Supplemental Online Content

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This supplemental material has been provided by the authors to give readers additional information about their work.
**eFigure. Geographic Residence of Patients at Telemedicine Visit**
| Variable                      | Level                              | Univariate Model | Multivariable Model |
|-------------------------------|------------------------------------|------------------|---------------------|
|                               | OR (95% CI), p value               | OR (95% CI), p value |
| Age                           | Every Ten Unit Increase            | 0.93 (0.87, 1.00), 0.04 | 0.91 (0.85, 0.97), 0.007 |
| Gender                        | Male vs. Female                    | 0.95 (0.74, 1.22), 0.69 |
| Site                          | MCHS vs. Arizona                   | 1.38 (0.96, 1.98), 0.09 |
|                               | Rochester vs. Arizona              | 1.24 (0.85, 1.81), 0.26 |
|                               | Florida vs. Arizona                | 1.03 (0.72, 1.46), 0.88 |
| Clinician Type                | Non-Physician vs. Physician        | 0.99 (0.70, 1.39), 0.95 |
| Case Type                     | Surgical vs. Non-Surgical          | 1.38 (1.02, 1.87), 0.04 | 1.22 (0.87, 1.71), 0.24 |
| Demographic                   | Pediatric vs. Adult                | 0.52 (0.22, 1.21), 0.13 |
| Specialty                     | Specialist vs. Primary Care        | 1.68 (1.27, 2.21), <.001 | 1.69 (1.24, 2.30), <.001 |
| Duration                      | Every Ten Unit Increase            | 1.02 (0.94, 1.10), 0.65 |
| Clinician Years Certified     | Every Ten Unit Increase            | 0.91 (0.78, 1.05), 0.19 |
| Prior Telemedicine Experience | Yes vs. No                         | 0.99 (0.68, 1.44), 0.96 |
| Clinician Years Certified     | Certified years 14 - <23 years vs. 0 - <7 years | 1.20 (0.79, 1.83), 0.40 |
|                               | Certified years 7 - <14 years vs. 0 - <7 years | 1.13 (0.75, 1.71), 0.55 |
|                               | Certified years => 23 years vs. 0 - <7 years | 0.87 (0.58, 1.29), 0.49 |
### eTable 2. Concordance Estimates by Clinical Area

| Level                                      | No. Concordant / No. Cases | Concordance Percent (Wald 95% CI) |
|--------------------------------------------|----------------------------|-----------------------------------|
| Allergy and Immunology                     | 32/33                      | 97.0 (91.1, 100.0)                |
| Breast Clinic                              | 10/11                      | 90.9 (73.9, 100.0)                |
| Cardiovascular Disease                     | 90/105                     | 85.7 (79.0, 92.4)                 |
| Cardiovascular Surgery                     | 6/6                        | 100                               |
| Child and Adolescent Neurology             | 6/6                        | 100                               |
| Clinical Genomics                          | 2/2                        | 100                               |
| Colon and Rectal Surgery                   | 15/16                      | 93.8 (81.9, 100.0)                |
| Community Internal Medicine                | 76/96                      | 79.2 (71.0, 87.3)                 |
| Community Pediatric and Adolescent Medicine| 7/10                       | 70                               |
| Dermatology                                | 46/58                      | 79.3 (68.9, 89.7)                 |
| Endocrinology                              | 10/12                      | 83.3 (62.2, 100.0)                |
| Express or Urgent Care                     | 1/2                        | 50                               |
| Family Medicine                            | 245/293                    | 83.6 (79.4, 87.9)                 |
| Gastroenterology and Hepatology            | 192/239                    | 80.3 (75.3, 85.4)                 |
| General Internal Medicine                  | 50/63                      | 79.4 (69.4, 89.4)                 |
| General Pediatric and Adolescent Medicine  | 3/7                        | 42.9                             |
| General Surgery                            | 18/19                      | 94.7 (84.7, 100.0)                |
| Hematology Oncology                        | 65/65                      | 100.0 (100.0, 100.0)              |
| Hepatobiliary and Pancreas Surgery         | 4/4                        | 100                               |
| Infectious Diseases                        | 5/5                        | 100                               |
| Integrative Medicine                       | 3/3                        | 100                               |
| Nephrology and Hypertension                | 5/5                        | 100                               |
| Neurological Surgery                       | 80/87                      | 92.0 (86.2, 97.7)                 |
| Neurology                                  | 114/141                    | 80.9 (74.4, 87.3)                 |
| Nutritional Medicine                       | 10/10                      | 100                               |
| Obstetrics and Gynecology                  | 102/117                    | 87.2 (81.1, 93.2)                 |
| Occupational Medicine                      | 11/12                      | 91.7 (76.0, 100.0)                |
| Oncology and Endocrine Surgery             | 7/7                        | 100                               |
| Ophthalmology                              | 11/12                      | 91.7 (76.0, 100.0)                |
| Orthopedic Surgery                         | 136/149                    | 91.3 (86.7, 95.8)                 |
| Otorhinolaryngology                        | 34/44                      | 77.3 (64.9, 89.7)                 |
| Pain Medicine                              | 7/7                        | 100                               |
| Pediatric Allergy and Immunology           | 1/1                        | 100                               |
| Pediatric Cardiology                       | 7/7                        | 100                               |
| Pediatric Gastroenterology                 | 1/1                        | 100                               |
| Pediatric Sleep Medicine                   | 3/3                        | 100                               |
| Pediatric Urology                          | 1/1                        | 100                               |
## eTable 2 (Continued). Concordance Estimates by Clinical Area

| Level                        | No. Concordant / No. Cases | Concordance Percent (Wald 95% CI) |
|------------------------------|----------------------------|-----------------------------------|
| Physical Medicine and Rehabilitation | 41/48                      | 85.4 (75.4, 95.4)                |
| Plastic Surgery              | 9/10                       | 90                                |
| Preventive Medicine          | 3/4                        | 75                                |
| Psychiatry and Psychology    | 95/99                      | 96.0 (92.1, 99.8)                |
| Pulmonary Medicine           | 64/74                      | 86.5 (78.7, 94.3)                |
| Radiation Oncology           | 67/67                      | 100.0 (100.0, 100.0)             |
| Radiology                    | 1/1                        | 100                               |
| Rheumatology                 | 6/9                        | 66.7                              |
| Sleep Medicine               | 24/28                      | 85.7 (72.8, 98.7)                |
| Spine                        | 13/20                      | 65.0 (44.1, 85.9)                |
| Sports Medicine              | 5/5                        | 100                               |
| Thoracic Surgery             | 15/15                      | 100.0 (100.0, 100.0)             |
| Transplant                   | 105/109                    | 96.3 (92.8, 99.9)                |
| Urology                      | 186/209                    | 89.0 (84.8, 93.2)                |
| Vascular Surgery             | 7/8                        | 87.5                              |
| Women’s Health               | 23/27                      | 85.2 (71.8, 98.6)                |
### eTable 3. Concordance Estimates by ICD Chapter

| Level | No. Concordant / No. Cases | Concordance Percent (Wald 95% CI) |
|-------|----------------------------|-----------------------------------|
| A00-B99: Infectious and Parasitic Diseases | 7/8 | 87.5 |
| C00-D49: Neoplasms | 269/278 | 96.8 (94.7, 98.8) |
| COVID-19 | 4/4 | 100 |
| D50-D89: Blood and Immune Mechanisms | 21/24 | 87.5 (74.3, 100.0) |
| E00-E89: Endocrine, Nutritional and Metabolic | 73/81 | 90.1 (83.6, 96.6) |
| F01-F99: Mental, Behavior, and Neurodevelopment | 163/172 | 94.8 (91.4, 98.1) |
| G00-G99: Nervous System | 144/164 | 87.5 (82.8, 92.8) |
| H00-H59: Eye and Adnexa | 12/14 | 85.7 (67.4, 100.0) |
| H60-H95: Ear and Mastoid | 11/17 | 64.7 (42.0, 87.4) |
| I00-I99: Circulatory System | 104/113 | 92.0 (87.0, 97.0) |
| J00-J99: Respiratory System | 77/90 | 85.6 (78.3, 92.8) |
| K00-K95: Digestive System | 154/177 | 87.0 (82.1, 92.0) |
| L00-L99: Skin and Subcutaneous Tissue | 48/63 | 76.2 (65.7, 86.7) |
| M00-M99: Musculoskeletal and Connective Tissue | 257/300 | 85.7 (81.7, 89.6) |
| N00-N99: Genitourinary System | 144/169 | 85.2 (79.9, 90.6) |
| O00-O9A: Pregnancy, Childbirth and Puerperium | 8/8 | 100 |
| Q00-Q99: Congenital Abnormalities | 22/24 | 91.7 (80.6, 100.0) |
| R00-R99: Abnormal Clinical Laboratory Findings | 303/402 | 75.4 (71.2, 79.6) |
| S00-T88: Injury and External Causes | 45/49 | 91.8 (84.2, 99.5) |
| Z00-Z99: Health Status | 208/228 | 91.2 (87.6, 94.9) |
| ICD Code | ICD Term                                         | No. Concordant / No. Cases | Concordance Percent (Wald 95% CI) |
|---------|--------------------------------------------------|---------------------------|----------------------------------|
| C61     | Malignant neoplasm of prostate                   | 56/59                     | 94.9 (89.3, 100.0)               |
| Z00.00  | Encounter for general adult medical examination without abnormal findings | 21/30                     | 70.0 (53.6, 86.4)               |
| F41.1   | Generalized anxiety disorder                     | 28/29                     | 96.6 (89.9, 100.0)               |
| Z01.818 | Encounter for other preprocedural examination    | 23/25                     | 92.0 (81.4, 100.0)               |
| M54.5   | Low back pain                                    | 17/22                     | 77.3 (59.8, 94.8)               |
| G47.33  | Obstructive sleep apnea                           | 16/17                     | 94.1 (82.9, 100.0)               |
| I10     | Essential (primary) hypertension                 | 17/17                     | 100.0 (100.0, 100.0)             |
| K21.9   | Gastro-esophageal reflux disease without esophagitis | 15/17                     | 88.2 (72.9, 100.0)               |
| R97.20  | Elevated prostate specific antigen [PSA]         | 15/17                     | 88.2 (72.9, 100.0)               |
| F33.1   | Major depressive disorder, recurrent, moderate   | 15/15                     | 100.0 (100.0, 100.0)             |
| N40.1   | Benign prostatic hyperplasia with lower urinary tract symptoms | 12/13                     | 92.3 (77.8, 100.0)               |
| R05     | Cough                                            | 10/12                     | 83.3 (62.2, 100.0)               |
| C67.9   | Malignant neoplasm of bladder, unspecified       | 11/11                     | 100.0 (100.0, 100.0)             |
Table 4 (Continued). Concordance by ICD Code (6-10 Cases)

| ICD Code | ICD Term                                                                 | No. Concordant / No. Cases | Concordance Percent |
|----------|--------------------------------------------------------------------------|-----------------------------|---------------------|
| F41.9    | Anxiety disorder, unspecified                                            | 8/10                        | 80                  |
| M25.511  | Pain in right shoulder                                                   | 6/10                        | 60                  |
| N18.6    | End stage renal disease                                                  | 10/10                       | 100                 |
| R13.10   | Dysphagia, unspecified                                                   | 9/10                        | 90                  |
| 272.4    | Other and unspecified hyperlipidemia                                     | 9/9                         | 100                 |
| C50.412  | Malignant neoplasm of upper-quadrant of left female breast                | 9/9                         | 100                 |
| F33.0    | Major depressive disorder, recurrent, mild                               | 8/9                         | 88.9                |
| G95.9    | Disease of spinal cord, unspecified                                      | 6/9                         | 66.7                |
| M47.816  | Spondylosis without myelopathy or radiculopathy, lumbar region          | 6/9                         | 66.7                |
| M48.062  | Spinal Stenosis Lumbar Region with Neurogenic Claudication               | 9/9                         | 100                 |
| C71.9    | Malignant neoplasm of brain, unspecified                                 | 8/8                         | 100                 |
| E66.01   | Morbid (severe) obesity due to excess calories                            | 7/8                         | 87.5                |
| E78.5    | Hyperlipidemia, unspecified                                              | 8/8                         | 100                 |
| K50.90   | Crohn’s disease, unspecified, without complications                      | 8/8                         | 100                 |
| K51.90   | Ulcerative colitis, unspecified, without complications                   | 8/8                         | 100                 |
| M25.512  | Pain in left shoulder                                                    | 8/8                         | 100                 |
| M54.17   | Radiculopathy, lumbosacral region                                        | 8/8                         | 100                 |
| R06.02   | Shortness of breath                                                      | 7/8                         | 87.5                |
| R19.7    | Diarrhea, unspecified                                                    | 8/8                         | 100                 |
| R31.9    | Hematuria, unspecified                                                   | 6/8                         | 75                  |
| J30.9    | Allergic rhinitis, unspecified                                           | 7/7                         | 100                 |
| L70.0    | Acne vulgaris                                                            | 7/7                         | 100                 |
| M25.561  | Pain in right knee                                                       | 7/7                         | 100                 |
| N20.0    | Calculus of kidney                                                       | 7/7                         | 100                 |
| R56.9    | Unspecified convulsions                                                  | 6/7                         | 85.7                |
| Z00.129  | Encounter for routine child health examination without abnormal findings | 7/7                         | 100                 |
| Z00.5    | Encounter for examination of potential donor of organ and tissue         | 7/7                         | 100                 |
| C50.411  | Malignant neoplasm of upper-quadrant of right female breast              | 6/6                         | 100                 |
| E11.40   | Type 2 diabetes mellitus with diabetic neuropathy, unspecified           | 6/6                         | 100                 |
| G43.909  | Migraine, unspecified, not intractable, without status migrainosus       | 6/6                         | 100                 |
| G65.9    | Polyneuropathy, unspecified                                              | 3/6                         | 50                  |
| J84.9    | Interstitial pulmonary disease, unspecified                              | 6/6                         | 100                 |
| M25.50   | Pain in unspecified joint                                                | 5/6                         | 83.3                |
| M54.12   | Radiculopathy, cervical region                                           | 6/6                         | 100                 |
| M54.2    | Cervicalgia                                                              | 4/6                         | 66.7                |
| N28.89   | Other specified disorders of kidney and ureter                           | 5/6                         | 83.3                |
| N39.0    | Urinary tract infection, site not specified                              | 4/6                         | 66.7                |
| N80.9    | Endometriosis, unspecified                                               | 6/6                         | 100                 |
| R53.83   | Other fatigue                                                            | 3/6                         | 50                  |