

# Paramedic - Evidence Based Medicine (P-EBP) Program

## Paramedic CAT (Critically Appraised Topic) Worksheet

**Title:** Perimortem Cesarean Sections – Effective?

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**2<sup>nd</sup> Party Appraiser:**

**Clinical Scenario:**

You are called to an MVC where you find a 38 week gestation female in cardiac arrest. You run the protocol and after all attempts you are at the point where you would normally pronounce death... would performing an emergency c-section on the dead mother, provide a positive outcome for the fetus?

**PICO (Population – Intervention – Comparison – Outcome) Question:**

In Pregnant women in cardiac arrest, does emergency c-section have effect on fetal mortality

**Search Strategy:** Search words;

Pregnant / cardiac arrest / emergency c-section / perimortem / mortality

**Search Outcome:** 12 results

### Relevant Papers:

AUTHOR, DATE	POPULATION: SAMPLE CHARACTERISTICS	DESIGN (LOE)	OUTCOMES	RESULTS	STRENGTHS/ WEAKNESSES
Yildirim, C. 2004 / june	Pregnant cardiac arrest due to penetrating trauma	3  Clinical experience	Fetus survived ; 45 minutes after cardiac arrest began	Healthy baby – no deficits	Only looks at one case  Involves only penetrating injury  Shows survival possible after extended down time
Katz, V 2005	Perimortem caesarean delivery in presence of maternal death	3  Descriptive studies	Perimortem c-section performed ASAP has best fetal survival rate	38 cases; 34 fetus' survived perimortem c-sections *11 within 5 min of C.A. *4 within 6-10 min	Takes studies from 1985-2004 Included variety of times from cardiac arrests and different gestation periods  Doesn't account for medical

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				*2 within 11-15 min *7 after 15 min of cardiac arrest	advancements made
Kue, R 2008 / Jan	Pregnant cardiac arrest from MVC ; c-section performed by paramedics	3	Fetal death; c-section performed approx. 45 min after cardiac arrest	Fetal death	Only one case  Demonstrated the abilities for paramedics to perform procedure

**Comments:**

Most articles found were individual cases and only 2 documented cases of paramedics performing procedure.

**Consider:** *Why would you NOT change practice, based on this article?*

- *Skill level may be to high*
- *Limited number of actual scenarios where this could be used*
- *Time restraints involved*

**Clinical Bottom Line:**

When dealing with pregnancy related cardiac arrest it is crucial to get to the hospital as soon as possible , where an emergency c-section is the only definitive care for possible fetal survival.

**References:**

Perimortem Cesarean section in the helicopter EMS setting

Kue R, Coyle C, Vaughan E, Restuccia M.

Air Med J. 2008 Jan-Feb;27(1):46-7

Perimortem caesarean delivery ; Were our assumptions correct?

Vern Katz, MD, Keith Balderston, MD, Melissa DeFreest, MD

American journal of obstetrics and gynecology (2005) 192, 1919-21

Direct correspondence with Dr. Vern Katz (author of perimortem c-section studies)

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