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7 Transparency as a Tool to Reduce Opioid Prescribing in One Emergency Department

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Objective: Between 2013 and 2016 opioid-related deaths in Massachusetts increased by over 53% (MA Department of Public Health). Nonmedical use of prescription opioids is a strong risk factor for heroin use, and even single, small prescriptions increase the risk for developing chemical dependency (*NEJM* 374;2). To promote physician stewardship in opioid prescribing, we studied prescribing practices before and after an administrative intervention. We proposed that full-time providers in our single-hospital group should have similar prescribing practices and that transparency in individual physician prescribing would result in an opportunity for physicians to compare their practices. Transparency would highlight significant practice variations and result in an opioid-prescribing change.

Design and Method: The setting was a 46k visit/year urban academic medical center. To establish a baseline, we tabulated all opioid prescribing by faculty for calendar year 2015. Starting in January 2016, using data from the electronic medical record, individual physician opioid prescribing was presented at a monthly physician meeting with complete transparency, including providers' names and opioid prescriptions. Shared data also included the percentage of discharged patients receiving an opioid prescription, the number of opioid prescriptions as a percentage of total prescriptions written, and year-to-date trends. There was no discussion of optimal target numbers, individual prescriptions, guidelines, rewards or penalties. We then contrasted 2016 and 2015 data.

Results and Conclusion: Over 12 months, opioid prescriptions decreased by 34%, the percentage of prescriptions for an opioid decreased by 33.9%, and the number of patients receiving an opioid prescription dropped by 37.6% (Table 1). Although there are other external factors that were not controlled, transparency regarding the number of opioid prescriptions written by the ED physician group and a monthly departmental discussion resulted in a significant decrease in the number of opioids prescribed.

Table 1. Comparison of physicians' opioid-prescribing frequency before and after an administrative intervention during which their prescribing practices were shared openly at monthly meetings.

Time Period	D/C Pts	Rxs	Pts Receiving Rx	# Opioid Rx	% Opioid Rx	% D/C Pts w/Opioid Rx
Jan-Dec 2015	32725	21282	17985	3120	14.70%	9.53%
Jan-Dec 2016	34628	21180	17652	2059	9.72%	5.95%
% CHANGE	**5.82%**	**(-)0.48%**	**(-)1.9%**	**(-)34.0%**	**(-)33.9%**	**(-)37.6%**

8 Major Incident Triage: The Civilian Validation of the Modified Physiological Triage Tool

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Objective: Triage is a key principle in the effective management of a major incident. Existing triage tools have demonstrated limited performance at predicting need for life-saving intervention. Derived using a military cohort, the Modified Physiological Triage Tool (MPTT) demonstrated the greatest performance at predicting the need for life-saving intervention. This study aimed to validate the MPTT in a civilian environment using trauma registry data.

Design and Method: The UK Trauma Audit Research Network database was interrogated for all adult patients between 2006-2014. We defined patients as Priority One if they received one or more life-saving interventions from a previously defined list. Using first recorded hospital physiological data, patients were categorised by the MPTT and existing primary physiological triage tools. We included only patients with complete physiological data in the analysis. Data was described as number (%) and median (interquartile range) as appropriate. We evaluated performance characteristics using sensitivity, specificity and area under the receiver operator characteristic (ROC) curve. Additional sensitivity analysis was performed on missing data using multiple imputation.

Results: During the study period, 218,985 adult patients were included in the database with 127,233 (58.1%) meeting inclusion criteria. Of those, 55.6% were male, aged 61.4 (43.1-80.0), Injury Severity Score 9 (9-16); 122,802 (96.5%) sustained blunt trauma, with low falls the most common mechanism (53.7%). We defined as Priority One 24,791 patients (19.5%) who received a life-saving intervention.

The MPTT (sensitivity 57.6%, 95%CI 0.569-0.582, specificity 71.5%, 95%CI 0.712-0.718) outperformed all existing triage methods with a 44.7% absolute reduction in under-triage compared to existing United Kingdom civilian methods. Comparison of the area under the ROC curve