

Sui Kwong Li MD^{1,2}, Carolyn Fernandes MD^{1,2}, Sowmya Nanjappa MD^{1,2}, Sarah Burgdorf MD PhD^{1,2}, Vidya Jagadeesan MD^{1,2}, Bettina Knoll MD^{1,2}, Shanza Khan MD^{1,2}, Nupur Gupta DO MPH^{1,2}, John W. Mellors MD^{1,2}, Rima Abdel-Massih MD^{1,2}
¹Division of Infectious Diseases, University of Pittsburgh Medical Center; ²Infectious Disease Connect, Inc.

OBJECTIVE

- Determine whether ID e-consults can be an effective substitute for in-person ID care
- Establish baseline data for outcomes related to ID e-consults

BACKGROUND

- Telemedicine (TM) can provide specialty ID care for remote and underserved areas.
- However, the need for dedicated audio-visual equipment, secure and stable internet connectivity, and local staff to assist with the consultation has limited wider implementation of synchronous TM.
- ID e-consults (electronic consultations or asynchronous TM) are an alternative, but data are limited on their effectiveness, especially patient outcomes.

METHODS

- In the setting of the COVID-19 pandemic and lack of in-person ID physician coverage, we performed ID e-consults at a 380-bed tertiary care hospital in Blair County, PA.
- We performed retrospective chart reviews of 121 patients initially evaluated by ID e-consults between April 2020 and July 2020.
- Follow-up visits were also conducted via e-consults with or without direct phone calls with the patient.
- Key patient outcomes assessed were length of stay (LOS), disposition, 30-day mortality from initial ID e-consult and 30-day readmission post-discharge

RESULTS

Table 1. Clinical Characteristics (n=121)

Age, mean (SD), y	61.2 (16.7)
Gender, No. (%)	
• Female	50 (41.3)
• Male	71 (58.7)
Race, No. (%)	
• White	115 (95.0)
• Other	6 (5.0)
BMI, mean (SD)	31.5 (8.6)
Immunocompromised State, No. (%)	21 (17.4)
• Immunosuppressive Agents*	5 (4.1)
• Solid Tumor	11 (9.1)
• Hematologic Malignancy	5 (4.1)
Charlson Comorbidity Index Score, mean (SD)	4.8 (3.0)
Hospitalization during previous 6 months, No. (%)	
• Yes	57 (47.1)
• No	64 (52.9)
ICU status at the time of e-consult, No. (%)	
• Yes	13 (10.7)
• No	108 (89.3)

*Apremilast, Dasatinib, Etanercept, Infliximab, Rituximab, or Prednisone >10 mg/day

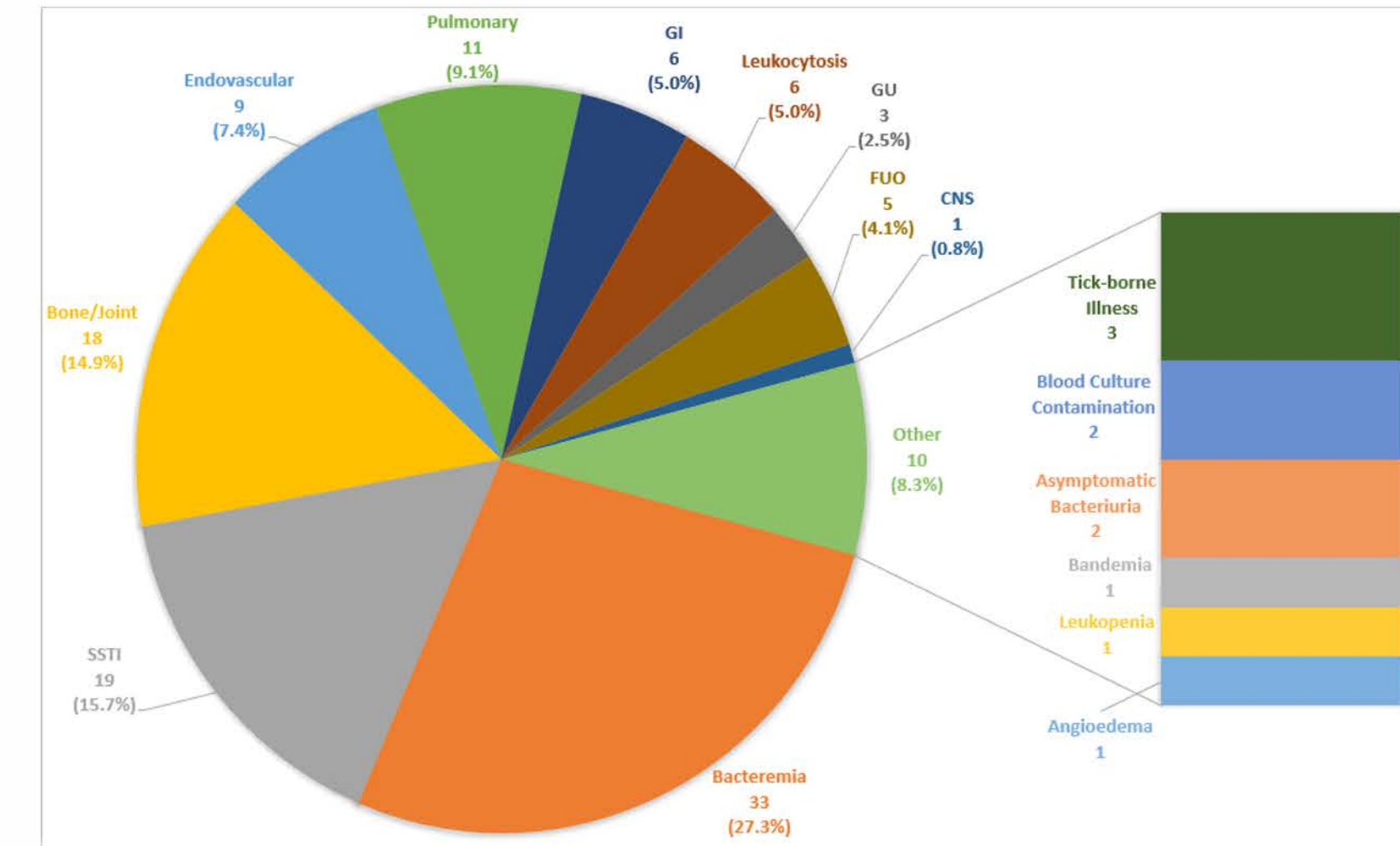
Table 2. Outcomes

Length of stay, mean (SD), d	
• Total	11 (9)
• Post initial ID e-consult	7 (8)
Disposition, No. (%)	
• Home	59 (48.7)
• Post-acute rehabilitation facility	45 (37.2)
• Left against medical advice	7 (5.8)
• Hospice	3 (2.5)
• Hospital transfer	3 (2.5)
• Index stay mortality	4 (3.3)
Death within 30 d of ID e-consult, No. (%)	5 (4.1)
Readmission within 30 d post-discharge, No. (%)	31 (25.6)
Readmission within 30 d related to initial infection, No. (%)	17 (14.0)

KEY FINDINGS

- Average total LOS post-initial ID e-consult was 7 days and the majority of patients (85%) were discharged to home or a skilled nursing facility.
- Rates of hospital transfer following ID e-consults and readmission within 30 days related to initial infection were low.

Figure 1. Variety of ID Diagnoses made by e-consults



CONCLUSIONS

- Mortality rates following e-consults appear to be comparable to those previously reported for in-person ID care¹².
- In the absence of in-person ID physicians, ID e-consults may be a reasonable substitute.
- Further study is required to compare performance of ID e-consults to in-person ID consults.

REFERENCES

- ¹Tande AJ, Barbari EF, Ramar P. et al. Association of a Remotely Offered Infectious Diseases eConsult Service with Improved Clinical Outcomes. Open Forum Infectious Diseases. 2020;7(1), ofaa003 <https://doi.org/10.1093/ofid/ofaa003>
- ²Schmitt S, McQuillen DP, Nahass R et al. Infectious Diseases Specialty Intervention is Associated with Decreased Mortality and Lower Healthcare Costs. Clin Infect Dis. 2014;58(1):22-8.