Additional file 3: Meta-analysis: Prevalence/incidence of cough in African, Asian and South American countries

| Denominator = incidental consultations Martin 1984 65 1000 + 6.5 [5.1; 8.3] Random effects model not applicable 1000 ♦ 6.5 [5.1; 8.1] Denominator = incidental reasons for encounter Martin 1984 63 1000 + 6.3 [4.9; 8.0] Random effects model not applicable 1000 ♦ 6.3 [4.9; 7.9] Denominator = patients Harding 1980 167 1624 + 10.3 [8.9; 11.9] Random effects model not applicable 1624 ♦ 10.3 [8.9; 11.8] Denominator = reasons for encounter Silva 1998 576 3448 + 16.7 [15.5; 18.0] Silva 1998 576 3448 + 16.7 [15.5; 18.0] 13.6 [12.6; 14.4] Ajmi 2011 4228 24882 + 17.0 [16.5; 17.5] 9.0 [8.7; 9.3] Liu 2017 1841 13705 + 9.0 [8.7; 9.3] 13.4 [12.9; 14.0] Random effects model solution 80062 ♦ 13.8 [11.0; 16.9] J² = 100%, χ² = 875.78 (ρ < 0.01) 0.001 0.001 | Study | k | N | | | | | Pe | rcentage (%) | 95% CI | |
|--|--|---------|-------|------------|----|----|----|-----|--------------|--------------|--|
| Martin 1984 65 1000 + 1000 ♦ 6.5 [5.1; 8.3] Random effects model not applicable 1000 ♦ 6.5 [5.1; 8.1] Denominator = incidental reasons for encounter Martin 1984 63 1000 + 6.3 [4.9; 8.0] Random effects model not applicable 1000 ♦ 6.3 [4.9; 7.9] Denominator = patients Harding 1980 167 1624 + 10.3 [8.9; 11.9] Random effects model not applicable 1624 ♦ 10.3 [8.9; 11.8] Denominator = reasons for encounter Silva 1998 576 3448 + 16.7 [15.5; 18.0] Silva 1998 576 3448 4 + 16.7 [15.5; 18.0] 16.7 [15.5; 18.0] Ben Abdelaziz 2004 892 6576 + 13.6 [12.8; 14.4] 17.0 [16.5; 17.5] Ajmi 2011 4228 24882 + 17.0 [16.5; 17.5] 90 [8.7; 9.3] Liu 2017 1841 13705 + 13.4 [12.9; 14.0] 13.4 [12.9; 14.0] Random effects model f ² = 100%, χ ² ₄ = 875.78 (ρ < 0.01) | Denominator = incidental consultations | | | | | | | | | | |
| Random effects model not applicable Denominator = incidental reasons for encounter Martin 1984 63 1000 + 6.3 [4.9; 8.0] Random effects model 1000 ♦ 6.3 [4.9; 7.9] not applicable Denominator = patients Harding 1980 167 1624 + 10.3 [8.9; 11.9] Random effects model 1624 ♦ 10.3 [8.9; 11.8] not applicable Denominator = reasons for encounter Silva 1998 576 3448 + 16.7 [15.5; 18.0] Ben Abdelaziz 2004 892 6576 + 13.6 [12.8; 14.4] Ajmi 2011 4228 24882 + 17.0 [16.5; 17.5] Mash 2012 2821 31451 + 9.0 [8.7; 9.3] Liu 2017 1841 13705 + 13.4 [12.9; 14.0] Random effects model 80062 ♦ 13.8 [11.0; 16.9] J² = 100%, χ² = 875.78 (p < 0.01) 0 20 40 60 80 100 | | | | | | | | | 6.5 | [5.1: 8.3] | |
| Denominator = incidental reasons for encounter Martin 1984 63 1000 + 6.3 [4.9; 8.0] Random effects model not applicable 1000 ♦ 6.3 [4.9; 7.9] Denominator = patients Harding 1980 167 1624 + 10.3 [8.9; 11.9] Random effects model not applicable 1624 ♦ 10.3 [8.9; 11.8] Denominator = reasons for encounter Silva 1998 576 3448 + 16.7 [15.5; 18.0] Ben Abdelaziz 2004 892 6576 + 13.6 [12.8; 14.4] 17.0 [16.5; 17.5] Ajmi 2011 4228 24882 + 17.0 [16.5; 17.5] 9.0 [8.7; 9.3] Liu 2017 1841 13705 + 9.0 [8.7; 9.3] 13.4 [12.9; 14.0] Random effects model fects model field for model field field for model field field for model field field for model field field field for model field fiel | | | 1000 | ♦ | | | | | 6.5 | | |
| Martin 1984 63 1000 + 1000 ♦ 6.3 [4.9; 8.0] Random effects model not applicable 1000 ♦ 6.3 [4.9; 7.9] Denominator = patients Harding 1980 167 1624 + 10.3 [8.9; 11.9] Random effects model not applicable 1624 ♦ 10.3 [8.9; 11.8] Denominator = reasons for encounter Silva 1998 576 3448 + 16.7 [15.5; 18.0] Ben Abdelaziz 2004 892 6576 + 13.6 [12.8; 14.4] Ajmi 2011 4228 24882 + 17.0 [16.5; 17.5] Mash 2012 2821 31451 + 9.0 [8.7; 9.3] Liu 2017 1841 13705 + 13.4 [12.9; 14.0] Random effects model f² = 100%, χ²4 = 875.78 (ρ < 0.01) | not applicable | | | | | | | | | | |
| Random effects model 1000 ♦ 6.3 [4.9; 7.9] not applicable Denominator = patients Harding 1980 167 1624 + 10.3 [8.9; 11.9] Random effects model 1624 ♦ 10.3 [8.9; 11.8] not applicable Denominator = reasons for encounter Silva 1998 576 3448 + 16.7 [15.5; 18.0] Ben Abdelaziz 2004 892 6576 + 13.6 [12.8; 14.4] Ajmi 2011 4228 24882 + 17.0 [16.5; 17.5] Mash 2012 2821 31451 + 9.0 [8.7; 9.3] Liu 2017 1841 13705 + 13.4 [12.9; 14.0] Random effects model 80062 ♦ 13.8 [11.0; 16.9] P = 100%, \(\chi_4^2 = 875.78\) (p < 0.01) | Denominator = incidental reasons for encounter | | | | | | | | | | |
| Denominator = patients Harding 1980 167 1624 + 10.3 [8.9; 11.9] Random effects model not applicable 1624 ♦ 10.3 [8.9; 11.8] Denominator = reasons for encounter Silva 1998 576 3448 + 16.7 [15.5; 18.0] Ben Abdelaziz 2004 892 6576 + 13.6 [12.8; 14.4] Ajmi 2011 4228 24882 + 17.0 [16.5; 17.5] Mash 2012 2821 31451 + 9.0 [8.7; 9.3] Liu 2017 1841 13705 + 13.4 [12.9; 14.0] Random effects model β 2 = 100%, χ ² ₄ = 875.78 (ρ < 0.01) | Martin 1984 | 63 | 1000 | + | | | | | 6.3 | [4.9; 8.0] | |
| Denominator = patients Harding 1980 167 1624 + 10.3 [8.9; 11.9] Random effects model not applicable 1624 ♦ 10.3 [8.9; 11.8] Denominator = reasons for encounter Silva 1998 576 3448 + 16.7 [15.5; 18.0] Ben Abdelaziz 2004 892 6576 + 13.6 [12.8; 14.4] Ajmi 2011 4228 24882 + 17.0 [16.5; 17.5] Mash 2012 2821 31451 + 9.0 [8.7; 9.3] Liu 2017 1841 13705 + 13.4 [12.9; 14.0] Random effects model J² = 100%, χ²/4 = 875.78 (ρ < 0.01) | Random effects model | | 1000 | ♦ | | | | | 6.3 | [4.9; 7.9] | |
| Harding 1980 167 1624 + 10.3 [8.9; 11.9] Random effects model not applicable Denominator = reasons for encounter Silva 1998 576 3448 + 16.7 [15.5; 18.0] Ben Abdelaziz 2004 892 6576 + 13.6 [12.8; 14.4] Ajmi 2011 4228 24882 + 17.0 [16.5; 17.5] Mash 2012 2821 31451 + 9.0 [8.7; 9.3] Liu 2017 1841 13705 + 13.4 [12.9; 14.0] Random effects model 80062 30062 13.8 [11.0; 16.9] P = 100%, χ ² ₄ = 875.78 (p < 0.01) 0 20 40 60 80 100 | not applicable | | | | | | | | | | |
| Harding 1980 167 1624 + 10.3 [8.9; 11.9] Random effects model not applicable Denominator = reasons for encounter Silva 1998 576 3448 + 16.7 [15.5; 18.0] Ben Abdelaziz 2004 892 6576 + 13.6 [12.8; 14.4] Ajmi 2011 4228 24882 + 17.0 [16.5; 17.5] Mash 2012 2821 31451 + 9.0 [8.7; 9.3] Liu 2017 1841 13705 + 13.4 [12.9; 14.0] Random effects model 80062 30062 13.8 [11.0; 16.9] P = 100%, χ ² ₄ = 875.78 (p < 0.01) 0 20 40 60 80 100 | | | | | | | | | | | |
| Random effects model not applicable Denominator = reasons for encounter Silva 1998 | | | | | | | | | | | |
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| Denominator = reasons for encounter Silva 1998 576 3448 + 16.7 [15.5; 18.0] Ben Abdelaziz 2004 892 6576 + 13.6 [12.8; 14.4] Ajmi 2011 4228 24882 + 17.0 [16.5; 17.5] Mash 2012 2821 31451 + 9.0 [8.7; 9.3] Liu 2017 1841 13705 + 13.4 [12.9; 14.0] Random effects model 80062 ◆ 13.8 [11.0; 16.9] $I^2 = 100\%$, $χ_4^2 = 875.78 (ρ < 0.01)$ | | | 1624 | ♦ | | | | | 10.3 | [8.9; 11.8] | |
| Silva 1998 576 3448 + 16.7 [15.5; 18.0] Ben Abdelaziz 2004 892 6576 + 13.6 [12.8; 14.4] Ajmi 2011 4228 24882 + 17.0 [16.5; 17.5] Mash 2012 2821 31451 + 9.0 [8.7; 9.3] Liu 2017 1841 13705 + 13.4 [12.9; 14.0] Random effects model $l^2 = 100\%, \chi_4^2 = 875.78 \ (p < 0.01)$ | not applicable | | | | | | | | | | |
| Ben Abdelaziz 2004 892 6576 + 13.6 [12.8; 14.4] Ajmi 2011 4228 24882 + 17.0 [16.5; 17.5] Mash 2012 2821 31451 + 9.0 [8.7; 9.3] Liu 2017 1841 13705 + 13.4 [12.9; 14.0] Random effects model 80062 \Diamond 13.8 [11.0; 16.9] $I^2 = 100\%, \chi_4^2 = 875.78 \ (p < 0.01)$ | Denominator = reasons for encounter | | | | | | | | | | |
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| Ajmi 2011 4228 24882 . 17.0 [16.5; 17.5] Mash 2012 2821 31451 . 9.0 [8.7; 9.3] Liu 2017 1841 13705 . 13.4 [12.9; 14.0] Random effects model 80062 \downarrow 13.8 [11.0; 16.9] $I^2 = 100\%, \chi_4^2 = 875.78 \ (p < 0.01)$ | Ben Abdelaziz 2004 | 892 | 6576 | + | | | | | | | |
| Mash 2012 2821 31451 9.0 [8.7; 9.3] Liu 2017 1841 13705 13.4 [12.9; 14.0] Random effects model β 80062 ϕ 13.8 [11.0; 16.9] β 2 100%, χ^2_4 = 875.78 (ρ < 0.01) 0 20 40 60 80 100 | Aimi 2011 | 4228 | 24882 | + | | | | | | | |
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| Random effects model 80062 \Leftrightarrow 13.8 [11.0; 16.9] $I^2 = 100\%, \chi_4^2 = 875.78 \ (p < 0.01)$ 0 20 40 60 80 100 | Liu 2017 | 1841 | 13705 | + | | | | | | | |
| $I^2 = 100\%, \chi_4^2 = 875.78 \ (p < 0.01)$ $0 20 40 60 80 100$ | Random effects model | | 80062 | \Diamond | | | | | 13.8 | [11.0; 16.9] | |
| 0 20 40 60 80 100 | $I^2 = 100\%, \chi_A^2 = 875.78$ (p | < 0.01) |) | | | | | | | | |
| | 774 | | | | | | | | | | |
| % | | | (| 20 | 40 | 60 | 80 | 100 | | | |
| | | | | | q | % | | | | | |

Figure 1: Meta-analysis: Prevalence/incidence of cough of all durations seen in primary care patients of all age groups in Asian, African and South American countries sorted by denominators. CI = confidence interval, k = number of (incidental) consultations because of a cough / patients in consultation for a cough / reason for encounter = cough, N = total number of (incidental) consultations / patients in consultation / reasons for encounter