

Attachment 1

Supplementary Table S1: Inclusion and exclusion criteria according to [13]

Inclusion criteria	Exclusion criteria
<p>Index diseases:</p> <ul style="list-style-type: none"> • Acute nasopharyngitis [common cold] (J00) • Acute sinusitis (J01) • Acute pharyngitis (J02.8 and J02.9) • Acute tonsillitis (J03.8 and J03.9) • Acute laryngitis and tracheitis (J04) • Acute upper respiratory infections of multiple and unspecified sites (J06) • Acute bronchitis (J20.3 to J20.9) <p>Physicians:</p> <ul style="list-style-type: none"> • Family doctors (general medicine, general internists, general practitioners) • Lifelong physician number matches the practice specialty • URTI diagnosing practice prescribed 1st antibiotic in the quarter of the index disease 	<ul style="list-style-type: none"> • Not continuously insured at BARMER in the past two years and/or cannot be assigned to any Associations of Statutory Health Insurance Physicians region (Kassenärztliche Vereinigung) (e.g. living abroad) <p>In the index and previous quarter:</p> <ul style="list-style-type: none"> • Hospital admission • Acute comorbidities: <ul style="list-style-type: none"> ➢ Various infections A00 to A99 ➢ Cystitis N30, Other disorders of urinary system N39.0, Disorder of urinary system, unspecified N39.9 ➢ Nonsuppurative otitis media H65 ➢ Suppurative and unspecified otitis media H66 ➢ Osteomyelitis M86 ➢ Inflammatory diseases of prostate N41 ➢ Streptococcal tonsillitis J03.0 ➢ Streptococcal pharyngitis J02.0 ➢ Influenza and pneumonia J09–J18 ➢ Acute bronchitis due to <i>Mycoplasma pneumoniae</i> J20.0 ➢ Acute bronchitis due to <i>Haemophilus influenzae</i> J20.1 ➢ Acute bronchitis due to streptococcus J20.2 ➢ Acute bronchiolitis J21 ➢ Unspecified acute lower respiratory infection J22 ➢ Other diseases of the upper respiratory tract J30–39 ➢ Suppurative and necrotic conditions of lower respiratory tract J85–J86 ➢ Other diseases of pleura J90–J94 ➢ Other diseases of the respiratory system J95–J99 ➢ Pulmonary embolism I26 ➢ Human immunodeficiency virus [HIV] disease B20–B24 ➢ Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism D50–D70 ➢ Diabetes with difficulties E10–E14 with 0–8 in 4th place ➢ Pregnancy, childbirth and the puerperium O ➢ Care involving dialysis Z49 ➢ Dysphagia R13

Inclusion criteria	Exclusion criteria
	<ul style="list-style-type: none"> • Antibiotic prescription in the last month of the previous quarter before the index illness <p>In the index quarter and two previous years:</p> <ul style="list-style-type: none"> • Relevant chronic comorbidities: <ul style="list-style-type: none"> ➢ Malignant neoplasms C00–C97 ➢ Certain disorders involving the immune mechanism D80–89 ➢ Immune compromise due to radiation, chemotherapy or other immunosuppressive measures D90* ➢ Cystic fibrosis E84 ➢ Chronic lower respiratory diseases J40–J47 ➢ Acute tubulo-interstitial nephritis N10, Chronic tubulo-interstitial nephritis N11, ➢ Tubulo-interstitial nephritis, not specified as acute or chronic N12 ➢ Senility R54 ➢ On waiting list for organ transplant U55* ➢ Successful registration for organ transplantation without HU urgency status (High Urgency) Z75.6* ➢ Successful registration for organ transplantation with HU urgency status (High Urgency) Z75.7* ➢ Transplanted organ and tissue status Z94 • More than one of the index diseases under consideration in the quarter under consideration
Additionally at the practice level	
	<ul style="list-style-type: none"> • <3 index cases in 2022 • <50% general practitioners/practice • Facilities with laboratory doctors, microbiologists
<p>* Translated to German according to ICD-10-GM version 2022 with https://gesund.bund.de/en/icd-code-search</p>	