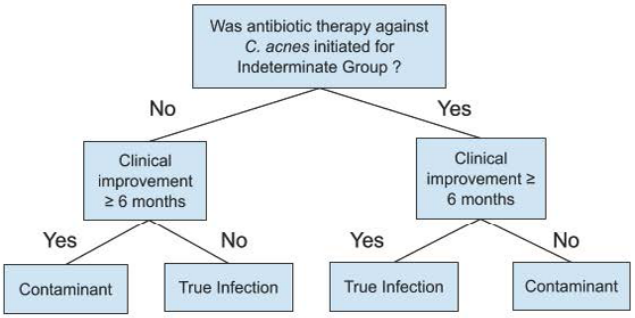
Figure 2



Disclosures. **All authors:** No reported disclosures.

458. Diagnostic Accuracy and Management of Suspected Moderate to Severe Cellulitis Referred to an Infectious Diseases Outpatient Parenteral Antibiotic Clinic: A Prospective Cross-Sectional Study

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Background. Moderate to severe cellulitis is a common reason for presentation to the emergency department and administration of intravenous antibiotics. Misdiagnosis of cellulitis occurs frequently as the disease can masquerade as a wide variety of noninfectious and infectious problems. There are currently no studies evaluating the impact of infectious diseases physicians on the diagnostic accuracy and management of cellulitis referred to an outpatient parenteral antibiotic clinic from the emergency department. The objective of this study was to quantify the prevalence of misdiagnosed moderate to severe cellulitis through an evaluation by an infectious diseases specialist, characterize the alternative diagnoses, and assess variables associated with misdiagnosis.

Methods. A prospective cross-sectional study of adults referred from emergency departments with presumed moderate to severe cellulitis to an outpatient parenteral antibiotic clinic staffed by infectious diseases specialists.

Results. 301 consecutive patients with presumed cellulitis were evaluated over a 6-month period. A concurring diagnosis of cellulitis was found in 170 patients (56.5%), for a misdiagnosis rate of 43.5% (131/301). Table 1 summarizes the alternative diagnoses. Infectious conditions other than cellulitis were the most common (63/301; 20.9%), with abscess being present in 23 (7.6%) of patients. Fifty-two of 301 (17.3%) of the diagnoses were noninfectious and 16/301 (5.3%) patients had a dual diagnosis where minor cellulitis was present, but secondary to another, predomintating condition. The presence of stasis dermatitis (OR 6.62, $P = 0.013$) and a history of physical trauma (OR 1.76, $P = 0.046$) were associated with a misdiagnosis. 31.9% (107/335) of antibiotic regimens prescribed by emergency physicians were inappropriate or sub-optimal compared with 7.9% (22/280) of those ordered by infectious disease doctors.

Conclusion. Moderate to severe cellulitis was incorrectly diagnosed in nearly half of the patients referred for intravenous antibiotics and resulted in a high rate of unstewardly antimicrobial use. Infectious diseases physicians at an outpatient antibiotic clinic improved the diagnostic accuracy and management of this complicated condition.

Table 1. Misdiagnosis Rate of Cellulitis and Alternative Diagnoses, Total = 301	
Correctly Diagnosed, n (%)	170 (56.5%)
Incorrectly Diagnosed, n (%)	131 (43.5%)
Alternative Infectious Disease Diagnoses, n (%)	63 (20.9%)
Abscess	23 (7.6%)
Osteomyelitis	9 (3%)
Bursitis	8 (2.7%)
Septic arthritis	7 (2.3%)
Wound/ulcer infection	5 (1.7%)
Tenosynovitis	3 (1%)
Diabetic Foot Infection	2 (0.7%)
Other*	6 (2%)
Alternative Non-infectious Diagnoses, n (%)	52 (17.3%)
Soft tissue injury	12 (4%)
Stasis dermatitis	12 (4%)
Gout	8 (2.7%)
Drug eruption	4 (1.3%)
Contact dermatitis	2 (0.7%)
Fracture	2 (0.7%)
Other#	12 (4%)
Dual Diagnosis, n (%): Minor cellulitis present but secondary to:	16 (5.3%)
Eczema	3 (1%)
Cutaneous candidiasis	2 (0.7%)
Stasis dermatitis	2 (0.7%)
Other^	9 (3%)
*One of each: furunculosis, impetigo, infected hematoma, odontogenic, septic thrombophlebitis, wet gangrene #One of each: balanoposthitis, dry gangrene, deep vein thrombosis, eczema, edema, lipodermatosclerosis, lymphedema, necribiosis lipoidica diabeticorum, osteoarthritis, pseudogout, pyoderma gangrenosum, vasculitis ^One of each: dacryocystitis, folliculitis, herpes zoster, odontogenic, otitis externa, peristomal irritation, pitting edema, sinusitis, soft tissue injury	

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459. Gaps in Diabetic Foot Care in an Inner-City Hospital

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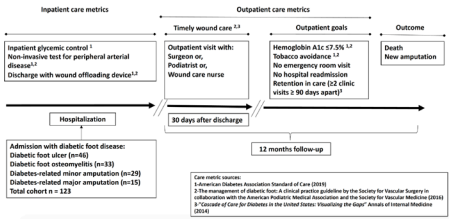
Background. Diabetic foot disease is the leading cause of preventable limb loss in the United States. Care continuum models to measure gaps in care are lacking.

Methods. Retrospective cohort study conducted in an urban safety-net hospital in Atlanta, GA (Grady Memorial Hospital). All patients admitted between January-May 2016 with diabetes-related foot ulcer, osteomyelitis, or for lower-extremity amputation were included. A care continuum model for inpatient and post-discharge outpatient metrics was developed based on national guidelines and available diabetes care continuum models (figure). We followed patients for 12 months after initial hospital admission.

Results. Among 123 patients, the median age was 56 (IQR 48–64) years and most were male (67%) and black (83%) (table). Prior to hospital admission, 12% of patients had a major amputation (above ankle) and 21% had a minor amputation (below ankle). Tobacco use (34%), homelessness (29%), and no medical insurance (20%) rates were high. Few patients (28%) had hemoglobin A1c (Hb1Ac) at goal (≤7.5%) and 10% had end-stage renal disease. Regarding inpatient care metrics, 59% had a median glucose at goal on the day of discharge (≤180 gm/dL). Few patient patients had a noninvasive vascular test (13%) or received a wound offloading device (16%) during hospitalization. Regarding post-discharge outpatient metrics, 33% had wound care ≤30 days after hospitalization, 14% with tobacco use at baseline quit, and 24% had Hb1c ≤7.5%. Emergency room (ER) visits and hospital readmissions within 12 months post-discharge were common (77% and 66%, respectively). Only 54% were retained in care (≥2 clinic visits ≥90 days apart). Outcomes during 12 months after the first day of initial hospital admission were poor: 6% died, 23% had a new major amputation and 22% had a new minor amputation. Including major amputations prior to initial hospital admission, 37% of patients died or were living with a major amputation 12 months after hospitalization.

Conclusion. Our care continuum model demonstrated large gaps in diabetic foot care. Over a third of these patients died or were living with major limb loss and there were high rates of ER visits and hospital readmissions. Implementing measures to close gaps in care could improve outcomes.

Diabetic foot disease care continuum



Baseline characteristics	N = 123 [1]
Median age, years (IQR)	56 (48-64)
Male	83 (67)
Black	102 (83)
No medical insurance	24 (20)
History of homelessness	36 (29)
Current tobacco use	42 (34)
Baseline hemoglobin A1c ≤7.5%	34 (28)
End-stage renal disease	12 (10)
Amputation prior to index admission	
Major amputation at baseline [2]	15 (12)
Minor amputation at baseline [3]	26 (21)
No amputation at baseline	82 (67)
Index admission diagnosis	
Major amputation [2]	15 (12)
Minor amputation [3]	29 (24)
Osteomyelitis	33 (27)
Ulcer	46 (37)
Inpatient care metrics	
Median last hospital admission day glucose ≤180 mg/dl	72 (59)
Non-invasive vascular test [4]	16 (13)
Wound offloading device (n=106) [5]	17 (16)
Outpatient care metrics (n=119) [6]	
Wound care ≤30 days after discharge	39 (33)
Retention in care (≥2 clinic visits ≥90 days apart)	64 (54)
Tobacco cessation (n=42) [7]	6 (14)
End of follow-up hemoglobin A1c ≤7.5% [8]	29 (24)
Emergency room visit	92 (77)
Hospital readmission	78 (66)
Outcomes	
Death	8 (6)
New major amputation [2]	28 (23)
New minor amputation [3]	27 (22)
Alive and no new amputation	60 (49)
Death, baseline or new major amputation [2]	45 (37)

1-Data are no. (%) unless otherwise specified
2-Below knee or above knee amputation
3-Below ankle amputation
4-Includes arterial-brachial index test
5-Excludes patients with major amputation
6-Excludes patients with death at index hospital admission (n=4)
7-Among patients with current tobacco use at baseline (n=42)
8-No follow-up hemoglobin A1c n= 36 (30%)

Disclosures. **All authors:** No reported disclosures.