

Economic Evaluation in Gastroenterology: The Brazilian Experience

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Abstract

Health economic evaluations draw comparisons between and among alternative treatments, devices and health programs, in terms of their costs and benefits/consequences and such studies analyze data regarding clinical effectiveness, in relation to cost. Although most health economic evaluations examine only the direct costs of a technology—those related to medications, services and hospitalization—some take a broader approach, also evaluating the indirect costs—those related to lost productivity (on the part of the patients and caregivers), as well as to other aspects.

Keywords: Gastroenterology

Mini Review

Since the 1980s in Brazil [1], health economic evaluations have been conducted, however, only since 2011, the performance of such evaluations has been assigned an obligatory part of the process of incorporating new technologies into the Brazilian Sistema Único de Saúde (SUS, Unified Health Care System), as mandated by Federal Law no. 12,401. Recent study demonstrated that in 2009 Brazil had produced more health economic evaluations than had any other country in South America [2].

Partial economic evaluations were defined as those that examined only costs (cost description studies), described the costs of a particular disease to society (cost-of-illness studies), described the costs and consequences of a single service or program (cost-outcome description studies), or compared two or more interventions only in terms of their costs (cost analyses). Studies were considered full economic evaluations if they compared the costs and consequences of two or more health care interventions or alternatives, designs including cost-consequences analysis, cost-minimization analysis, cost-effectiveness analysis, cost-utility analysis and cost-benefit analysis.

Economic evaluations models can help health care professionals make better decision from among the available technologies and can help researchers identify segments in which there is a need for further studies. In the gastroenterology field, economic evaluations are performed in order to evaluate or compare new alternative medications, surgical techniques, diagnostic tests or procedures. Now-classic studies include that in which omeprazole was shown to be more cost-effective than ranitidine in the treatment of gastroesophageal reflux [3], as well as those demonstrating that it was more cost-effective to eradicate *Helicobacter pylori* than to provide symptomatic treatment to *H. pylori*-positive patients with suspected peptic ulcer disease [4,5]. It is incumbent upon researchers to identify technologies that have already been assessed and to understand the relationship between the emergence of new technologies (clinical or surgical) and the need for specific studies. Such knowledge also provides health care managers with additional input that can be used in the decision-

making processes related to the incorporation of new technologies into a health care system.

In a review about health economic evaluations in Brazil, we identified 538 health economic evaluations published in the 1980-2013 period relating to Brazil. Of those 538 articles, only 40 dealt with gastroenterology. The first economic evaluations related to gastroenterology in Brazil, published in the 1980s, was about therapeutic approaches to epigastric hernia[6] and peptic ulcers [7,8]. Full and partial economic evaluations respectively accounted for 23 (57.5%) and 17 (42.5%). Of the 40 studies, 25 (62.5%) evaluated medications; 7 (17.5%) evaluated procedures; and 3 (7.5%) evaluated equipment.

Most of the studies of health economic evaluation in the field of gastroenterology were related to viral hepatitis (63.4%). Other topics included gastrointestinal cancer, liver transplantation, digestive diseases and hernias. Over the 33-year period examined, the number of such economic evaluations relating to Brazil, especially of those evaluating medications for the treatment of hepatitis, increased considerably, 63.4% were published after 2010 [Figure 1].

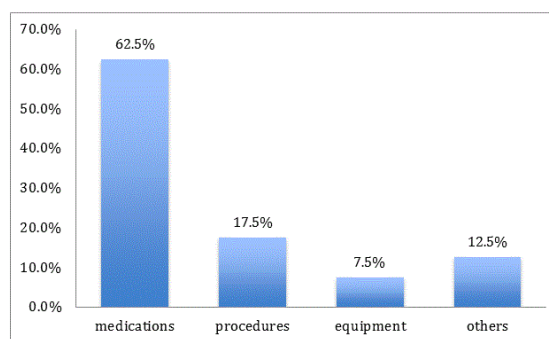


Figure 1: Technologies evaluated in Economic Evaluation Studies of Gastroenterology in Brazil (%).

In the gastroenterology area, there are currently a number of new technologies that merit evaluation in order to shape the direction of future investments. Minimally invasive surgery is a rapidly expanding area and involves the use of expensive, increasingly specialized, equipment, including the use of robotics. With increasing frequency, such equipment is employed in simple procedures such as cholecystectomy and hernia surgery, although its use is advancing at a more rapid pace in procedures that are more complex and costly, such as cancer and liver surgery.

Therefore, it is evident that, although there have been a number of economic evaluations related to gastroenterology in Brazil, further studies about this topic should be done, so that expenditures on health care in Brazil are made as fairly and efficiently as possible .

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