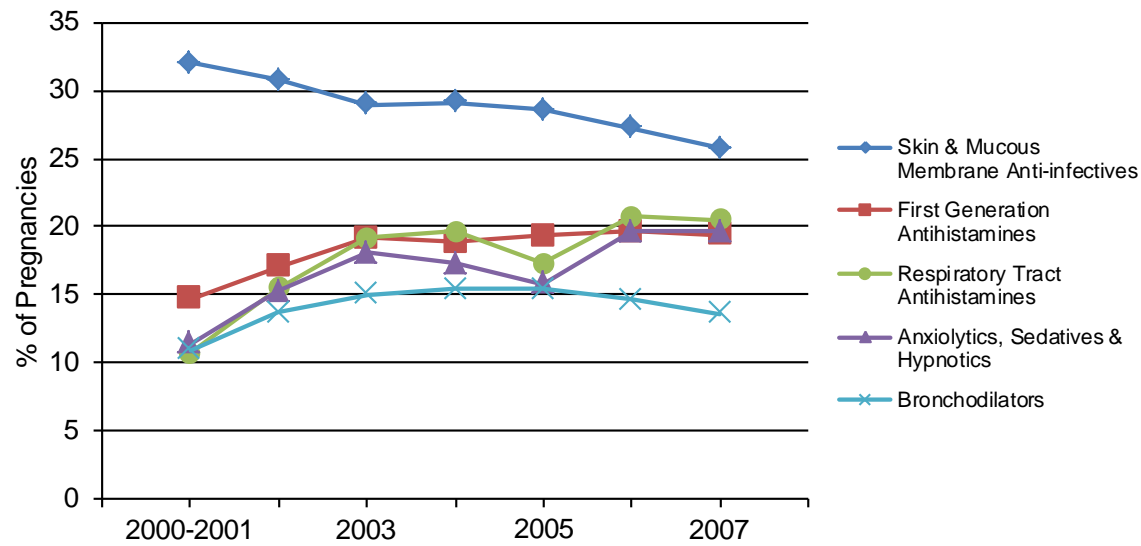
Appendix 12. Proportion of pregnancies with a prescription medication dispensing (MAX) or use (NBDPS, BDS) in the first trimester, by study cohort. Missing bars indicate that the proportion was not reported in the article.^{3,4} Abbreviations: APAP, acetaminophen; BDS, Slone Epidemiology Center Birth Defects Study; NBDPS, National Birth Defects Prevention Study; MAX, Medicaid Analytic eXtract. NBDPS 2004-2007 may include combination medication forms.

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Appendix 10.

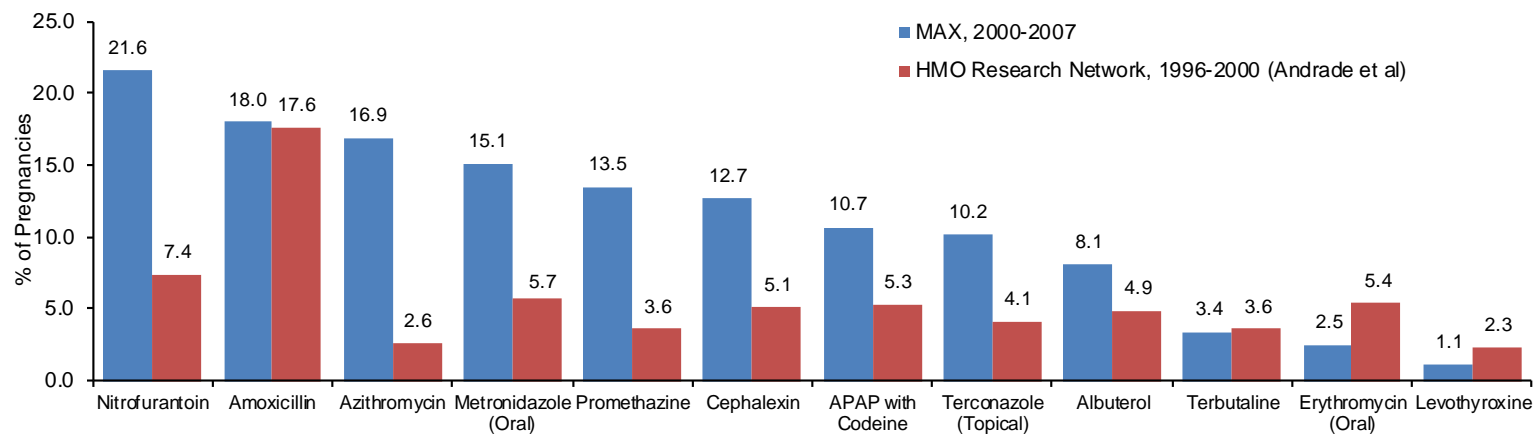


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Appendix 11.

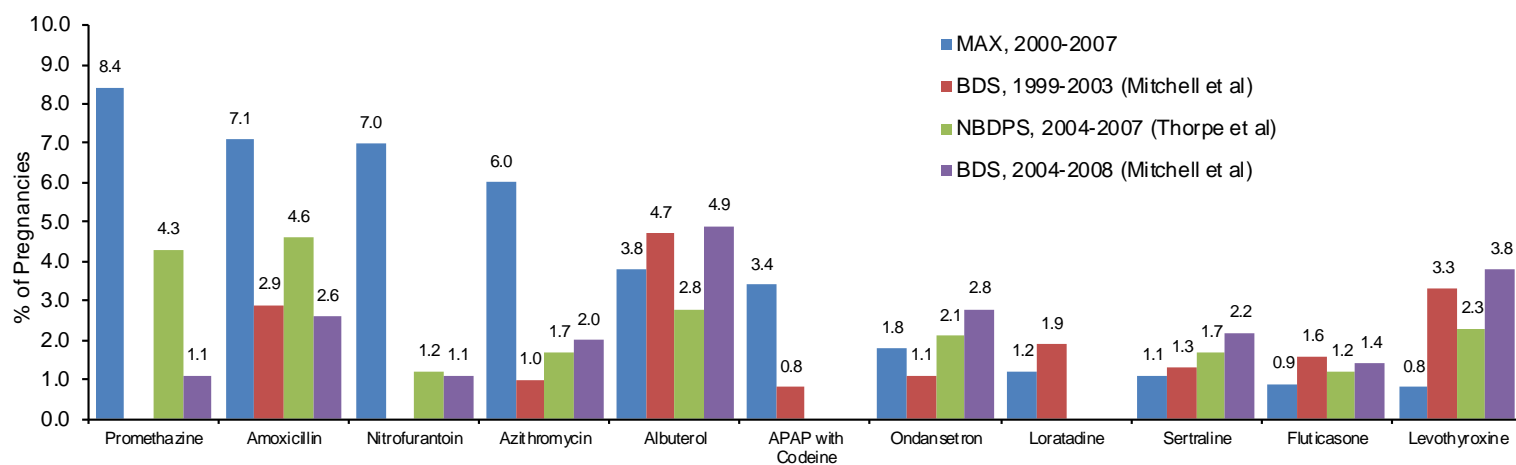


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Appendix 13. Discussion of potential contributions of population composition to the observed differences in medication utilization across studies.

Differences in population composition could contribute to differences in medication utilization observed between this study and the previous studies. In this study, 60% of women were <25 years old, 40% were white, and 34% were black in the current study, whereas less than 25% of women were <25 years old, more than 60% were white, and up to 12% were black in the BDS study.^{3,4} In the HMO Research Network study, 17% were <25 years old.² The prevalence estimates of nitrofurantoin (indicated for urinary tract infections), metronidazole (used to treat bacterial vaginosis and infections), azithromycin (used to treat respiratory-tract infections among other infections), and promethazine (an antiemetic and antihistamine),^{5,6} were higher among younger versus older women in this study and were higher in this study compared with previous studies.^{2-4,7} Furthermore, metronidazole and terconazole (used to treat vulvovaginal candidiasis),⁵ were higher among black versus white women in this study and were higher in this study compared with the HMO Research Network study.² Prevalence differences across study populations could reflect differences in treatment decisions or in the prevalence of underlying indications by age, race–ethnicity, and socio-economic status. We could not determine actual indications for dispensed medications. However, the proportion dispensed levothyroxine (for hypothyroidism)⁵ was lower in this study, which could reflect under-diagnosis of hypothyroidism and less hypothyroidism due to the younger age distribution. Higher metronidazole prevalence in this study may reflect a higher prevalence of bacterial vaginosis, which is more common among black women compared with white women.⁸ Higher prevalence of medications used to treat infections in this study may reflect a greater burden of undiagnosed infections when prenatal care is initiated among women enrolled in Medicaid than women with private insurance. Additionally, prescribing patterns may differ according to public versus private

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insurer and socio-economic status. In line with previous studies describing higher use of opioids among pregnant women enrolled in Medicaid^{9,10} than commercially insured women,¹¹ there was a higher proportion of women dispensed codeine and acetaminophen in the current study than in the BDS and the HMO Research Network study.^{2,3}

Some discrepancies between prevalence estimates across studies may be attributed in part to temporal changes in medication use as the study years differed slightly. The decrease in terconazole, an intravaginal treatment for vulvovaginal candidiasis, may have resulted from increased availability of over-the-counter treatments and the increase in prevalence of fluconazole, an oral treatment.^{12,13} The increase in hydrocodone/acetaminophen mirrors an increase in prescription opioid use in other populations during similar years.^{14,15}

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Appendix References

1. Briggs GG, Freeman RK, Yaffee SJ, editors. Drugs in pregnancy and lactation: a reference guide to fetal and neonatal risk. 8th ed. Philadelphia (PA): Lippincott Williams & Wilkins; 2008.
 2. Andrade SE, Gurwitz JH, Davis RL, Chan KA, Finkelstein JA, Fortman K, et al. Prescription drug use in pregnancy. *Am J Obstet Gynecol* 2004;191:398-407.
 3. Mitchell AA, Gilboa SM, Werler MM, Kelley KE, Louik C, Hernández-Díaz S. National Birth Defects Prevention Study. Medication use during pregnancy, with particular focus on prescription drugs: 1976-2008. *Am J Obstet Gynecol* 2011;205:51.e1-8.
 4. Thorpe PG, Gilboa SM, Hernandez-Diaz S, Lind J, Cragen JD, Briggs G, et al. Medications in the first trimester of pregnancy: most common exposures and critical gaps in understanding fetal risk. *Pharmacoepidemiol Drug Saf* 2013;22:1013-8.
 5. Clinical Pharmacology [database online]. Tampa (FL): Gold Standard, Inc.; 2015. Available at: <http://www.clinicalpharmacology-ip.com/>. Retrieved January 7, 2015.
 6. Sweetman S, editor. Martindale: the complete drug reference. London (UK): Pharmaceutical Press. In: Micromedex® 2.0, (electronic version). Truven Health Analytics, Greenwood Village, Colorado. Available at: <http://www.micromedexsolutions.com/>. Retrieved January 7, 2015.
 7. Toh S, Li Q, Cheetham TC, Cooper WO, Davis RL, Dublin S, et al. Prevalence and trends in the use of antipsychotic medications during pregnancy in the U.S., 2001 -2007: a population-based study of 585,615 deliveries. *Arch Womens Ment Health* 2013;16:149-57.
 8. Koumans EH, Sternberg M, Bruce C, McQuillan G, Kendrick J, Sutton M, et al. The prevalence of bacterial vaginosis in the United States, 2001 -2004; associations with symptoms, sexual behaviors, and reproductive health. *Sex Transm Dis* 2007;34:864-9.
- Palmsten K, Hernandez-Diaz S, Chambers CD, Mogun H, Lai S, Gilmer TP, et al. The most commonly dispensed prescription medications among pregnant women enrolled in the United States Medicaid program. *Obstet Gynecol* 2015;126.
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9. Epstein RA, Bobo WV, Martin PR, Morrow JA, Wang W, Chandrasekhar R, et al. Increasing pregnancy-related use of prescribed opioid analgesics. *Ann Epidemiol* 2013;23:498-503.
10. Desai RJ, Hernandez-Diaz S, Bateman BT, Huybrechts KF. Increase in prescription opioid use during pregnancy among Medicaid-enrolled women. *Obstet Gynecol* 2014;123:997-1002.
11. Bateman BT, Hernandez-Diaz S, Rathmell JP, Seeger JD, Doherty M, Fischer MA, et al. Patterns of opioid utilization in pregnancy in a large cohort of commercial insurance beneficiaries in the United States. *Anesthesiology* 2014;120:1216-24.
12. Gurwitz JH, McLaughlin TJ, Fish LS. The effect of an Rx-to-OTC switch on medication prescribing patterns and utilization of physician services: the case of vaginal antifungal products. *Health Serv Res* 1995;30:672-85.
13. McCaig LF, McNeil MM. Trends in prescribing for vulvovaginal candidiasis in the United States. *Pharmacoepidemiol Drug Saf* 2005;14:113-20.
14. Sullivan MD, Edlund MJ, Fan MY, Devries A, Brennan Braden J, Martin BC. Trends in use of opioids for non-cancer pain conditions 2000-2005 in commercial and Medicaid insurance plans: the TROUP study. *Pain* 2008;138:440-9.
15. Frenk SM, Porter KS, Paulozzi LJ. Prescription opioid analgesic use among adults: United States, 1999-2012. *NCHS Data Brief* 2015:1-8.

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