Severe Purulent infection with systemic signs of infection:
- temp >38 degrees
- tachycardia >90 bpm
- tachypnea >24 breaths per minute
- leukocytes >12, <4, or >10% bands
Clinical signs of deeper infection:
- bullae, skin sloughing, hypotension, end organ dysfunction, complicated or deep abscesses
Failure on PO antibiotics previously
- Neutropenia
- On chemotherapy
- Immunocompromised or immunodeficiency
- Malignancy
- Immersion injury (susceptible to pseudomonas)
- Recurrence after I&D with antibiotics

Moderate Purulent infection Systemic signs of infection:
- temp >38 degrees
- tachycardia >90 bpm
- tachypnea >24 breaths per minute
- leukocytes >12, <4, or >10% bands
Medical co-morbidities complicating healing (liver/renal disease, vascular insufficiency)

Mild Purulent infection Not a re-occurrence NO systemic signs of infection

Mild Infection: I&D with no antibiotics
Moderate Infection: I&D with PO antibiotics
Consider Streptococcus A,B,C, G and Staphylococcus (MSSA, HA-MRSA, and CA-MRSA)
Treatment duration 5-7 days
Empiric Therapy
- TMP/SMX 1-2 DS tablets PO BID
- Doxycycline 100mg PO BID

Severe Infection: I&D with IV antibiotics
Consider Streptococcus A,B,C, G and Staphylococcus (MSSA, HA-MRSA, and CA-MRSA), Pseudomonas
Treatment duration varies, reassess and step down to PO
Empiric Therapy
- Vancomycin 30mg/kg/day in 2 divided doses IV
- Daptomycin 4mg/kg q 24hours IV
- Linezolid 600mg q12h IV or 600mg PO BID

MRSA Risk Factors
Hospital Acquired-MRSA
- Hospitalization
- Long-term care
- Recent antibiotic therapy
- Hemodialysis

Community Acquired-MRSA**
- HIV infection
- Men who have sex with men
- Injection drug use
- Unsanitary/crammed living conditions
- Incarceration
- Military service
- Sharing sports equipment
- Diabetes

*Avoid Clindamycin if suspected CA-MRSA due to inducible resistance

DISCLAIMER: Always refer to your local antibiograms to guide your choices for clinical care. Susceptibility of various organisms may vary due to local resistance patterns.

References
Mild
Typical localized cellulitis
No purulent focus

Mild Infection: PO antibiotics
Consider Strep A, B, C, G
Treatment duration 5 days, extend if no clinical improvement
Empiric therapy:
Cephalexin 500mg PO QID
Dicloxacillin 500mg PO QID
If penicillin allergic:
Clindamycin 300mg QID
Levofloxacin 750mg PO daily

Moderate
Typical cellulitis with systemic signs of infection
temp >38 degrees
tachycardia >90 bpm
tachypnea >24 breaths per minute
leukocytes >12, <4, or >10% bands
Medical co-morbidities complicating healing
(liver/renal disease, vascular insufficiency)

Moderate Infection: IV antibiotics
Consider Strep A, B, C, G, MSSA
Treatment duration minimum 5 days, extended if no clinical improvement
Empiric therapy:
Ceftriaxone 1gm IV q8 hours
Cefazolin 1gm IV q8 hours
If penicillin allergic:
Clindamycin 600-900mg IV q8 hours

Severe
Purulent infection with systemic signs of infection
temp >38 degrees
tachycardia >90 bpm
tachypnea >24 breaths per minute
leukocytes >12, <4, or >10% bands
Clinical signs of deeper infection
bullae, skin sloughing, hypotension, end organ dysfunction, complicated or deep abscesses
Patients who have failed previous PO antibiotics
Neutropenia
On chemotherapy
Immunocompromised or immunodeficiency
Malignancy
Immersion injury (susceptible to pseudomonas)
Recurrence after I&D with antibiotics

Severe Infection: IV antibiotics, r/o necrotizing disease
Consider Strep A, B, C, G, MSSA, MRSA, Pseudomonas
Treatment duration varies, reassess, await culture results, and step down to PO
Empiric therapy:
Vancomycin 30mg/kg IV divided into 2 doses AND
Piperacillin/Tazobactam 3.375mg IV q6hours
If penicillin allergic:
Vancomycin 30mg/kg IV divided into 2 doses AND
Imipenem 1g IV q6-8hours
Vancomycin 30mg/kg IV divided into 2 doses AND
Meropenem 1g IV q8hours
If known MRSA colonization (from previous infection, or nasal swabs):
TMP/SMX 1-2 DS tablets PO BID

If concerns for necrotizing disease:
Stat surgical consult
Piperacillin/Tazobactam 4.5mg IV and Clindamycin 600-900 mg IV

References

DISCLAIMER: Always refer to your local antibiograms to guide your choices for clinical care. Susceptibility of various organisms may vary due to local resistance patterns.