

# Initial six-month results after starting a pulmonary embolism response team (PERT) in an academic Canadian hospital under an alternate funding plan

C. L. D'Arsigny<sup>1</sup>, Z. Wu<sup>2</sup>, A. R. Nasirzadeh<sup>3</sup>, E. Tarulli<sup>3</sup>, A. Menard<sup>3</sup>, K. de Wit<sup>4</sup>, B. Mussari<sup>3</sup>  
<sup>1</sup>Dept. of Critical Care Medicine, <sup>2</sup>Dept. of Medicine, <sup>3</sup>Dept. of Radiology, <sup>4</sup>Dept. of Emergency Medicine  
 Alternate Funding Plan <sup>1,2,4</sup>

No conflict of interest <sup>1-4</sup>

## BACKGROUND



Kingston Health Sciences Centre is a 440-bed academic teaching hospital associated with Queen's University in Kingston, ON, Canada. Majority of physicians are paid via an alternate funding model and are not fee-for-service

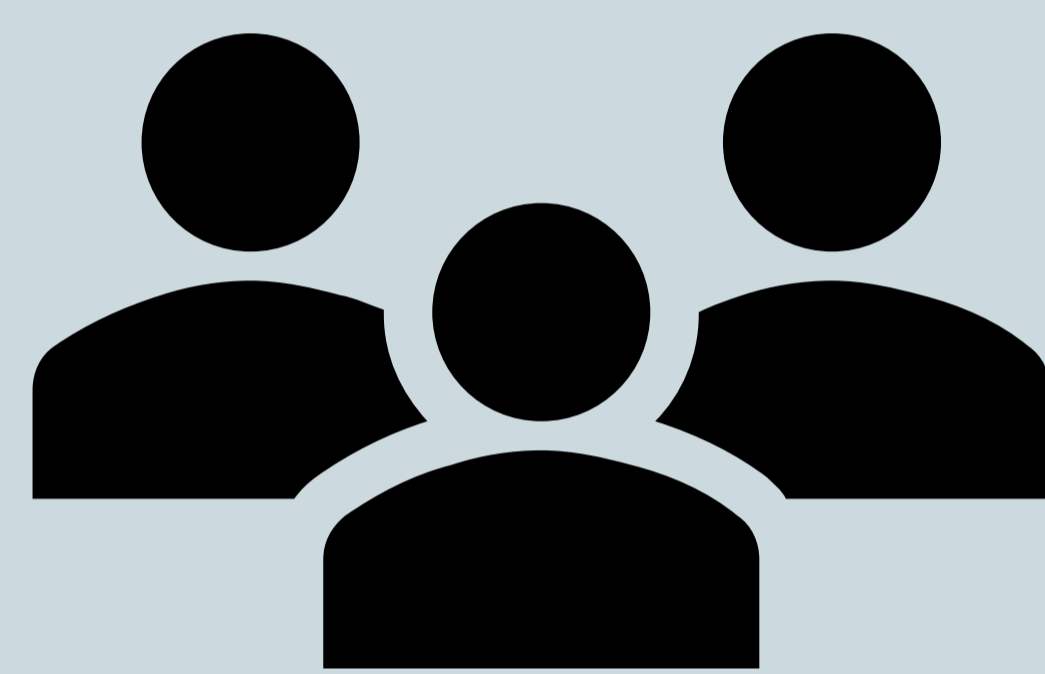


KHSC covers a 20 000 square kilometer catchment area (N=500 000)

Pre PERT implementation review (2015-2020) N=650 acute PE			
High Risk PE	17/650 (3%)	Intermediate Risk PE	270/650 (42%)
Advanced therapies	12/17 (71%)	Advanced therapies	36/270 (13%)
Systemic thrombolysis	9/17 (53%)	Systemic thrombolysis	24/270 (9%)
Catheter directed thrombolysis	3/17 (18%)	Catheter directed thrombolysis	12/270 (4%)
Process Metrics		Process Metrics	
Time from diagnosis to thrombolysis	6.3 h	Time from diagnosis to thrombolysis	5.9 h
Time from diagnosis to interventional radiology	3.7 h	Time from diagnosis to interventional radiology	27.7 h
Outcome		Outcome	
In-hospital mortality	4/17 (24%)	In-hospital mortality	14/270 (5%)
Major bleeding	3/17 (18%)	Major bleeding	7/270 (3%)

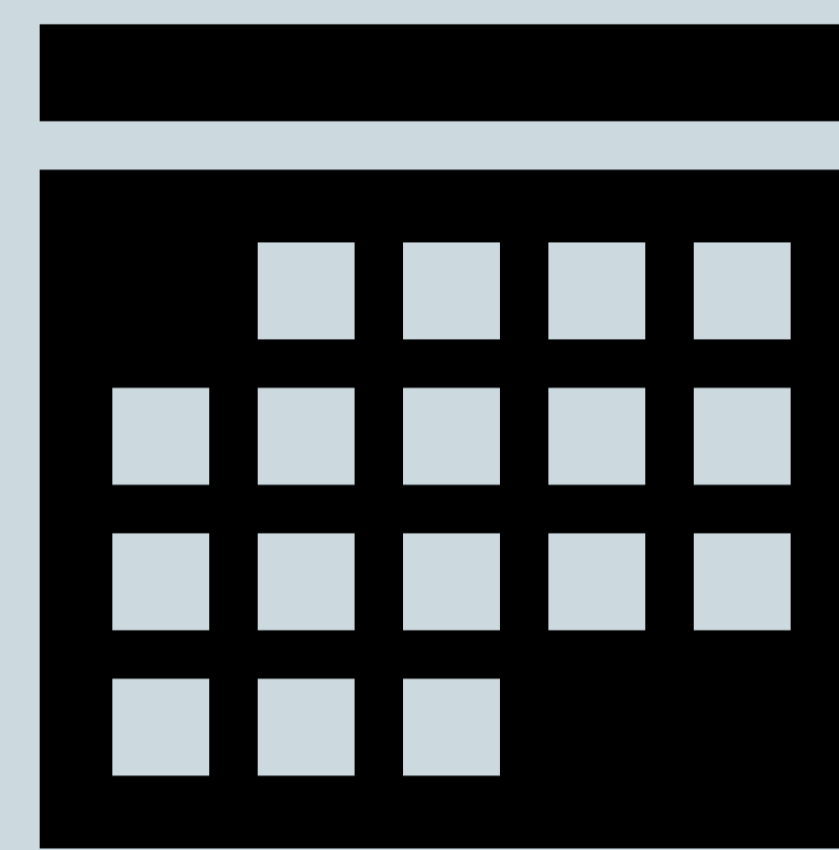
## METHODS

### PERT Team Members:



- Emergency Medicine/Thrombosis (n=1)
- Intensivist/Pulmonologist (n=1)
- General Internal Medicine (n=1)
- Interventional Radiology (n=4)

### Schedule



24h/day Mon-Fri

### Infrastructure/Implementation

- New PERT Assessment and consult document forms
- Ensure RV/LV ratio on all CTPA reports
- Troponin ordered for ALL PE patients
- Advertise PERT team at multiple rounds + Posters
- On-call roster

## RESULTS

PERT Team Activations: N=25		Systemic thrombolysis (ST)(n=3)	Mechanical thrombectomy (MT) (n=7)	ST followed by MT (N= 2)	Mortality (n=3)
		High Risk (n=5)	2/5 (40%) Time to thrombolysis= 2 h	2/5 (40%) Time to MT=9.8 h	1/5 (20%)
Intermediate High Risk (n=12)	1/12 (8%) Time to thrombolysis= 1.5 h	4/12 (33%) Time to MT=49.8h	1/12 (8%)	1/12 (8%) No advanced therapy received Not PE related	
Intermediate Low Risk (n=8)	0/8 (0%) Time to thrombolysis=n/a	1/8 (12.5%) Time to MT=3.5h Clot in transit on chronic PH	0/8 (0%)	1/8 (12.5%) No advanced therapy received Not PE related	

## CONCLUSIONS

- Introduction of PERT appeared to increase the use of advanced treatments in high-risk PE with 100% receiving either thrombolysis or mechanical thrombectomy (71% historically)
- Time to thrombolysis reduced from 6.7h to 2h
- **Barrier identified:** Lack of specific funding for PERT is a challenge for PERT consultant recruitment.

## REFERENCE

Konstantinides SV, Meyer G, Becattini C, et al. 2019 ESC Guidelines for the diagnosis and management of acute pulmonary embolism developed in collaboration with the European Respiratory Society (ERS): The Task Force for the diagnosis and management of acute pulmonary embolism of the European Society of Cardiology (ESC). *Eur Respir J*. Sep 2019;54(3)doi:10.1183/13993003.01647-2019