A Prospective Evaluation of the Utility of the Ambulance Call Record to Change the Management of Patient Care in the Emergency Department

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Introduction

- The ambulance call report (ACR) is used to record clinical history and physical exam findings, vital signs, pre-hospital medical treatments and scene details
- Ontario ED nurses and occasionally physicians receive verbal handover from paramedics as part of their transfer of care from EMS. Important information is often lost in the exchange

Objectives

Primary Objective

- To determine if the ACR contains clinically important information that could change ED management

Secondary Objectives

- How often the ACR is available
- Perceived value of information contained in the ACR to either change patient management, or provide support for diagnosis and disposition

Methods

- A prospective cohort study of adult patients arriving to one of two EDs at a tertiary care centre (annual census 125,000) by ambulance
- Electronic ACRs were faxed to the ED upon completion and added to the patient's chart by ED staff
- Physicians were asked to complete a data collection form for each patient regarding ACR availability and the perceived value of the ACR
- Conducted over 2 four-week time periods to control for any confounding factors related to the implementation of this new eACR handover process
  - Jul 24 - Aug 21, 2012 (Round 1)
  - Feb 19 - Mar 19, 2013 (Round 2)

Results

- 869 forms were collected during the study period (545 Round 1, 324 Round 2)
- ACR available at first physician assessment for 82 (15.0%) patients in Round 1 vs. 76 (23.5%) in Round 2 (Δ 8.5%; 95% CI: 3%, 14%)
- ACR available at some point during the patient's ED stay for 154 (28.3%) patients in Round 1, compared to 111 (34.5%) in Round 2 (Δ 6.2%; 95% CI: 0.3%, 12.4%)

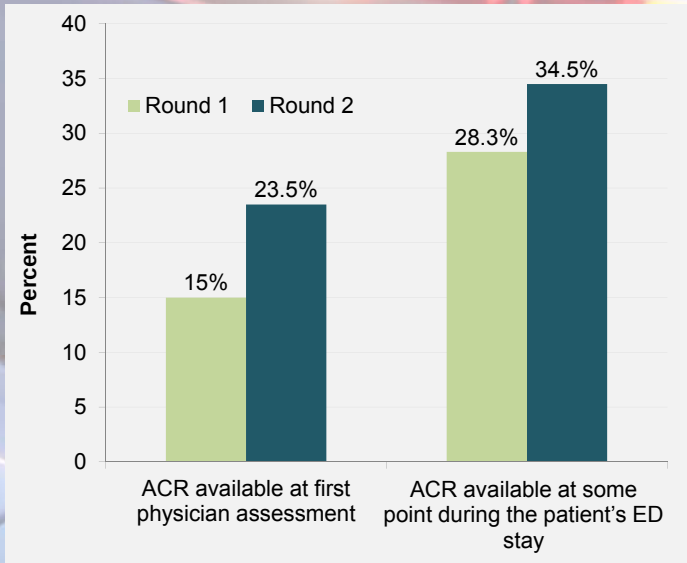

Figure 1. ACR availability

- When ACR was available (n=265), physicians reported that information changed or altered their treatment plan in 28.7% of cases
- When ACR was not available, 63.9% of physicians reported that the ACR would have provided valuable information
  - Patient history (72.3%)
  - Vital signs (69.2%)
- In 50.5% of cases (n=411), the physician did not receive verbal handover or an ACR
- Physicians received verbal handover AND ACR in 6.9% of cases (n=56)
- Of the cases where there was no ACR available at first physician assessment, 36% were faxed to the ED at least 10 min prior to PIA

Table 1. How ED management was changed by the ACR. (Some patients had changes in >1 category)

How ED management was changed	n
Medical therapy	37
Laboratory investigation	28
Imaging investigation	20
Outpatient referral	7
Inpatient referral	3
Other	10

Limitations

- Low response rate (22% overall)
- Biased responders
- Hypothetical nature of some questions

Conclusions

- Although the ACR contains clinically relevant information that may change or influence ED management, physicians often assess, treat and disposition patients without receiving the ACR
- Physicians reported that information in the ACR changed or altered their treatment plan in 76 (28.7%) cases