

## Additional File 2 - Summary of the included studies

**Table 1: Summary of the included studies (n=117) by definition of asthma**

|  | Lifetime asthma<br>[1-34]  | Diagnosed asthma [2, 4,<br>17, 21-26, 30, 31, 33, 35-<br>76]  | Current asthma<br>[2-4, 7, 9, 17, 21, 22, 29, 40,<br>41, 47, 54, 56, 63, 67, 70, 71,<br>75-117]   |
|--|--|---|---|
| <b>Papers, n</b>   | 34   | 54  | 61  |
| <b>Operational definitions, n</b>                                    | 8  | 12  | 29  |
| <b>Prevalence of asthma, %</b>                                       | 1.4-28.2   | 1.0-38.6  | 1.5-29.4  |
| <b>Questionnaires used</b>   | ATS<br>ECRHS<br>FinEsS<br>ISAAC<br>MRC<br>NHIS<br>OLIN   | ATS<br>ATS-DLD<br>BOLD<br>BPAS<br>CRQ<br>ECRHS<br>FinEsS<br>GEIRD<br>ISAAC<br>MRC<br>National asthma<br>prevalence study<br>(Bangladesh)<br>PNAD<br>National Maternal and<br>Infant Health Survey<br>NHANES<br>OLIN<br>WHS  | ATS<br>ATS-DLD<br>BOLD<br>ECRHS<br>ISAAC<br>IUATLD<br>MRC<br>National asthma prevalence<br>study (Bangladesh)<br>NCHS<br>NFHS<br>NHANES<br>NHIS<br>NYC-NAAS<br>PNAD   |
| <b>Country/Region</b>  | Austria<br>Australia<br>Brazil<br>Canada<br>China<br>Cyprus<br>Denmark<br>Greece<br>Italy<br>Japan<br>Norway<br>Portugal<br>Scandinavia and<br>Eastern Europe<br>South Korea<br>Spain<br>Sweden<br>United Arab<br>Emirates<br>United Kingdom<br>United States<br>Vietnam | Australia<br>Bangladesh<br>Brazil<br>Canada<br>China<br>Colombia<br>Croatia<br>Finland<br>Germany<br>Greece<br>Iran<br>Japan<br>New Zealand<br>Portugal<br>Saudi Arabia<br>Serbia and Montenegro<br>Singapore<br>South Korea<br>Sweden<br>Thailand<br>United Kingdom<br>United States<br>Ukraine<br>Vietnam | Australia<br>Bangladesh<br>Brazil<br>Canada<br>Croatia<br>Ecuador<br>European Community<br>Greece<br>India<br>Ireland<br>Japan<br>Peru<br>Portugal<br>Rwanda<br>South Korea<br>Spain<br>Sweden<br>Turkey<br>United Arab Emirates<br>United Kingdom<br>United States |
| <b>Data collection /<br/>questionnaire<br/>administration method</b> | Telephone<br>Post<br>School<br>Door-to-door  | Telephone<br>Post<br>School<br>Primary care unit<br>Door-to-door<br>Mobile unit   | Telephone<br>Post<br>School<br>Primary care unit<br>Door-to-door<br>Mobile unit<br>Public place   |

The asthma definitions were grouped into 3 general subgroups: lifetime asthma (if the respondent reported ever having had asthma), diagnosed asthma (if the respondent reported asthma diagnosed by a health professional) and current asthma (if the respondent reported having had asthma features in the 12 months prior to the interview). ATS, American Thoracic Society; ATS-DLD, American Thoracic Society-Division of Lung Disease; BOLD, Burden of Lung Disease; BPAS, Brief Pediatric Asthma Screen; CSGA, Collaborative Studies on the Genetics of Asthma; CRQ, Children's Respiratory Questionnaire; ECRHS, European Community Respiratory Health Survey; FinEsS, Finnish, Estonian and Swedish respiratory Survey; ISAAC, International Study of Asthma and Allergies in Childhood; IUATLD, International Union Against Tuberculosis and Lung Disease; MRC, Medical Research Council respiratory questionnaire; NCHS, Five data sources from the National Center for Health Statistics; NFHS, National Family Health Survey; NHANES, National Health and Nutrition Examination Survey; NHIS, National Health Interview Survey; NYC-NAAS, New York City – Neighborhood Asthma and Allergy Study; PNAD, National Household Sample Survey-Pesquisa Nacional por Amostra de Domicílios; OLIN, Obstructive Lung Disease In Northern Sweden; WHS, World Health Survey.

**Table 2: The 117 included papers by Average citation per year by the end of 2013.**

| First Author      | Year | Journal  | Times cited | Average citations per year |
|-------------------|------|--|-------------|----------------------------|
| Pearce, N.        | 2007 | Thorax   | 291         | 41.57                      |
| Asher, M. I.      | 1998 | European Respiratory Journal                                   | 644         | 40.25                      |
| Akinbami, L. J.   | 2002 | Pediatrics   | 408         | 34                         |
| Burney, P.        | 1996 | European Respiratory Journal                                   | 514         | 28.56                      |
| Burr, M. L.       | 1989 | Archives Of Disease In Childhood                               | 644         | 25.76                      |
| Burney, P. G. J.  | 1990 | British Medical Journal  | 482         | 20.08                      |
| Moorman, J. E.    | 2011 | Morbidity And Mortality Weekly Report. Surveillance Summaries  | 59          | 19.67                      |
| Vonmutius, E.     | 1992 | British Medical Journal  | 331         | 15.05                      |
| Gergen, P. J.     | 1988 | Pediatrics   | 383         | 14.73                      |
| Robertson, C. F.  | 1991 | British Medical Journal  | 313         | 13.61                      |
| Weitzman, M.      | 1992 | JAMA-Journal Of The American Medical Association               | 280         | 12.73                      |
| Upton, M. N.      | 2000 | British Medical Journal  | 178         | 12.71                      |
| Crain, E. F.      | 1994 | Pediatrics   | 247         | 12.35                      |
| Mortz, C. G.      | 2001 | British Journal Of Dermatology                                 | 154         | 11.85                      |
| Kaur, B.          | 1998 | British Medical Journal  | 177         | 11.06                      |
| To, T.            | 2012 | BMC Public Health  | 22          | 11                         |
| Galassi, C.       | 2006 | Pediatrics   | 85          | 10.63                      |
| Litonjua, A. A.   | 1999 | Pediatric Pulmonology  | 148         | 9.87                       |
| Downs, S. H.      | 2001 | Archives Of Disease In Childhood                               | 126         | 9.69                       |
| Anderson, H. R.   | 1994 | British Medical Journal  | 187         | 9.35                       |
| Haby, M. M.       | 2001 | Thorax   | 121         | 9.31                       |
| Woolcock, A. J.   | 1987 | Thorax   | 243         | 9                          |
| Zollner, I. K.    | 2005 | Thorax   | 81          | 9                          |
| Arif, A. A.       | 2003 | European Respiratory Journal                                   | 93          | 8.45                       |
| Akinbami, L. J.   | 2011 | National Health Statistics Reports                             | 25          | 8.33                       |
| Rodriguez, M. A.  | 2002 | Archives Of Pediatrics & Adolescent Medicine                   | 99          | 8.25                       |
| Pearce, N.        | 2000 | European Respiratory Journal                                   | 112         | 8                          |
| Strachan, D. P.   | 1994 | Archives Of Disease In Childhood                               | 155         | 7.75                       |
| Bjorksten, B.     | 1998 | European Respiratory Journal                                   | 120         | 7.5                        |
| Miller, J. E.     | 2000 | American Journal Of Public Health                              | 105         | 7.5                        |
| Leung, R.         | 1997 | European Respiratory Journal                                   | 118         | 6.94                       |
| Guo, Y. L. L.     | 1999 | Environmental Health Perspectives                              | 103         | 6.87                       |
| Goh, D. Y. T.     | 1996 | Archives Of Disease In Childhood                               | 118         | 6.56                       |
| Peat, J. K.       | 1992 | British Medical Journal  | 141         | 6.41                       |
| Joseph, C. L. M.  | 1996 | Journal Of Pediatrics  | 105         | 5.83                       |
| Oraka, E.         | 2010 | Chest  | 23          | 5.75                       |
| Kwon, J.-W.       | 2011 | Allergy Asthma & Immunology Research                           | 17          | 5.67                       |
| Bjerg, A.         | 2010 | Allergy  | 22          | 5.5                        |
| Krstic, G.        | 2011 | Plos One   | 16          | 5.33                       |
| Akinbami, L. J.   | 2010 | Environmental Research   | 21          | 5.25                       |
| Clifford, R. D.   | 1989 | Archives Of Disease In Childhood                               | 125         | 5                          |
| Waite, D. A.      | 1980 | Clinical Allergy   | 165         | 4.85                       |
| Studnicka, M.     | 1997 | European Respiratory Journal                                   | 81          | 4.76                       |
| Ma, J.            | 2010 | Allergy  | 19          | 4.75                       |
| James, A. L.      | 2010 | European Respiratory Journal                                   | 19          | 4.75                       |
| Mak, H.           | 1982 | Journal Of Allergy And Clinical Immunology                     | 146         | 4.56                       |
| Wennergren, G.    | 2010 | Pediatric Allergy And Immunology                               | 16          | 4                          |
| Sanchez-Lerma, B. | 2012 | Journal Of Investigational Allergology And Clinical Immunology | 8           | 4                          |
| Arnedo-Pena, A.   | 2011 | International Journal Of Biometeorology                        | 11          | 3.67                       |
| Duggan, E. M.     | 2012 | Pediatric Allergy And Immunology                               | 7           | 3.5                        |
| Barry, A. C.      | 2010 | Journal Of Asthma  | 11          | 2.75                       |
| Fukutomi, Y.      | 2010 | International Archives Of Allergy And Immunology               | 10          | 2.5                        |
| Rodriguez, A.     | 2011 | Thorax   | 7           | 2.33                       |
| Ekerljung, L.     | 2010 | International Journal Of Tuberculosis And Lung Disease         | 9           | 2.25                       |
| Bai, J.           | 2010 | Biomedical And Environmental Sciences                          | 9           | 2.25                       |
| Hansen, T. E.     | 2013 | Acta Paediatrica   | 2           | 2                          |
| Dell, S. D.       | 2010 | Canadian Respiratory Journal                                   | 8           | 2                          |
| Lukrafka, J. L.   | 2010 | Journal Of Asthma  | 8           | 2                          |
| Musafiri, S.      | 2011 | Respiratory Medicine   | 6           | 2                          |

| First Author                | Year | Journal  | Times cited | Average citations per year |
|-----------------------------|------|--|-------------|----------------------------|
| Chittleborough, C. R.       | 2010 | Respirology  | 6           | 1.5                        |
| Sa-Sousa, A.                | 2012 | Clinical And Translational Allergy                         | 3           | 1.5                        |
| Fukutomi, Y.                | 2011 | Allergology International                                  | 4           | 1.33                       |
| Julia-Serda, G.             | 2011 | International Journal Of Tuberculosis And Lung Disease     | 4           | 1.33                       |
| Sousa, S. I. V.             | 2011 | Environment International                                  | 4           | 1.33                       |
| Andrea Rodriguez, L.        | 2010 | Biomedica  | 5           | 1.25                       |
| Wehrmeister, F. C.          | 2010 | Cadernos De Saude Publica                                  | 5           | 1.25                       |
| Frazier, J. C.              | 2012 | Preventing Chronic Disease                                 | 2           | 1                          |
| de Marco, R.                | 2013 | Plos One   | 1           | 1                          |
| Agrawal, S.                 | 2012 | Journal Of Asthma  | 2           | 1                          |
| Koshy, G.                   | 2010 | Journal Of Public Health                                   | 4           | 1                          |
| Lam, H. T.                  | 2011 | Respiratory Medicine                                       | 3           | 1                          |
| Pegas, P. N.                | 2011 | Revista Portuguesa De Pneumologia                          | 3           | 1                          |
| Yeh, K.-W.                  | 2011 | Asian Pacific Journal Of Allergy And Immunology            | 3           | 1                          |
| Alves, G. d. C.             | 2012 | Cadernos De Saude Publica                                  | 2           | 1                          |
| Ekici, A.                   | 2012 | Journal Of Asthma  | 2           | 1                          |
| Fedortsiv, O.               | 2012 | Advances In Medical Sciences                               | 2           | 1                          |
| Robinson, C. L.             | 2012 | Bmj Open   | 2           | 1                          |
| Kim, S. Y.                  | 2013 | Lung   | 1           | 1                          |
| Alsowaidi, S.               | 2010 | Respiration  | 4           | 1                          |
| Ekerljung, L.               | 2010 | Clinical Respiratory Journal                               | 4           | 1                          |
| Delmas, M. C.               | 2012 | Revue Des Maladies Respiratoires                           | 2           | 1                          |
| Akinbami, L. J.             | 2012 | NCHS Data Brief  | 2           | 1                          |
| Kainu, A.                   | 2013 | Primary Care Respiratory Journal                           | 1           | 1                          |
| Jain, A.                    | 2010 | Indian Journal Of Pediatrics                               | 3           | 0.75                       |
| Anthracopoulos, M. B.       | 2011 | Allergy And Asthma Proceedings                             | 2           | 0.67                       |
| Anthracopoulos, M. B.       | 2011 | Acta Paediatrica   | 2           | 0.67                       |
| Bryant-Stephens, T.         | 2012 | Journal Of Asthma  | 1           | 0.5                        |
| Oraka, E.                   | 2012 | Journal Of Asthma  | 1           | 0.5                        |
| Al Ghobain, M. O.           | 2012 | Bmc Public Health  | 1           | 0.5                        |
| Gudelj, I.                  | 2012 | Medical Science Monitor                                    | 1           | 0.5                        |
| de Farias, M. R. d. C.      | 2010 | Brazilian Journal Of Epidemiology                          | 2           | 0.5                        |
| Parasuramalu, B. G.         | 2010 | Indian Journal Of Public Health                            | 2           | 0.5                        |
| Coker, T. R.                | 2012 | Health Services Research                                   | 1           | 0.5                        |
| Fiori, N. S.                | 2012 | Cadernos De Saude Publica                                  | 1           | 0.5                        |
| Matos Povoas Juca, S. C. B. | 2012 | Cadernos De Saude Publica                                  | 1           | 0.5                        |
| Kolokotroni, O.             | 2011 | BMC Public Health  | 1           | 0.33                       |
| de Luna, M. d. F. G.        | 2011 | Cadernos De Saude Publica                                  | 1           | 0.33                       |
| de Sousa, J. C.             | 2011 | BMC Public Health  | 1           | 0.33                       |
| Toledo, M. F.               | 2011 | Allergologia Et Immunopathologia                           | 1           | 0.33                       |
| Zivkovic, Z.                | 2010 | World Journal Of Pediatrics                                | 1           | 0.25                       |
| Shakurnia, A. H.            | 2010 | Eastern Mediterranean Health Journal                       | 1           | 0.25                       |
| Agrawal, S.                 | 2013 | International Journal Of Tuberculosis And Lung Disease     | 0           | 0                          |
| Broms, K.                   | 2013 | BMC Public Health  | 0           | 0                          |
| Bennoor, K. S.              | 2011 | Respirology  | 0           | 0                          |
| Cornell, A. G.              | 2011 | American Journal Of Respiratory And Critical Care Medicine | 0           | 0                          |
| de Luna, M. d. F. G.        | 2013 | Jornal Brasileiro De Pneumologia                           | 0           | 0                          |
| de Sousa, C. A.             | 2012 | Revista De Saude Publica                                   | 0           | 0                          |
| Hong, S.                    | 2012 | Environmental Health And Toxicology                        | 0           | 0                          |
| Hwang, G.-S.                | 2012 | Asia-Pacific Journal Of Public Health                      | 0           | 0                          |
| Jie, Y.                     | 2013 | Polish Journal Of Environmental Studies                    | 0           | 0                          |
| Lopez-Silvarrey-Varela, A.  | 2011 | Archivos De Bronconeumologia                               | 0           | 0                          |
| Mahboub, B. H.              | 2012 | Bmc Pulmonary Medicine                                     | 0           | 0                          |
| Moreira, S. M.              | 2010 | European Journal Of Medical Research                       | 0           | 0                          |
| Nriagu, J.                  | 2012 | Science Of The Total Environment                           | 0           | 0                          |
| Rerksuppaphol, S.           | 2012 | Pediatric Reports  | 0           | 0                          |
| Zahran, H. S.               | 2011 | JAMA-Journal Of The American Medical Association           | 0           | 0                          |
| Zobeiri, M.                 | 2011 | Acta Medica Iranica  | 0           | 0                          |

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