



The primary–secondary care interface: Does provision of more services in primary care reduce referrals to medical specialists?



Christel E. van Dijk^{a,*}, Joke C. Korevaar^a, Berber Koopmans^a,
Judith D. de Jong^a, Dinny H. de Bakker^{a,b}

^a NIVEL, Netherlands Institute for Health Services Research, P.O. Box 1568, 3500 BN, Utrecht, The Netherlands

^b Tilburg University, Scientific Centre for Transformation in Care and Welfare (TRANZO), 90153, 5037 AB, Tilburg, The Netherlands

ARTICLE INFO

Article history:

Received 7 May 2013

Received in revised form 24 March 2014

Accepted 3 April 2014

Keywords:

Referrals

Primary care

Diagnostic services

Therapeutic services

ABSTRACT

Great variation in referral rates between primary care physicians has been the main reason to influence physician's referral behaviour, by for example, stimulating extra services. This study investigated the extent to which the number of therapeutic and diagnostic services performed by primary care physicians influenced referrals. Data was derived from electronic medical records of 70 general practices for the period 2006 until 2010. For the total patient population ($N = 651,089$ patient years) and specific patients groups for whom specific services were performed mostly (28 groups; 10 services), logistic multilevel regression analyses were conducted to determine associations between the number of services performed in a practice and referrals to medical specialists. The total number of services performed in a practice was not associated with the referral rate (OR: 1.00). Only for two specific services was a significant association found: a lower referral rate for minor surgery for patient with sebaceous cysts (OR: 0.98) and a higher rate for Doppler diagnostic tests for patients with other peripheral arterial diseases (OR: 1.04). As the number of services in general practice was rarely associated with referrals, other measures might be more effective in changing referral behaviour. Another explanation for our results could be that certain preconditions have not been met.

© 2014 Elsevier Ireland Ltd. All rights reserved.

1. Introduction

The primary–secondary care interface plays a pivotal role in cost containment strategies in many countries, since primary health care is generally less expensive than secondary, specialised health care [1]. In times of economic

crisis and rising health care costs, increased attention on primary care is therefore understandable [2,3]. In many European countries, and health plans in the United States, patients have a primary care physician who acts as a formal gatekeeper and thereby determines whether or not a patient requires secondary care [4,5]. The referral behaviour of primary care physicians is considered a vital component of demand management and thus of restraining health care costs.

Primary care physicians generally refer patients to a medical specialist for diagnosis or investigation, treatment, and reassurance of physician and/or patient [6]. A

* Corresponding author. Tel.: +31 302 729 760; fax: +31 302 729 729.

E-mail addresses: c.vandijk@nivel.nl (C.E. van Dijk), j.korevaar@nivel.nl (J.C. Korevaar), b.koopmans@nivel.nl (B. Koopmans), j.dejong@nivel.nl (J.D. de Jong), d.debakker@nivel.nl (D.H. de Bakker).

physician's decision to refer a patient is made in close interaction with the patient, in which patient characteristics such as diagnosis, age and gender, are the most important inputs to the referral decision [7,8]. Physician and practice characteristics, such as length of experience, gender, willingness to take risk and practice type (single-handed, group practice, etc.) have also been shown to influence the referral decision [6,8]. However, after controlling for patient, physician and practice characteristics a large variation still exists in referral rates at physician and practice level [9]. It has been suggested that this variation indicates a sub-optimal referral process [10]. At first glance, large variation seems negative as it implies that some patients receive sub-optimal care: both under- and over-referrals. But variation in referrals could also suggest opportunities for cost containment in cases of over-referral. This large variation has been the driving force for health care professionals to develop guidelines and increase knowledge about common (chronic) diseases in primary care, but also for health policy makers to strengthen primary health care, by for example, influencing physicians' referral behaviour with financial incentives through financing possibilities for extra staff or stimulating extra services through a system of reimbursement.

But do extra services in primary care result in fewer referrals to secondary care? Despite the emphasis on strengthening primary care, there is little (consistent) information on the extent to which extra services impact on the referral behaviour of primary care physicians. Stimulating more services in primary care is only of financial interest if extra primary care services are a direct substitute for specialty care, and not a complement. Extra (diagnostic) services, through early detection and prevention, could also improve quality of care and might delay or prevent future need for specialty care (e.g. diabetes care). Several studies have shown that primary health care can be substitute for specialty care, but primary care services cannot be a substitute on a one-to-one ratio with specialty care services; more than one extra primary care service needs to be performed to substitute for one specialty care encounter [11,12]. These extra services could be due to treatment of patients who would otherwise not be treated or referred, or for whom more services are needed to prevent a referral.

Results of studies focussing on the effect of extra services on referral behaviour show inconsistent results. Krasnik et al. found lower referral rates with an increase in diagnostic and therapeutic services within primary care [13]. Groenewegen and van Dijk et al. found lower referral rates with a larger number of services within primary care for only some specific services and/or patients groups [14,15]. Lowy et al. found no reduction in referral rate with an increased number of minor surgery services [16]. These studies show that at least some extra primary care services might have the potential to influence physicians' referral rates, and thereby substitute primary health care for specialty care. But to better help health policy, more information is needed to decide which services and patient groups should be focused on when stimulating substitution.

This paper contributes to the literature on the primary–secondary care interface. Using data from

electronic medical records (EMRs) of general practitioners (GPs), we investigated the impact of performing specific therapeutic and diagnostic services within primary care in the Netherlands, so called modernisation and innovation (M&I) services, on referral behaviour of primary care physicians. In the Netherlands, the GP remuneration system consists of both capitation fees and fee-for-services for consultations and home visits. M&I services form a separate group of therapeutic and diagnostic services that are expected to encourage substitution from secondary to primary health care or improve quality and are remunerated with a fee independent of the consultation fees. These services comprise a relatively small part of the GP remuneration system. The services can be divided into two parts: (i) a predefined set of services with freely negotiable fees; and (ii) regional initiatives which are reimbursed by a supplement on top of the capitation fee. In this paper, we focus only on predefined services such as 'minor surgery' and 'cognitive function tests'. In 2010, 50 different services were in operation. Between 2006 and 2010, the median number of therapeutic and diagnostic services in general practice had increased from 109 to 178 per 1000 patients [17]. Specialist care is remunerated on a diagnosis-related group based payment system in the Netherlands. This study investigated the association between the total number of therapeutic and diagnostic services and the number of referrals, and therefore investigated whether these M&I services really have substitution potential. Furthermore, the association between the number of services and referrals was investigated for specific services and patient groups. The following research questions were answered:

1. To what extent did the number of therapeutic and diagnostic services performed within general practice influence the referral rate of primary care physicians?
2. To what degree did this impact differ between services and specific patient groups? We expected more substitution potential for therapeutic than diagnostic services, since diagnostic services could reveal morbidity that is not treatable by GPs and could be a reason for referral.

2. Materials and methods

2.1. Study design and population

This was an observational cross-sectional study analysing the association between the number of therapeutic and diagnostic services and referral behaviour of GPs in the Netherlands from 2006 until 2010. Combined data from 2006 to 2010 was used from the EMRs of general practices that participated in the Netherlands Primary Care Database (NPCD; formerly known as LINH) [18]. The NPCD GP database contains longitudinal data at the patient level in terms of contacts, morbidity, prescriptions and referrals, with small yearly changes in practice composition. The NPCD is registered with the Dutch Data Protection Authority; data is handled according to national data protection guidelines (anonymous patient records and opt-out), making ethical approval by an ethics committee unnecessary.

Download English Version:

<https://daneshyari.com/en/article/6239508>

Download Persian Version:

<https://daneshyari.com/article/6239508>

[Daneshyari.com](https://daneshyari.com)