

YouTube as a source of information on cardiopulmonary resuscitation

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背景

- 網際網路已經成爲一個容易使用且經常被使用的醫療資訊來源。
- 在網際網路上，每月有5000萬美國人獲得健康有關的資訊。
- 免費的影片網站如YouTube便是受歡迎的資訊來源之一，每天擁有著超過100萬的觀眾。

研究目的

- 廣爲人知地，心肺復甦術（CPR）是在心因性猝死上提高生存率的關鍵。
- 在YouTube上有著數量成長的健康資訊，而分析在這影片網站上有關CPR影片的來源、內容、品質。

方法

- 使用“CPR”“Cardiopulmonary resuscitation”，“BLS”“Basic life support”，以上關鍵字在YouTube查詢。
- 以英文呈現CPR技術的影片都納入這次的研究之中。
- 以上傳來源，內容，流程結構等對CPR主題影片進行分類。
- 影片被評分爲1-8分以CPR步驟“示範的準確性”還有“可看性”。

結果

- 800部影片中符合納入標準的52部平均秒數爲 233 (±145)秒以及每天有 37 (±77)點擊次數。
- 48% (n = 25)影片是由無憑證的個人所提供。
- 點擊次數與影片的“示範的準確性”還有“可看性”並沒有相關性。
- 影片中沒有提到保護自身和週遭環境的安全之評估佔了65% (n = 34)
- 只有69% (n = 31/45) 影片展示了正確的胸外按壓與人工呼吸的比率，而63.5% (n = 33) 、34.6% (n = 18) 和40.4% (n = 21) 依序提供胸外按壓的位置，速度和深度的資訊。
- 19% (n = 10)影片對於檢查脈搏給予錯誤地建議。

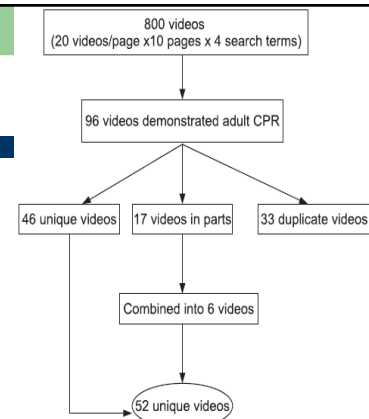


Fig. 1. Screening of eligible videos.

Table 1
Accuracy of demonstration of various steps of CPR.

Step of CPR	Done correctly/explained	Done incorrectly/out of sequence/not explained	Not done
Scene safety assessment	34.0% (n=18)		65.4% (n=34)
Assessing responsiveness	94% (n=49)		6% (n=3)
Calling ambulance (n=48)	81.6% (n=40)	8.2% (n=4)	10.2% (n=5)
Opening airway (n=48)	81.2% (n=39)	10.4% (n=5)	8.3% (n=4)
Assessing respiration by look-listen-feel technique (n=48)	89.6% (n=43)		10.4% (n=5)
Providing 2 rescue breaths (n=48)	91.7% (n=44)		8.3% (n=4)
Location of chest compressions (n=50)	66% (n=33)	34% (n=17)	
Rate of compressions (n=49)	36.7% (n=18)	63.2% (n=31)	
Depth of compressions (n=49)	42.9% (n=21)	57.1% (n=28)	
Compression-ventilation ratio (n=45)	68.9% (n=31)	28.9% (n=13)	2.2% (n=1)

Table 2
Comparison of videos based on source.

	Total	PA	GB	CS	CU	N	p value by one way ANOVA
View count per day (n=52)	37 ± 11	33 ± 54	23 ± 28	71 ± 151	22 ± 21	94 ± 128	0.35
Accuracy of demonstration (n=45)	5.45 ± 1.6	5.2 ± 2	8 (n=1)	5.9 ± 0.9	5.2 ± 1.5	6.2 ± 1.3	0.31
View ability (n=52)	3.25 ± 0.8	3.4 ± 0.8	3.7 ± 0.6	3.1 ± 0.9	3.1 ± 0.8	3.7 ± 0.6	0.58

結論

- 最好的CPR資訊影片往往不是最常被瀏覽的。
- 在這平台上的資訊是不受規範的，因此可信來源的內容應該被張貼，提供大眾準確方便獲取CPR資訊。
- YouTube可能有潛在作用於CPR影像輔助教學以及做為的緊急情況下CPR的資訊來源。

討論

- 雖然影片中大多數CPR的步驟中有了相當不錯的說明，但影片有不少重要步驟的忽略、執行措施不當或者不按順序。
- 關於胸外按壓以及按壓人工呼吸比的資訊是特別的缺少。
- 影片中對於是一般民眾版 (Lay Rescuers) 及醫療人員版 (Healthcare Providers) 並沒有清楚的提到。
- 而不同版本CPR的建議應該是不同的。
- 許多影片不正確的建議一般民眾去評估脈搏。
- 最常被點閱與品質上最好的並無實際上相關。

The Role of Triage Liaison Physicians on Mitigating Overcrowding in Emergency Departments: A Systematic Review

ACADEMIC EMERGENCY MEDICINE 2011; 18:111–120 a 2011 by the Society for Academic Emergency Medicine

背景

- 急診的擁擠是一個全球衛生照護系統面臨複雜和富有挑戰性的問題。
- 急診人滿為患問題的重要性不能低估，因為它可能導致對於時間敏感診斷和治療決策的延誤、患者沒有留下完成照護、病人和提供者的不滿以及不佳健康狀況相關的後果。

研究目的

- 其目的是審查的檢傷分類聯絡醫師 (triage liaison physicians (TLPs))對於緩解急診部門人滿為患情況的有效性。

方法

- 電子資料庫 (Cochrane Central Register of Controlled Trials, MEDLINE, EMBASE, Web of Science, HealthSTAR, Dissertation Abstracts, and ABI/INFORM Global), 對照試驗註冊網站、會議記錄、學習參考、本領域專家的聯繫、與作者的通信被用來確定潛在相關 TLP 研究。
- 介入研究以一名 TLP 影響急診人滿為患的程度有待院時間 (length of stay [LOS] in minutes)、醫師初步評估 (physician initial assessment [PIA]) 以及未經診視自行離院 (left without being seen [LWBS]) 在這份研究中被納入。
- 兩名評審者獨立執行數據提取和評估引用的相關性，納入和研究質量。
- 對於連續結果，對加權平均差異 (WMD) 進行了計算和報告了相應的 95% 可信區間 (CIs)。
- 用二分類變項對個人和匯集的統計數字進行計算，以相對危險度 (RR) 與 95% 信賴區間表示。

結果

- 從 14446 個潛在相關研究，有 28 個被納入在系統性回顧中。
- 有 13 個期刊出版，12 個摘要和 3 個網路文章。
- 大多數研究採用前後觀察比較方式；28 個中 23 個研究被認為是薄弱的研究品質。
- 基於從兩個隨機對照試驗 (RCTs) 統計數據的匯集，相較於由護士領導檢傷分類，醫師檢傷分類導致較短待院時間 (WMD = -36.85 min; 95% CI = -51.11 to -22.58)。
- 這些隨機對照試驗中一個顯示了在“醫師初步評估”顯著的減少與檢傷分類醫師存在的關聯 (WMD = -30.00 min; 95% CI = -56.91 to -3.09)，而其餘隨機對照試驗表明在“未經診視自行離院”上沒有變化 (RR = 0.82; 95% CI = 0.67 to 1.00)。

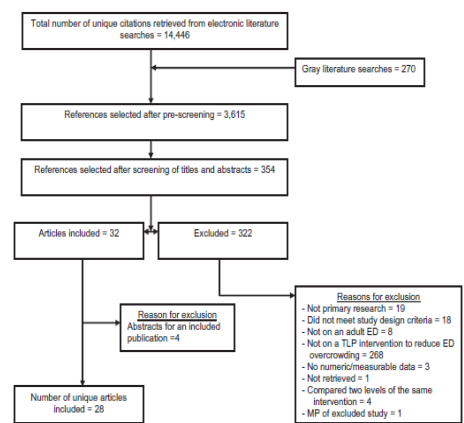


Figure 1. Literature search and study selection flow. MP = multiple publication; TLP = triage liaison physician.

Table 1. Descriptive Characteristics of Studies Included in the Review

Reference (First Author, Year)	Location	Sample	Duration	Study Design	TLP Intervention	Comparison	Overall quality
Holroyd, ¹⁰ 2007	Canada	5,718	2 weeks	RCT	Senior physician triage	Nurse-led triage	Strong
Levin, ¹¹ 2008	United States	79,389	6 months	Before-after	Team triage	Nurse-led triage	Weak
Choi, ¹² 2008	Hong Kong	2,665	7 days	Before-after	Team triage	Nurse-led triage	Weak
Chan, ¹³ 2005	United States	36,522	6 months	ITS	IT revisions, EP at triage	Nurse-led triage	Moderate
Wan, ¹⁴ 2009	United States	17,265	2 months	Before-after	EP at triage	Nurse-led triage	Moderate
Richardson, ¹⁵ 2004	Australia	17,259	3 months	Before-after	Senior EP at triage	Nurse-led triage	Weak
Treweek, ¹⁶ 2006	Singapore	576	10 days	CCT	Senior EP at triage	Nurse-led triage	Weak
Terrie, ¹⁷ 2004	United Kingdom	252	3 months	CCT	Senior EP at triage	No IMPACT team	Weak
Siddons, ¹⁸ 2004	United Kingdom	1,025	4 days	RCT	EP at triage	Nurse-led triage	Weak
Roger, ¹⁹ 2004	United Kingdom	NR	6 weeks	Before-after	Team triage	Nurse-led triage	Weak
Chomley, ²⁰ 2002	United Kingdom	NR	2 months	Before-after	Team triage	Nurse-led triage	Weak
Parsons, ²¹ 2001	United States	1,734	8 days	CCT	Senior EP at triage	Nurse-led triage	Strong
Green, ²² 1999	Australia	21,167	3 months	Before-after	Senior junior EP at triage	Nurse-led triage	Weak
RME, ²³ 2006	United States	NR	NR	Before-after	Team triage	Nurse-led triage	Weak
RME, ²⁴ 2009	United States	NR	NR	Before-after	Team triage	Nurse-led triage	Weak
RME, ²⁵ 2009	United States	NR	NR	Before-after	Team triage	Nurse-led triage	Weak
Ruffin, ²⁶ 2004	United States	NR	3 months	Before-after	Senior physician triage	Nurse-led triage	Weak
Murrell, ²⁷ 2009	United States	64,907	6 months	Before-after	EP at triage	Nurse-led triage	Weak
Schäfer, ²⁸ 2008	United States	1,789	1 week	Before-after	EP at triage	Nurse-led triage	Weak
Crane, ²⁹ 2009	United States	4,327	4 months	CCT	EP at triage	Nurse-led triage	Weak
Geddes, ³⁰ 2009	United States	NR	6 days	CCT	EP at triage	Nurse-led triage	Weak
Porter, ³¹ 2009	United States	NR	15 days	CCT	Junior EP at triage	Nurse-led triage	Weak
Sigel, ³² 2007	United States	121,894	12 months	Before-after	Mid-level EP at triage	Nurse-led triage	Weak
Baumann, ³³ 2006	United States	243	NR	Prospective cohort study	Team triage	Nurse-led triage	Weak
Chan, ³⁴ 2005	United States	23,088	6 months	Before-after	Physician-directed ancillary triage	Nurse-led triage	Weak
Gray, ³⁵ 2009	Canada	5,020	3 weeks	CCT	EP at triage	Nurse-led triage	Strong
Graham, ³⁶ 2009	Hong Kong	1,160	2 weeks	Before-after	Senior EP at triage	Nurse-led triage	Weak
Crane, ³⁷ 2007	United States	143	6 months	Prospective cohort study	EP at triage	Nurse-led triage	Weak

CCT = clinical controlled trial; ENP = emergency nurse practitioner; IT = informatics technology; ITS = interrupted time series; NR = not reported; RCT = randomized controlled trial; RME = Rapid Medical Evaluation Program (SEP American, SHG = senior house officer).

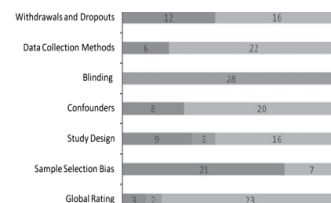
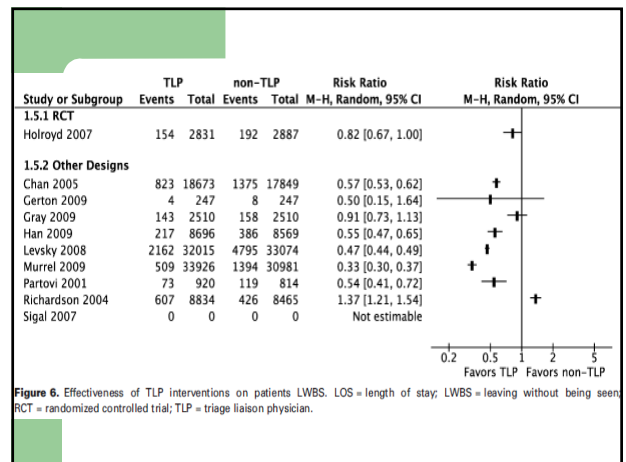
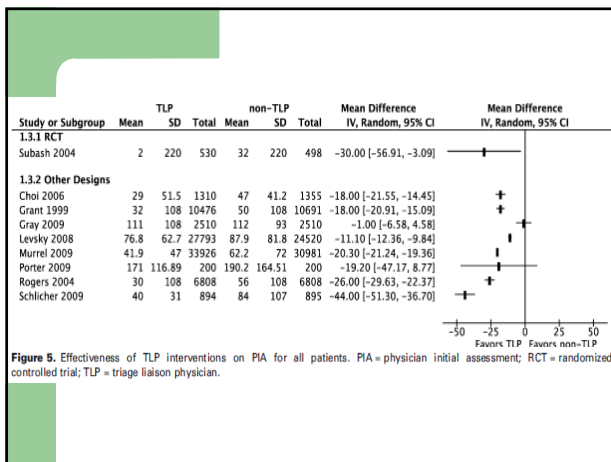
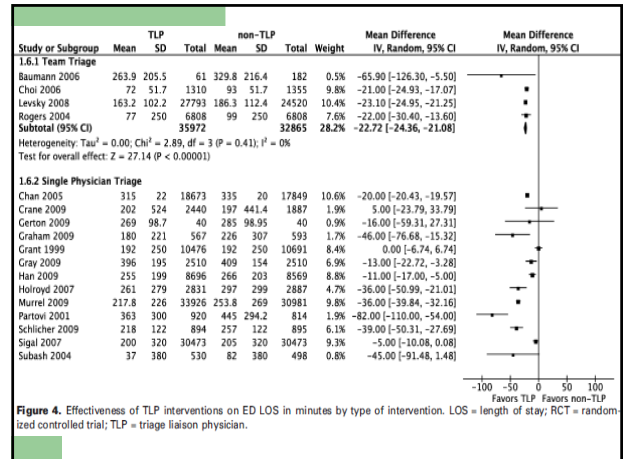
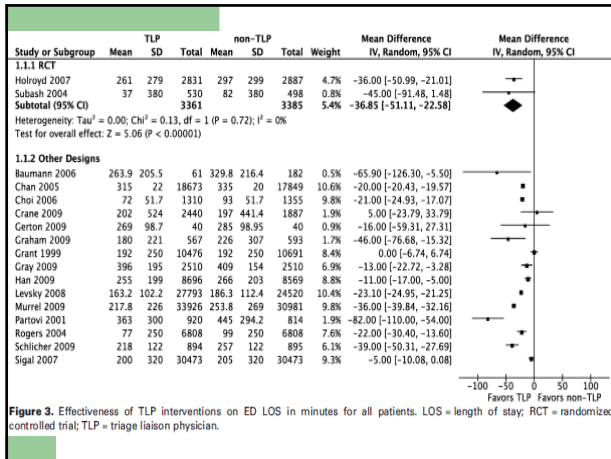


Figure 2. Frequency of the six components of the EPHPP tool³ and Global* ratings. EPHPP = Effective Public Health Practice Project.



結論

- 雖然總結的證據表明有一名檢傷分類醫師對於減輕急診人滿為患情形是一種有效的介入，但由於薄弱的研究方法確定性，在廣泛實施之前需要更多的研究。

討論

- 這系統性回顧總結了現有最佳證據檢傷分類醫師介入減輕急診擁擠情況負面影響的有效性，並突出其度量性。
- 而這反過來又可以指導選擇最佳的服務，並可能被用來加強衛生保健系統。
- 顯著減少在急診“待院時間”以及“醫師初步評估”，尤其特別在檢傷分類第三級病患
- 在“未經診視自行離院”的風險減少上，幾乎是有相關性的（RR = 0.82; 95% CI = 0.67~1.00）。
- 需要設計健全的進一步的研究。

- Thanks!!

Limitations

- (1) The scoring criteria for 'viewability' were **subjective**.
- (2) **Non-English** language video clips were excluded.
- (3) This study presents **only a snapshot** of information available on YouTube. YouTube content **shifts over time**.
- (4) This study was **limited to a direct YouTube** search and does not account for YouTube videos viewed at other sites which embed or link videos and videos on other health information websites but not on YouTube.