Sepsis in the ED

Rob Stenstrom

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Situation:
Considerable physician variability in treatment of sepsis and septic shock. Emergency department patient's health authorities and specific hospitals should have consistent, high level, evidence-based care.

Vision:
To optimize outcomes for ED patients with infections and/or sepsis and to decrease variability of practice within BC emergency departments.

Stakeholders:
- DEM Members
- ED's in B.C.
- Practicing Health Professionals in EM
- BCMA Section of EM
-BC MoH
- UBC
- BC Health Authorities
- CAEP
BC PS& Q Council
- UBC CHEOS
- Industry

Priority Goals:
• Sepsis & septic shock best practises universally applied in BC ED's
• Develop evidence-based guidelines for obtaining blood cultures in pts w sepis.
• Improve time to antibiotics & time to fluids in pts w severe sepsis & septic shock.

Inputs	Activities	Outputs	Outcomes		
			Short Term (<1 yr)	Long Term (2-3yrs)	Anticipated Impact
Partner with Lion's Gate, Vancouver General, Montreal, and Phoenix Hospitals for large RTC of blood cultures pre and post antibiotics	Multiple ongoing studies of sepsis and septic shock	Growing database of ED patients with sepsis; ID'ing risk stratification of patients and improving process outcomes	Determine role of biomarkers in patients with sepsis & use these in risk stratification score	RCT of use of C-reactive protein level and effect on use of blood cultures	Decrease use of blood cultures in the ED resulting in saved money for health care system
Critical care sepsis working group trials partnership	Strengthen relationships with all EM physicians through EM Network	Analyzing data from completed study to assess impact of rapid treatment of sepsis on various biochemical markers	Access in all BC ED's to EM Network best practices files	Refine criteria used to obtain blood cultures in ED patients with sepsis	Decreased variation in sepsis treatment
Ongoing partnerships w BC PS & Q Council & CAEP to development cohesive strategy of evidence-based care for patients with sepsis and septic shock through knowledge generation, KT and evaluation	Assessment of new 2016 definitions of sepsis	Creation of EM Network best practices file on sepsis	Analyze and publish results of blood culture RCT and prospective cohort study		Ensure patients receive timely diagnosis and efficient, cost effective treatment interventions
			Design studies to ID high risk patients with sepsis in the ED		Reduce unnecessary test-ing by developing algorithms to identify low-risk patients

Significant Challenges:
Uptake and knowledge dissemination toEP's across British Columbia.
Altering practice patterns of established EP's across British Colombia.

Soft Tissue Infections in the ED

Rob Stenstrom

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Situation:
Considerable physician variability in treatment of skin and soft tissue infections. Emergency department patient's health authorities and specific hospitals should have consistent, high level, evidence-based care for these disease states.

Vision:
To optimize outcomes for ED patients with infections and to decrease variability of practice within BC emergency departments.

Stakeholders:
- DEM Members
- ED's in B.C.
- Practicing Health Professionals in EM
- BCMA Section of EM
-BC MoH
- UBC
- BC Health Authorities
- CAEP
- BC CDC
- BC Centre for Excellence in HIV/AIDS
BC PS& Q Council
- UBC CHEOS
- Industry

Priority Goals:
• Develop evidence -based guidelines for obtaining blood cultures in pts w sepis.
• Skin & soft tissue infections managed according to evidence-based, pragmatic principles of antibiotic use.
• Widespread HIV screening; Hep C routine testing

Inputs	Activities	Outputs	Outcomes		
			Short Term (<1 yr)	Long Term (2-3yrs)	Anticipated Impact
In-kind donation of equipment from Biolitical	Multiple ongoing studies of resistant bacteria and SSTIs	Conducted widespread point of care HIV testing of all ED patients, published study	Access in all BC ED's to EM Network best practices files	Point of care HIV testing policy for all ED patients, and rapid access to care, in col-laboration with BC MoH services and BC Centre for Excellence in HIV/AIDS	Decrease use of blood cultures in the ED resulting in saved money for health care system
UBC Summer Studentship grant (SSRP)	RCT of IV vs oral antibiotics for skin and soft tissue infections	Published MSRA trial (Completed)	Develop strategy for routine testing for hepatitis C in the ED	Study the feasibility of Hepatitis C testing in the ED	Decreased amount of IV antibiotics in the ED for skin and soft tissue infections
	Retrospective study of moxifloxacin use with patients who are high risk for TB	Creation of EM Network best practices file on skin and soft tissue infection	Design studies to ID high risk patients with infections in the ED		Ensure patients receive timely diagnosis and efficient, cost effective treatment interventions
	Ongoing surveillance of MRSA prevalence and incidence rates	Institutionalized point of care HIV testing; collaboration with Providence Health Care			Reduce unnecessary test-ing by developing algorithms to identify low-risk patients
	Strengthen relationships with all EM physicians through EM Network	Institutionalized policy: warnings issued with use of moxifloxacin in high risk patient populations			
	Partner with industry to evaluate novel oral antibiotics				

Significant Challenges:
Uptake and knowledge dissemination toEP's across British Columbia.
Altering practice patterns of established EP's across British Colombia.