Supplementary Online Content

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**eAppendix.** Variables Used in Multiple Imputations

**eTable.** Characteristics of CODA Trial Participants Randomized to Antibiotics with Appendectomy Within 24 Hours of Emergency Department Arrival

**eFigure 1.** Randomization and Disposition of Participants in the CODA Trial

**eFigure 2.** Cumulative Incidence of Appendectomy Through Two Years in the Antibiotic Group by Emergency Department Discharge Within 24 Hours or Later

This supplementary material has been provided by the authors to give readers additional information about their work.
eAppendix. Variables Used in Multiple Imputations

Variables used in multiple imputations (all variables were obtained at index except where noted):

Early discharge status, appendectomy within 7 days, site, appendicolith on imaging, periappendiceal fat on imaging, periappendiceal fluid on imaging, appendiceal diameter on imaging, height (cm), weight (kg), diabetes, Alvarado score, Charlson score, EQ-5D, lives alone vs. with others, primary language (English/other or Spanish), insurance (commercial, Medicare/Tricare, Medicaid/state, or other/none), employment (employed, student, or unemployed/other), education (HS/GED or less, or some beyond HS/GED), number of adults in the household with income, number of dependents, sharing responsibilities of dependents, physical at work (most or all of the time, some of the time or less, or not employed), smoking history (yes or no), combined household income, Global Health questions 1-9 (each with a five-point scale rating, covering general health, quality of life, physical health, mental health, social activities/relationships, and everyday physical activities), health literacy help (yes or no), below poverty or Medicaid/state, age, sex, fever, nausea or vomiting, white blood cell count, maximum pain score recorded in the emergency department, and symptom duration.
eTable. Characteristics of CODA Trial Participants Randomized to Antibiotics with Appendectomy Within 24 Hours of Emergency Department Arrival

|                        | Appendectomy 0-24 hours (n=42) |
|------------------------|---------------------------------|
|                        | n (%)                           |
| **Age in years**       |                                 |
| <30                    | 13 (31.0)                       |
| 30-39                  | 10 (23.8)                       |
| 40-49                  | 10 (23.8)                       |
| 50-59                  | 6 (14.3)                        |
| 60-69                  | 1 (2.4)                         |
| 70-79                  | 2 (4.8)                         |
| ≥80                    | 0 (0.0)                         |
| **Sex**                |                                 |
| Male                   | 24 (57.1)                       |
| Female                 | 18 (42.9)                       |
| **Race**               |                                 |
| White                  | 19 (46.3)                       |
| Black, African American| 6 (14.6)                        |
| American Indian or Alaska Native | 1 (2.4) |
| Asian                  | 3 (7.1)                         |
| Native Hawaiian or Other Pacific Islander | 0 (0.0) |
| Other race             | 10 (24.3)                       |
| Multiple races         | 2 (4.9)                         |
| **Hispanic**           |                                 |
| No                     | 23 (54.8)                       |
| Yes                    | 19 (45.2)                       |
| **Primary language**   |                                 |
| English                | 30 (71.4)                       |
| Spanish                | 10 (23.8)                       |
| Other                  | 2 (4.8)                         |
| **Health insurance**   |                                 |
| Commercial             | 14 (33.3)                       |
| Medicare or Tricare    | 3 (7.1)                         |
| Medicaid or state      | 10 (23.8)                       |
| Other or none          | 14 (33.3)                       |
| **Health literacy help** |                             |
| Never/rarely           | 32 (78.0)                       |
| Sometimes or more      | 9 (22.0)                        |
| **Below federal poverty level/Medicaid** |   |
| No                     | 20 (69.0)                       |

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|                          | Yes          | 9 (31.0) |
|--------------------------|--------------|----------|
| **Dependents**           |              |          |
| No                       |              | 15 (35.7)|
| Yes                      |              | 27 (64.2)|
| **Body mass index, kg/m²** |            |          |
| <25                      |              | 7 (17.5) |
| 25-35                    |              | 28 (70.0)|
| >35                      |              | 5 (12.5) |
| **Symptom duration, days** |           |          |
| <1                       |              | 7 (16.7) |
| 1-<2                     |              | 20 (47.6)|
| ≥2                       |              | 15 (35.7)|
| **Fever**                |              |          |
| No                       |              | 31 (73.8)|
| Yes                      |              | 11 (26.1)|
| **Nausea, vomiting, or anorexia** |      |          |
| No                       |              | 11 (26.2)|
| Yes                      |              | 31 (73.8)|
| **CT only**              |              |          |
| No                       |              | 6 (14.2) |
| Yes                      |              | 36 (85.7)|
| **Ultrasound only**      |              |          |
| No                       |              | 41 (97.6)|
| Yes                      |              | 1 (2.4)  |
| **Appendicolith**        |              |          |
| No                       |              | 25 (59.5)|
| Yes                      |              | 17 (40.5)|
| **Perforation, abscess, or phlegmon** | | |
| No or not mentioned      |              | 35 (85.3)|
| Yes                      |              | 6 (14.6) |
| **mean (SD)**            |              |          |
| **Instrumental support** |              | 16 (4.7) |
| **Charlson score**       |              | 0.4 (0.9)|
| **Alvarado score**       |              | 7.0 (1.5)|
| **Pain score in past 7 days** |      | 6.5 (3.1)|
| **White blood count, K/µL** |          | 14 (4.1) |
| **Appendiceal diameter, mm** |         | 12 (3.9) |

CODA, Comparison of Antibiotic Drugs and Appendectomy; CT, computed tomography
a Participants with missing data were excluded from the denominator. Missing data occurred for participants as follows: race - 1; health literacy help - 1; below federal poverty level - 13; body mass index - 2; perforation, abscess, or phlegmon - 1; instrumental support - 1; Charlson score - 0; Alvarado score - 2; pain score - 0; white blood cell count - 0; and appendiceal diameter - 4.

b Instrumental support score was determined by PROMIS patient-related outcome of having someone to take the patient to the doctor, run errands, and help with daily chores and if confined to bed.11
eFigure 1. Randomization and Disposition of Participants in the CODA Trial

8168 Patients with appendicitis were assessed for eligibility

3987 Were excluded
  267 Did not speak English or Spanish
  1589 Were excluded for clinical reasons
  853 Had appendix-related conditions
    368 Had abscess
    251 Had severe phlegmon
    107 Had free air
    296 Had other reason
    90 Had ascites
    111 Had evidence suggestive of cancer
    95 Had peritonitis
  736 Had other conditions
    130 Had immunodeficiency
    148 Were already receiving antibiotics
    122 Had contraindication to surgery
    376 Had other reason
    45 Had sepsis
    57 Had cancer
    71 Had concurrent hospitalization
    42 Were receiving active treatment for inflammatory bowel syndrome
    26 Were undergoing hemodialysis
    2 Had a left ventricular assist device
    66 Were pregnant
    23 Had recent abdominal or pelvic surgery
    2 Had uncompensated liver failure
    7 Recently underwent implantation
    35 Had contraindication to antibiotics
  319 Could not be approached within 7 hours
  96 Were deemed ineligible by clinical team
  1716 Declined to participate
  809 Declined before being approached
  75 Were deemed ineligible after being approached
  834 Declined after being approached

4181 Were enrolled in any cohort

2629 Did not undergo randomization
  518 Were enrolled in observational cohort
  2111 Were enrolled in EMR-only cohort

1552 Underwent randomization
776 Were assigned to receive antibiotics

726 Were included in study population

8 Received first antibiotic dose after 24 hours
42 Underwent appendectomy within 24 hours

335 Were discharged within 24 hours
165 Were discharged at 0-12 hours
172 Were discharged at >12-24 hours

391 Were discharged after 24 hours
eFigure 2. Cumulative Incidence of Appendectomy Through Two Years in the Antibiotic Group by Emergency Department Discharge within 24 Hours or Later

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