Mortality After "Treat and Release" Practices in EMS Opiate Overdose Care: A Systematic Review

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Introduction

Traditionally, patients who have overdosed on opiates that are managed by emergency medical services (EMS) are treated with the opiate antagonist naloxone, provided ventilatory support and subsequently transported to hospital. However, certain EMS agencies have allowed paramedics who have reversed an opiate overdose to refuse transport, if the patient has the capacity to do so. Therefore, our intent is to examine the available literature to determine the prevalence of mortality and serious adverse events within 48 hours of EMS treat and release due to suspected rebound opiate toxicity after naloxone administration.

Methods

A systematic search was performed on May 11th 2017 in PubMed, Cochrane Central, Embase and CIHAL using keywords and MeSH headings. Included studies were hand searched. Two authors conducted the screening, selection and data extraction process. Discrepancies were resolved via discussion. A modified QUIPs tool was used to evaluate risk of bias.

Results

1401 records were screened after duplicate removal. Eighteen full text studies were reviewed with 7 selected for inclusion. The prevalence of mortality within 48 hours was so infrequent that it could not be quantitatively meta-analyzed. There were 4/4912 (0.00081%) total reported deaths of suspected rebound etiology from included patients across all studies. Only one study reported on adverse events of patients released on scene. This study found no incidence of adverse events from their sample of 71 released patients.

Conclusion

Mortality or serious adverse events in the included studies due to suspected rebound toxicity in patients released on scene post EMS treatment with naloxone was rare. Despite limited studies, the prevalence rate was so low that we conclude this practice may therefore be safe in terms of mortality and may be considered an alternative of traditional transport. Additional prospective studies need to be preformed to strengthen knowledge around adverse events.