

# The Effects of Gatekeeping

## A Systematic Review of the Literature

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### Introduction

Gatekeeping is an international policy issue. Gatekeeping systems require a referral from a primary care professional to access specialty care. In Europe, gatekeeping is encountered both in tax-funded (e.g. UK) and in certain social health insurance systems (e.g. the Netherlands). Countries that do not allow direct access to specialty care show lower expenditure on ambulatory care<sup>1</sup>.

Gatekeeping can be exercised through primary care physicians or by non-physician staff – as it has been the case in the context of managed care in the US.

The aim of this project was to assess the effects of physician-centered gatekeeping on (1) health, (2) health care utilisation and (3) costs by conducting a systematic review of the literature.

### Methods

#### Search Strategy

Systematic literature search in the databases PubMed (MEDLINE and Pre-MEDLINE), EMBASE, and the Cochrane Library (from their inception through February 2010) using combinations of the search terms "gatekeeping," "gatekeeper," "first contact," and "self-referral", without restrictions for publication type, study design, or language. Additionally, reference lists of included papers were scanned.

#### Study Selection

Randomised controlled trials (RCTs), cluster RCTs, non-randomised controlled trials (CCTs), cluster non-randomised controlled trials, controlled before-after studies (CBAs), cohort studies, case control studies, and interrupted time series (ITS) were considered acceptable for this review<sup>2</sup>. Studies were included if they analysed the effects of gatekeeping on at least one of the following outcomes: (1) health- and patient-related outcomes (mortality, morbidity, health-related quality of life, and satisfaction); (2) health care utilisation, or (3) economic outcomes.

#### Quality Assessment

Independently assessed by two reviewers. According to the US Task Force on Community Preventive Services (USTFPCS) each study was assigned a level of evidence depending to its study design (i.e. level I for RCT; level II for CCT, CBA or prospective cohorts; level III for retrospective cohorts, ITS)<sup>3</sup>. Level I and level II studies are considered of greater suitability<sup>3</sup>. In addition, the quality of each study was rated as *good*, *fair*, or *poor* according to the USTFPCS and the US Task Force on Preventive Services<sup>3,4</sup> based on allocation, outcome assessment, data sources, risk of contamination, and of attrition bias. Statistical adjustment for characteristics, which could explain differences in results, played a central role in our quality assessment.

#### Synthesis

Results are summarised graphically. For each study, one observation per outcome parameter was created by calculating the relative difference between the comparison groups. Studies comparing 2 or more types of gatekeeping with no gatekeeping contributed more than one observation (e.g. Hurley 1991-1, Hurley 1991-2). Studies reporting results for subgroups produced a single observation (i.e. a single bar in the figure), containing the range of values.

### Results and Conclusions

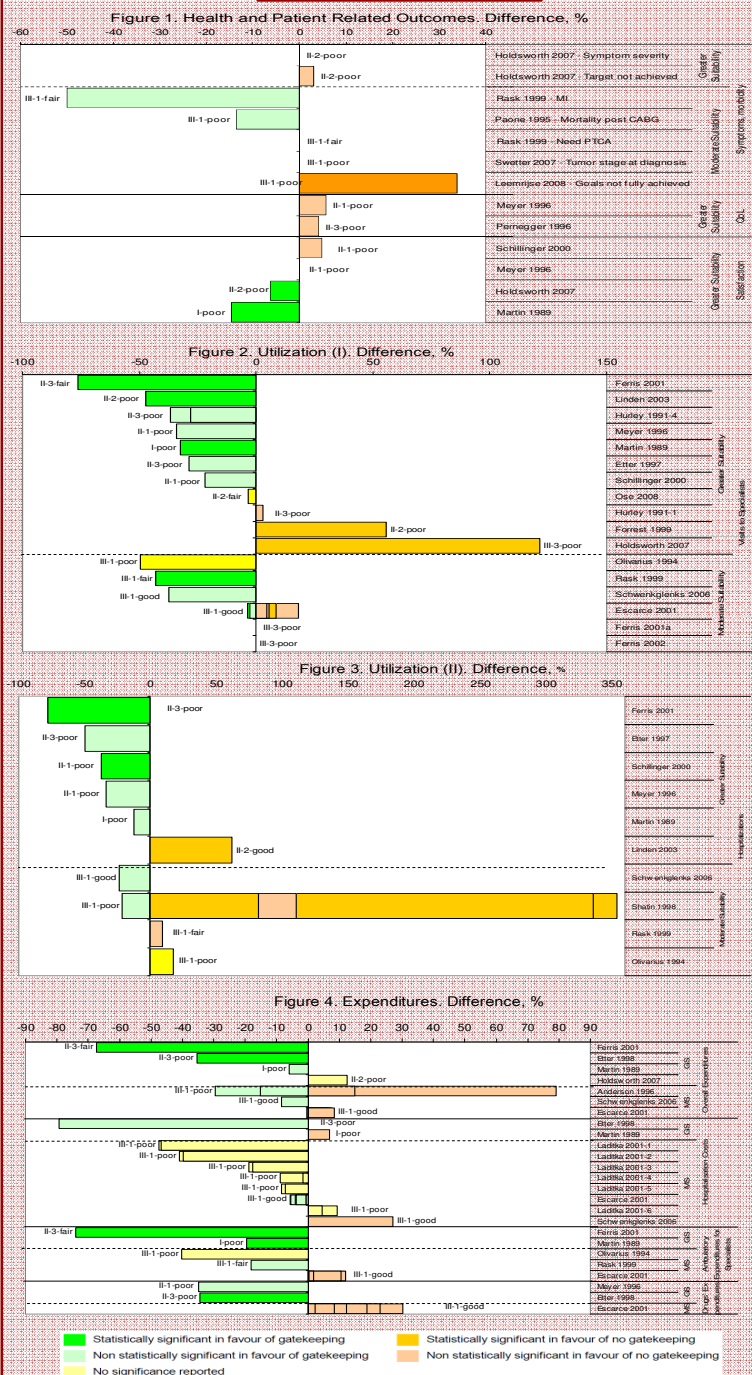
A total of 26 studies were included. Most (62%) reported data from the US. Study designs included one RCT, 2 quasi-randomised studies, 2 ITSs, 5 CBAs, 4 prospective and 12 retrospective cohort studies.

12 studies were judged to have a *suitable* design and 14 a *moderate suitability*. Quality was rated as *good* in 2, as *fair* in 3 and as *poor* in the rest of studies. The most common shortcoming was the lack of control for relevant clinical and socio-demographic characteristics.

Gatekeeping was associated with lower utilization of health services (up to -78%) and lower expenditures (up to -80%). However, there was great variability in the magnitude and direction of the differences (Figs. 1 to 4).

In summary, the evidence regarding the effects of gatekeeping is of limited quality. Many studies are available regarding the effects on health care utilization (Fig. 2,3) and expenditures (Fig. 4), whereas the effects on health and patient-related outcomes have been studied only exceptionally (Fig. 1).

### Results



### References

- 1 Delnoij D, van Merode G, Paulus A; et al. Does general practitioner gatekeeping curb health care expenditure? *J Health Serv Res Policy*. 2000;5(1):22-26.
- 2 Cochrane Effective Practice and Organization of Care Group (EPCC). EPCC resources for review authors. <http://epcc.cochrane.org/epcc-resources-review-authors> Last accessed May 25, 2010.
- 3 Briss PA, Zaza S, Pappaioanou M; et al. Developing an evidence-based guide to community preventive services – methods. *Am J Prev Med*. 2000;18(suppl 1):35-43.
- 4 Harris RP, Helfand M, Woolf SH; et al. Current methods of the U.S. Preventive Services Task Force: a review of the process. *Am J Prev Med*. 2001;20(suppl 3):21-35.