



Multichamber bags (MCBs) may offer potential clinical, ergonomic, and economic advantages compared with (hospital) pharmacy compounded bags (COBs) and multibottle systems (MBSs)” Alfonso et al (2016).

Abstract:

Background: Multichamber bags (MCBs) may offer potential clinical, ergonomic, and economic advantages compared with (hospital) pharmacy compounded bags (COBs) and multibottle systems (MBSs).

Methods: A systematic literature review was performed to identify and assess the available evidence regarding advantages of MCBs compared with COBs and MBSs. Medline, Embase, the Cochrane Databases, and EconLit were searched for articles reporting clinical, ergonomic, and economic outcomes for MCBs compared with COBs or MBSs. The search was limited to studies conducted in hospitalized patients >2 years of age that were published in English between January 1990 and November 2014. The Population Intervention Comparison Outcomes Study Design (PICOS) framework was used for the analysis.

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Results: From 1307 unique citations, 74 potentially relevant publications were identified; review of references identified 2 additional publications. Among the 76 publications, 18 published studies met the inclusion criteria. Most were retrospective in design. Ten studies reported clinical outcomes, including 1 prospective randomized trial and multiple retrospective analyses that reported a lower risk of bloodstream infection for MCBs compared with other delivery systems. Sixteen studies reported ergonomic and/or economic outcomes; most reported a potential cost benefit for MCBs, with consistent reports of reduced time and labor compared with other systems. The largest cost benefit was observed in studies evaluating total hospitalization costs.

Conclusions: The systematic literature review identified evidence of potential clinical, ergonomic, and economic benefits for MCBs compared with COBs and MBSs; however, methodological factors limited evidence quality. More prospective studies are required to corroborate existing evidence.

Reference:

Alfonso, J.E., Berlana, D., Ukleja, A. and Boullata, J. (2016) Clinical, Ergonomic, and Economic Outcomes With Multichamber Bags Compared With (Hospital) Pharmacy Compounded Bags and Multibottle Systems: A Systematic Literature Review. JPEN. June 28th. .

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