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Economic Evaluations of Clinical Pharmacy Services: 2001–2005

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The objectives of this review were to summarize and evaluate studies that measured the economic impact of clinical pharmacy services published between 2001 and 2005 (inclusive) and to provide guidance on methodologic considerations to individuals performing such research in the future. A systematic literature search using the MEDLINE and International Pharmaceutical Abstracts databases was conducted to identify published economic evaluations of clinical pharmacy services. Studies were screened and then randomly assigned to reviewers, who reassessed inclusion and exclusion criteria and abstracted prespecified data from each study. Among the many characteristics examined in each study were study design and type of economic evaluation, setting and type of clinical pharmacy service, study quality, and results. Ninety-three articles were included in the final analysis. These studies were published in 43 different journals, most of which (68 [73.1%]) were pharmacy-based. Most studies were performed in hospitals (40 [43.0%]), ambulatory care clinics or physician's offices (20 [21.5%]), or community pharmacies (16 [17.2%]). The most common types of clinical pharmacy services evaluated were general pharmacotherapeutic monitoring services (32 [34.4%]), target drug programs (27 [29%]), and disease state–management services (21 [22.6%]). Full economic evaluations were performed in just less than half (45 [48.4%]) of the studies, and a positive economic benefit associated with clinical pharmacy services was noted in 31 (69%) of the 45 studies. Among 15 studies reporting data necessary to determine a benefit:cost ratio, the pooled median value was 4.81:1—meaning that for every $1 invested in clinical pharmacy services, $4.81 was achieved in reduced costs or other economic benefits. The quality of studies varied widely, with less than one half considered to be good to fair (40 [43.0%]); however, the proportion of studies using appropriate study designs increased compared with previous reviews. Based on the evidence examined in this review, clinical pharmacy services continue to provide a significant return on investment, but improvements are still needed in the methods used to evaluate the economic impact of these services.

Key Words: clinical pharmacy services, cost, cost-effectiveness, cost-benefit, cost-utility, outcomes, programs, economic evaluation.

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