

Box S1. Database Search Strings

PubMed search

("Telemedicine"[Mesh] OR "Remote Consultation"[Mesh] OR "Videoconferencing"[Mesh] OR "Telephone"[Mesh] OR Telehealth[tiab] OR Telemedicine[tiab] OR Videoconferencing[tiab] OR Telephone[tiab] OR telephone-delivered[tiab])

AND

("General Practitioners"[Mesh] OR "Primary Health Care"[Mesh] OR "Family Practice"[Mesh] OR "Ambulatory Care"[Mesh] OR "Outpatients"[Mesh] OR "Primary care"[tiab] OR "Urgent care"[tiab] OR "Primary healthcare"[tiab] OR "General Practitioner"[tiab] OR "General Practitioners"[tiab] OR "Family practice"[tiab] OR "General practice"[tiab] OR "Ambulatory care"[tiab] OR Outpatients[tiab] OR Outpatient[tiab] OR "Community care"[tiab])

AND

("Drug Prescriptions"[Mesh] OR "Inappropriate Prescribing"[Mesh] OR "Practice Patterns, Physicians"[Mesh] OR "Medical Audit"[Mesh] OR "administration and dosage"[SH] OR Prescriptions[tiab] OR Prescribing[tiab] OR Prescribed[tiab])

AND

("Anti-Bacterial Agents"[Mesh] OR "Macrolides"[Mesh] OR "beta-Lactams"[Mesh] OR "Fluoroquinolones"[Mesh] OR "Sulfonamides"[Mesh] OR "Tetracyclines"[Mesh] OR "Aminoglycosides"[Mesh] OR Antibacterial[tiab] OR Antibacterials[tiab] OR Antibiotics[tiab] OR Antibiotic[tiab] OR Anti-infective[tiab] OR Anti-infectives[tiab] OR Macrolides[tiab] OR Macrolide[tiab] OR beta-Lactams[tiab] OR Fluoroquinolones[tiab] OR Sulfonamides[tiab] OR Tetracyclines[tiab] OR Aminoglycosides[tiab] OR Antimicrobial[tiab] OR Antimicrobials[tiab] OR Penicillin[tiab] OR Penicillins[tiab] OR Methicillin[tiab] OR ampicillin[tiab] OR azithromycin[tiab] OR Cephalexin[tiab] OR Maytansine[tiab] OR Mepartricin[tiab] OR Miocamycin[tiab] OR Natamycin[tiab] OR Nystatin[tiab] OR Oleandomycin[tiab] OR Troleandomycin[tiab] OR Oligomycins[tiab] OR Rutamycin[tiab] OR Sirolimus[tiab] OR Everolimus[tiab] OR Tacrolimus[tiab] OR Tylosin[tiab] OR Amphotericin[tiab] OR Antimycin[tiab] OR Brefeldin [tiab] OR Bryostatins [tiab] OR Candicidin[tiab] OR Epothilones[tiab] OR Erythromycin[tiab] OR Azithromycin[tiab] OR Clarithromycin[tiab] OR Ketolides[tiab] OR Roxithromycin[tiab] OR Filipin[tiab] OR Ivermectin[tiab] OR Josamycin[tiab] OR Leucomycins[tiab] OR Kitasamycin[tiab] OR Spiramycin[tiab] OR Carbapenems[tiab] OR Thienamycins[tiab] OR Cephalosporins[tiab] OR Cefamandole[tiab] OR Cefazolin[tiab] OR Cefonicid[tiab] OR Cefsulodin[tiab] OR Cephacetrile[tiab] OR Cephalexin[tiab] OR Cephaloridine[tiab] OR Cephamycins[tiab] OR Clavulanic[tiab] OR Monobactams[tiab] OR Aztreonam[tiab] OR Moxalactam[tiab] OR Amdinocillin[tiab] OR Cyclacillin[tiab] OR Methicillin[tiab] OR Nafcillin[tiab] OR Oxacillin[tiab] OR Penicillanic[tiab] OR Sulbactam[tiab] OR Ticarcillin[tiab] OR Amoxicillin[tiab] OR Ciprofloxacin[tiab] OR Fleroxacin[tiab] OR Enoxacin[tiab] OR Norfloxacin[tiab] OR Ofloxacin[tiab] OR Levofloxacin[tiab] OR Pefloxacin[tiab])

Embase search

('Telemedicine'/exp OR 'Remote Consultation'/exp OR 'Videoconferencing'/exp OR 'Telephone'/exp OR Telehealth:ti,ab OR Telemedicine:ti,ab OR Videoconferencing:ti,ab OR Telephone:ti,ab OR telephone-delivered:ti,ab)

AND

('General Practitioners'/exp OR 'Primary Health Care'/exp OR 'Family Practice'/exp OR 'Ambulatory Care'/exp OR 'Outpatients'/exp OR "Primary care":ti,ab OR "Urgent care":ti,ab OR "Primary healthcare":ti,ab OR "General Practitioner":ti,ab OR "General Practitioners":ti,ab OR "Family practice":ti,ab OR "General practice":ti,ab OR "Ambulatory care":ti,ab OR Outpatients:ti,ab OR Outpatient:ti,ab OR "Community care":ti,ab)

AND

('Drug Prescriptions'/exp OR 'Inappropriate Prescribing'/exp OR 'Practice Patterns, Physicians'/exp OR 'Medical Audit'/exp OR "administration and dosage":Ink OR Prescriptions:ti,ab OR Prescribing:ti,ab OR Prescribed:ti,ab)

AND

('Anti-Bacterial Agents'/exp OR 'Macrolides'/exp OR 'beta-Lactams'/exp OR 'Fluoroquinolones'/exp OR 'Sulfonamides'/exp OR 'Tetracyclines'/exp OR 'Aminoglycosides'/exp OR Antibacterial:ti,ab OR Antibacterials:ti,ab OR Antibiotics:ti,ab OR Antibiotic:ti,ab OR Anti-infective:ti,ab OR Anti-infectives:ti,ab OR Macrolides:ti,ab OR Macrolide:ti,ab OR beta-Lactams:ti,ab OR Fluoroquinolones:ti,ab OR Sulfonamides:ti,ab OR Tetracyclines:ti,ab OR Aminoglycosides:ti,ab OR Antimicrobial:ti,ab OR Antimicrobials:ti,ab OR Penicillin:ti,ab OR Penicillins:ti,ab OR Methicillin:ti,ab OR ampicillin:ti,ab OR azithromycin:ti,ab OR Cephalexin:ti,ab OR Maytansine:ti,ab OR Mepartricin:ti,ab OR Miocamycin:ti,ab OR Natamycin:ti,ab OR Nystatin:ti,ab OR Oleandomycin:ti,ab OR Troleandomycin:ti,ab OR Oligomycins:ti,ab OR Rutamycin:ti,ab OR Sirolimus:ti,ab OR Everolimus:ti,ab OR Tacrolimus:ti,ab OR Tylosin:ti,ab OR Amphotericin:ti,ab OR Antimycin:ti,ab OR Brefeldin:ti,ab OR Bryostatins:ti,ab OR Candicidin:ti,ab OR Epothilones:ti,ab OR Erythromycin:ti,ab OR Azithromycin:ti,ab OR Clarithromycin:ti,ab OR Ketolides:ti,ab OR Roxithromycin:ti,ab OR Filipin:ti,ab OR Ivermectin:ti,ab OR Josamycin:ti,ab OR Leucomycins:ti,ab OR Kitasamycin:ti,ab OR Spiramycin:ti,ab OR Carbapenems:ti,ab OR Thienamycins:ti,ab OR Cephalosporins:ti,ab OR Cefamandole:ti,ab OR Cefazolin:ti,ab OR Cefonicid:ti,ab OR Cefsulodin:ti,ab OR Cephacetrile:ti,ab OR Cephalexin:ti,ab OR Cephaloridine:ti,ab OR Cephamycins:ti,ab OR Clavulanic:ti,ab OR Monobactams:ti,ab OR Aztreonam:ti,ab OR Moxalactam:ti,ab OR Amdinocillin:ti,ab OR Cyclacillin:ti,ab OR Methicillin:ti,ab OR Nafcillin:ti,ab OR Oxacillin:ti,ab OR Penicillanic:ti,ab OR Sulbactam:ti,ab OR Ticarcillin:ti,ab OR Amoxicillin:ti,ab OR Ciprofloxacin:ti,ab OR Fleroxacin:ti,ab OR Enoxacin:ti,ab OR Norfloxacin:ti,ab OR Ofloxacin:ti,ab OR Levofloxacin:ti,ab OR Pefloxacin:ti,ab)

Cochrane Central search

([mh Telemedicine] OR [mh "Remote Consultation"] OR [mh Videoconferencing] OR [mh Telephone] OR Telehealth:ti,ab OR Telemedicine:ti,ab OR Videoconferencing:ti,ab OR Telephone:ti,ab OR "telephone delivered":ti,ab)

AND

([mh "General Practitioners"] OR [mh "Primary Health Care"] OR [mh "Family Practice"] OR [mh "Ambulatory Care"] OR [mh Outpatients] OR "Primary care":ti,ab OR "Urgent care":ti,ab OR "Primary healthcare":ti,ab OR "General Practitioner":ti,ab OR "General Practitioners":ti,ab OR "Family practice":ti,ab OR "General practice":ti,ab OR "Ambulatory care":ti,ab OR Outpatients:ti,ab OR Outpatient:ti,ab OR "Community care":ti,ab)

AND

([mh "Drug Prescriptions"] OR [mh "Inappropriate Prescribing"] OR [mh "Practice Patterns, Physicians"] OR [mh "Medical Audit"] OR [mh /AD] OR Prescriptions:ti,ab OR Prescribing:ti,ab OR Prescribed:ti,ab)

AND

([mh "Anti Bacterial Agents"] OR [mh Macrolides] OR [mh "beta Lactams"] OR [mh Fluoroquinolones] OR [mh Sulfonamides] OR [mh Tetracyclines] OR [mh Aminoglycosides] OR Antibacterial:ti,ab OR Antibacterials:ti,ab OR Antibiotics:ti,ab OR Antibiotic:ti,ab OR Anti-infective:ti,ab OR Anti-infectives:ti,ab OR Macrolides:ti,ab OR Macrolide:ti,ab OR beta-Lactams:ti,ab OR Fluoroquinolones:ti,ab OR Sulfonamides:ti,ab OR Tetracyclines:ti,ab OR Aminoglycosides:ti,ab OR Antimicrobial:ti,ab OR Antimicrobials:ti,ab OR Penicillin:ti,ab OR Penicillins:ti,ab OR Methicillin:ti,ab OR ampicillin:ti,ab OR azithromycin:ti,ab OR Cephalexin:ti,ab OR Maytansine:ti,ab OR Mepartricin:ti,ab OR Miocamycin:ti,ab OR Natamycin:ti,ab OR Nystatin:ti,ab OR Oleandomycin:ti,ab OR Troleandomycin:ti,ab OR Oligomycins:ti,ab OR Rutamycin:ti,ab OR Sirolimus:ti,ab OR Everolimus:ti,ab OR Tacrolimus:ti,ab OR Tylosin:ti,ab OR Amphotericin:ti,ab OR Antimycin:ti,ab OR Brefeldin:ti,ab OR Bryostatins:ti,ab OR Candicidin:ti,ab OR Epothilones:ti,ab OR Erythromycin:ti,ab OR Azithromycin:ti,ab OR Clarithromycin:ti,ab OR Ketolides:ti,ab OR Roxithromycin:ti,ab OR Filipin:ti,ab OR Ivermectin:ti,ab OR Josamycin:ti,ab OR Leucomycins:ti,ab OR Kitasamycin:ti,ab OR Spiramycin:ti,ab OR Carbapenems:ti,ab OR Thienamycins:ti,ab OR Cephalosporins:ti,ab OR Cefamandole:ti,ab OR Cefazolin:ti,ab OR Cefonicid:ti,ab OR Cefsulodin:ti,ab OR Cephacetrile:ti,ab OR Cephalexin:ti,ab OR Cephaloridine:ti,ab OR Cephamycins:ti,ab OR Clavulanic:ti,ab OR Monobactams:ti,ab OR Aztreonam:ti,ab OR Moxalactam:ti,ab OR Amdinocillin:ti,ab OR Cyclacillin:ti,ab OR Methicillin:ti,ab OR Nafcillin:ti,ab OR Oxacillin:ti,ab OR Penicillanic:ti,ab OR Sulbactam:ti,ab OR Ticarcillin:ti,ab OR Amoxicillin:ti,ab OR Ciprofloxacin:ti,ab OR Fleroxacin:ti,ab OR Enoxacin:ti,ab OR Norfloxacin:ti,ab OR Ofloxacin:ti,ab OR Levofloxacin:ti,ab OR Pefloxacin:ti,ab)

Table S1. List of excluded studies

| | Reference | Reason for exclusion |
|-----|---|---|
| 1. | Teo MV. (2018). "Antibiotic prescribing in a clinician-first telephone triage setting in a general practice." <u>Clinical Pharmacist</u> 10 (6). | Study type |
| 2. | Akbar, N., et al. (2019). "Hold the phone: Antibiotic prescribing practices associated with nonvisit encounters for urinary tract infections (UTIs) in urology clinics." <u>Open Forum Infectious Diseases</u> 6 (Supplement_2): S384. | Inappropriate study data – no response from authors |
| 3. | Barnett, M. L., et al. (2018). "Trends in Telemedicine Use in a Large Commercially Insured Population, 2005-2017." <u>Jama- Journal of the American Medical Association</u> 320 (20): 2147-2149. | Study design |
| 4. | Bhopal, J. S. and R. S. Bhopal (1988). "Outcome and Duration of Telephone Consultations in a General-Practice." <u>Journal of the Royal College of General Practitioners</u> 38 (317): 566-566. | Study design |
| 5. | Bonacci, R. (2006). "Telephone protocol for UTI reduces unnecessary office visits and lab testing." <u>Journal of Family Practice</u> 55 (4): 338. | Study type |
| 6. | Brown, J. M., et al. (1982). "Patient-Care Telephone Calls Received in Family-Practice Offices." <u>Journal of Family Practice</u> 14 (3): 527-532. | Study design |
| 7. | Brown, T., et al. (2018). "Non-visit-based and non-infection-related antibiotic prescribing." <u>Journal of General Internal Medicine</u> 33 (2): 271. | Duplicate- Inappropriate study data |
| 8. | Bruxvoort, K. J., et al. (2020). "Outpatient urinary tract infections in an era of virtual healthcare: Trends from 2008 to 2017." <u>Clinical Infectious Diseases</u> 71 (1): 100-108. | Inappropriate study data |
| 9. | Campbell, J. L., et al. (2014). "Telephone triage for management of same-day consultation requests in general practice (the ESTEEM trial): a cluster-randomised controlled trial and cost-consequence analysis." <u>Lancet</u> 384 (9957): 1859-1868. | Inappropriate study data |
| 10. | Chaudhry, R., et al. (2006). "Nurse-based telephone protocol versus usual care for management of URI and acute sinusitis: a controlled trial." <u>Managed care interface</u> 19 (8): 26-31. | Study author contacted- no full text |
| 11. | Eron, L., et al. (2004). "Treating acute infections by telemedicine in the home." <u>Clin Infect Dis</u> 39 (8): 1175-1181. | Study design |
| 12. | Haaijer-Ruskamp, F. M., et al. (1987). "Does Indirect Consultation Lead to Overprescribing in General-Practice." <u>Social Science & Medicine</u> 25 (1): 43-46. | Inappropriate study data |
| 13. | Hersh, A. L., et al. (2019). "Re: Antibiotic prescribing during pediatric direct-to-consumer telemedicine visits." <u>Pediatrics</u> 144 (2). | Study type |
| 14. | Johnson, K. L., et al. (2020). "Comparison of diagnosis and prescribing practices between virtual visits and office visits for adults diagnosed with uncomplicated urinary tract infections within a primary care network." <u>Infect Control Hosp Epidemiol</u> : 1-6. | Study intervention |

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| 15. | Johnson, K. M., et al. (2019). "Comparison of Diagnosis and Prescribing Practices Between Virtual Visits and Office Visits for Adults Diagnosed With Sinusitis Within a Primary Care Network." <u>Open Forum Infect Dis</u> 6 (9): ofz393. | Study intervention |
| 16. | Li, K. Y. and N. Genes (2020). "Variation in antibiotic prescribing rates for acute respiratory infections in direct-to-consumer telemedicine." <u>Academic Emergency Medicine</u> 27 : S175. | Inappropriate study data |
| 17. | Linder, J. A., et al. (2018). "Non-visit-based and non-infection-related ambulatory antibiotic prescribing." <u>Open Forum Infectious Diseases</u> 5 : S43. | Inappropriate study data |
| 18. | Mabeck, C. E. (1983). "Prescription of antibacterial drugs for treatment of bronchitis and pneumonia in general practice in Denmark." <u>Scand J Prim Health Care</u> 1 (1): 20-24. | Study design |
| 19. | Mabeck, C. E. (1986). "[Telephone prescription of antibiotics in general practice. A multipractice study]." <u>Ugeskr Laeger</u> 148 (40): 2537-2540. | Study design |
| 20. | Marsh, G. N., et al. (1987). "A study of telephone advice in managing out-of-hours calls." <u>Journal of the Royal College of General Practitioners</u> 37 (300): 301-304. | Study design |
| 21. | Martinez, K. A., et al. (2019). "Antibiotic Prescribing for Respiratory Tract Infections and Encounter Length: An Observational Study of Telemedicine." <u>Annals of Internal Medicine</u> 170 (4): 275-+. | Study design |
| 22. | Martinez, K. A., et al. (2018). "Patterns of Use and Correlates of Patient Satisfaction with a Large Nationwide Direct to Consumer Telemedicine Service." <u>Journal of General Internal Medicine</u> 33 (10): 1768-1773. | Study design |
| 23. | McConnochie, K. M., et al. (2006). "Differences in Diagnosis and Treatment Using Telemedicine Versus In-Person Evaluation of Acute Illness." <u>Ambulatory Pediatrics</u> 6 (4): 187-195. | Study intervention |
| 24. | McKinstry, B., et al. (2002). "Telephone consultations may be useful for people who request same-day appointments, but do not reduce workload." <u>Evidence-Based Healthcare</u> 6 (4): 154-155. | Inappropriate study data |
| 25. | Mehrotra, A., et al. (2013). "A comparison of care at e-visits and physician office visits for sinusitis and urinary tract infection." <u>JAMA Intern Med</u> 173 (1): 72-74. | Study intervention |
| 26. | Moth, G., et al. (2014). "Drug prescription by telephone consultation in Danish out-of-hours primary care: a population-based study of frequency and associations with clinical severity and diagnosis." <u>BMC Fam Pract</u> 15 : 142. | Study design |
| 27. | Palms, D. L., et al. (2018). "Comparison of Antibiotic Prescribing in Retail Clinics, Urgent Care Centers, Emergency Departments, and Traditional Ambulatory Care Settings in the United States." <u>Jama Internal Medicine</u> 178 (9): 1267-1269. | Inappropriate study data |
| 28. | Peters, L., et al. (2018). "The impact of private online video consulting in primary care." <u>Journal of the Royal Society of Medicine</u> 111 (5): 162-166. | Study type |
| 29. | Radecki, S. E., et al. (1989). "Telephone patient-management by primary care physicians." <u>Medical Care</u> 27 (8): 817-822. | Inappropriate study data |
| 30. | Ray, K. N., et al. (2019). "Use of Commercial Direct-to-Consumer | Inappropriate study data |

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| | Telemedicine by Children." <u>Academic Pediatrics</u> 19 (6): 665-669. | |
| 31. | Rokstad, K. and J. Straand (1997). "Drug prescribing during direct and indirect contacts with patients in general practice. A report from the Møre & Romsdal Prescription Study." <u>Scand J Prim Health Care</u> 15 (2): 103-108. | Total number of antibiotics prescribed in each group could not be identified |
| 32. | Sigurdsson, E. L., et al. (2020). "How primary healthcare in Iceland swiftly changed its strategy in response to the COVID-19 pandemic." <u>BMJ Open</u> 10 (12): e043151. | Inappropriate study data |
| 33. | Spencer, D. C. and A. J. Daugird (1990). "The nature and content of telephone prescribing habits in a community practice." <u>Fam Med</u> 22 (3): 205-209. | Study design |
| 34. | Sprecher, E. and J. A. Finkelstein (2019). "Telemedicine and antibiotic use: One click forward or two steps back?" <u>Pediatrics</u> 144 (3). | Study type |
| 35. | Stirewalt, C. F., et al. (1982). "Effectiveness of an ambulatory care telephone service in reducing drop-in visits and improving satisfaction with care." <u>Medical Care</u> 20 (7): 739-748. | Inappropriate study data |
| 36. | Straand, J., et al. (1998). "Prescribing systemic antibiotics in general practice - A report from the More & Romsdal Prescription Study." <u>Scandinavian Journal of Primary Health Care</u> 16 (2): 121-127. | Total number of antibiotics prescribed in each group could not be identified |
| 37. | Uscher-Pines, L., et al. (2015). "Antibiotic Prescribing for Acute Respiratory Infections in Direct-to-Consumer Telemedicine Visits." <u>Jama Internal Medicine</u> 175 (7): 1234-1235. | Duplicate |
| 38. | Vinson, D. R. and C. P. Quesenberry (2004). "The safety of telephone management of presumed cystitis in women." <u>Archives of Internal Medicine</u> 164 (9): 1026-1029. | Study design |
| 39. | Willey, V. J., et al. (2012). "Antibiotic prescribing via telephone: How often does it occur?" <u>Value in Health</u> 15 (4): A10. | Inappropriate study data – no response from authors |
| 40. | Ewen, E., et al. (2015). "Antibiotic prescribing by telephone in primary care." <u>Pharmacoepidemiol Drug Saf</u> 24 (2): 113-120. | Total number of antibiotics prescribed from patient visits in each group could not be identified |
| 41. | Christensen, M. B., et al. (2016). "Drug prescriptions in Danish out-of-hours primary care: a 1-year population-based study." <u>Scand J Prim Health Care</u> 34 (4): 453-458. | All patients received a telephone consultation prior to a face-to-face visit. |
| 42. | Huibers, L., et al. (2014). "Antibiotic prescribing patterns in out-of-hours primary care: a population-based descriptive study." <u>Scand J Prim Health Care</u> 32 (4): 200-207. | All patients received a telephone consultation prior to a face-to-face visit. |
| 43. | Yao, P., et al. (2020). "Antibiotic Prescribing Practices: Is There a Difference Between Patients Seen by Telemedicine Versus Those Seen In-Person?" <u>Telemedicine and E-Health</u> 26 (1): 107-109. | All patients with low acuity infections were offered a telehealth consultation |

Table S2. Characteristics of included studies

| Author (Country, year) | Study type | Number of | | | Type of participants | All participants Mean age (SD) | % Female | Type of infection | | | Duration of | | Recent antibiotic use | Type of telehealth consultation | Type of provider |
|--|---------------|------------------|------------------|----------------------|-------------------------|--|--|----------------------|---------|----------------------|-----------------|-----------|-----------------------------|---------------------------------------|---------------------|
| | | All participants | Telehealth group | Face-to-face group | | | | Respiratory | Urinary | Skin and soft tissue | Data collection | Follow-up | | | |
| McKinstry (UK, 2002) ¹⁹ | RCT | 388 | 194 | 194 | A & Ch | NR ^a | NR | ✓ | ✓ | ✓ | 4w | NR | NR | Ph | GP |
| Uscher- Pines (USA, 2016) ²⁸ | CSS | 217,987 | 3,043 | 214,944 | A | NR ^a | TH: 63% F2F: 56% | ✓ | | | 19M | NR | NR | Ph or Vid | Phy |
| Gordon (USA, 2017) ¹⁷ | CSS | 18, 516 | 4,635 | 13,881 | A & Ch | TH: A= 40.1 (10.8), Ch= 8.4 (5.2), F2F: A= 42.7 (13.2), Ch= 7.1 (5.1) | TH: 61.2% (2.8) F2F: 61% (8.5) | ✓ | ✓ | | 3W | 3W | NR | Vid | Phy |
| Shi (USA, 2018) ²⁶ | CSS | 981,452 | 38,839 | 942,613 | A ^b | NR ^a | 63% | ✓ | | | 1Y | 3W | NR | Ph or Vid | Phy or Nur |
| Davis (USA, 2019) ¹⁶ | CSS | 157 | 57 | 100 | A ^c | TH= 43 (NR) F2F= 46 (NR) | TH: 65% F2F: 63% | ✓ | | | 1Y | NR | NR | Ph or Vid | Phy |
| Halpren- Ruder (USA, 2019) ¹⁸ | CSS | 570 | 190 | 190 | A & Ch | 35.6 (0.58) | 59% (+/- 12%) | ✓ | | | 1Y | NR | NR | Vid | Phy |
| Ray (USA, 2019) ²⁵ | CSS | 528,213 | 4,604 | 485,201 ^d | Ch | NR ^a | TH= 51% F2F = 51% | ✓ | | | 1Y | 3W | NR | Ph or Vid | Phy |
| Miller (USA, 2020) ²⁰ | BA | 5,729 | 2,075 | 3,654 | A & Ch | TH= 51.9 (16.5) F2F= 51.1 (17.5) | TH: 73.3% F2F: 70.7% | ✓ | | | 3M | NR | NR | NC | Sp |

| | | | | | | | | | | | | | | | |
|-------------------------------------|-----|------------------------|--------|----------------------|--------|-------------------------|--------|---|---|---|-----|----|----|-----------|-----|
| Murray (USA, 2020) ²¹ | CSS | 450 ^e | 150 | 150 | A | 39.6 (NR) | 100% | | ✓ | | 1Y | 1M | No | Ph | Nur |
| Penza (USA, 2020 A) ²³ | CSS | 450 ^e | 150 | 150 | A | 43.7 (NR) | 73.10% | ✓ | | | 1Y | 1M | No | Ph | Nur |
| Penza (USA, 2020 B) ²⁴ | CSS | 505 | 202 | 202 | Ch | 6.4 (4.4) | 50.90% | ✓ | | | 1Y | 2W | No | Ph | Nur |
| Stenehjem (USA, 2020) ²⁷ | CSS | 1,163,849 ^e | 37,453 | 1043040 ^f | A & Ch | Median: 30 (IQR= 15-48) | 56.70% | ✓ | ✓ | ✓ | 23M | NR | NR | NC | Phy |
| Norden (USA, 2020) ²² | CSS | 5,772 | 944 | 1277 | NR | NR ^a | NR | ✓ | | | 2Y | NR | NR | Ph or Vid | Phy |

A: Adults, **Ch:** Children, **TH:** Telehealth group, **F2F:** Face-to-face group, **RCT:** Randomized Controlled Trial, **NR:** Not reported, **NC:** Not clear, **IQR:** Interquartile intervals, **CSS:** Cross-sectional study, **BA:** Before-after, **Ph:** Phone consultations, **Vid:** Video consultations, **GP:** General practitioner, **Phy:** Physician, **Nur:** Nurse, **Sp:** Specialist, **Y:** years, **M:** Months, **W:** Weeks

^a Mean or median age is not reported. The study reported the number of participants in the different age groups

^b Adults with pharmaceutical coverage

^c Adults who received discharge diagnosis of acute sinusitis

^d Primary care office visit

^e The number of contacts or encounters

^f There is a third arm of 83,356 children (KidsCare)

Table S3. Reported adverse events by initial encounter type.

| Study ID | Reported AE | Telehealth group | | Face-to-face | |
|----------------------------------|----------------------------------|------------------|-----|--------------|---|
| | | Number of AE | % | Number of AE | % |
| Murray (USA, 2020) ²¹ | Pyelonephritis | 5 | 3.3 | 6 | 4 |
| | Sepsis or hospitalization | 0 | | 0 | |