Doctoral Dissertation

Physician Behaviour in Ghana's Healthcare System

(Summary)

DZAMPE KWADZO ADOLF

International Economic Development Program

Graduate School of Humanities and Social Sciences

Hiroshima University

September 2023

（別記様式 4）
(Form 4)

学位論文の要旨（論文の内容の要旨）
Summary of the Dissertation (Summary of Dissertation Contents)

氏　　名　　DZAMPE KWADZO ADOLF
Name

学　位　論　文
Dissertation
論　文　題　目
Dissertation Title　Physician Behaviour in Ghana′s Healthcare System

A central issue in health economics is that of physician behaviour, and the on-going debate is whether physician motives are primarily in the best interest of the patients or driven by their own financial self-interest. Physicians are hypothesized to induce or enable demand for financial self-interest (Fang & Rizzo, 2009; McGuire, 2000; McKinlay et al., 2014; Shih & Tai-Seale, 2012). However, studies that scientifically measure physician-induced demand (PID) and physician-enabled demand (PED) are limited. Even so, the available empirical literature has produced mixed results (McGuire, 2000; Johnson, 2014). Furthermore, one important aspect of the discussions about whether physicians induce or enable demand which has received even lesser attention in the literature is the patient perspective.

To address these gaps, this study aims to investigate physician behaviour in Ghana's healthcare system, where the patient-doctor relationship is highly paternalistic, physicians have significant discretion, health literacy rates are low, and health sector remuneration is relatively low, with a specific emphasis on the concepts of physician-induced demand and physician-enabled demand. Several studies have demonstrated that physician behaviour has significant implications for healthcare expenditures in all healthcare systems, as physicians are often responsible for allocating healthcare resources. Thus, understanding physician motives is essential for designing effect healthcare policies.

In the first part of this study (Chapter 2), we use a comprehensive data of administrative claims from Ghana to explore the association between competition and use of medical care as well as quality of care. We focused on hypertension patients partly due to high physician discretion (low risk) in terms of encounter frequency and medications (Weber et al., 2014).

We found that competition (measured as increased doctor-to-population ratio) was significantly associated with use and intensity of medical care for hypertension patients. We also found that this ″excessive″ use and intensity of medical care were not negatively associated with the quality of care provided. Our findings are in line with the body of literature examining the physician-induced demand hypothesis (Alinia et al., 2021; Fuchs, 1978; Ikegami et al., 2021; Peacock & Richardson, 2007; Xirasagar & Lin, 2006).

In the second part, we employ an experimental design approach to find further evidence regarding the issue of physician motives. In our analyses, we considered the perspectives of both physicians and patients regarding the concepts of demand inducement and demand enablement. From the physician perspective (Chapter 3), our findings indicate that physicians exhibit behaviour consistent with both of these concepts. Specifically, physicians tend to prescribe more medical services than necessary when patients can afford or are insured. Additionally, physicians often comply with patient requests for treatments that they would not have otherwise recommended.

These findings are supported by the patient perspective (Chapter 4), as patients generally believe that physicians engage in demand inducement behaviour. Additionally, the findings indicate that patients exhibit

behaviour consistent with demand enablement. That is, a significant proportion of patients make requests or suggest to their physicians the medical services that they wish to receive. The findings are in line with previous studies which have shown that patient requests can influence physician behaviour (McKinlay et al., 2014). Likewise, several experimental studies have shown that financial incentives can influence physician behaviour (Brosig-Koch et al., 2017; Martinsson & Persson, 2019).

Overall, our analyses indicate that both physician-induced demand (PID) and physician-enabled demand (PED) exist within Ghana's healthcare system. This may be partially attributed to competitive pressure because our findings suggest that these behaviours are more likely in competitive regions. For instance, Alinia et al. (2021) also found that competition leads to an increase in knee replacement surgeries in Iran. In addition, the generally low compensation in the Ghanaian healthcare sector and the increasing need for health facilities to generate revenue internally in order to incentivize physicians may also contribute to these phenomena.

The study also revealed that a significantly higher proportion of patients believe that physicians engage in PID compared to physicians' own admissions. On the other hand, higher proportion of physicians enable patient demand than patients′ own admissions. These suggest that although relatively smaller proportions of physician and patient engage in inducement and enablement behaviours, respectively, they do so intensely. The discrepancy in perceptions regarding physician motives could potentially result in patient mistrust, possibly due to poor communication between patients and doctors.

When physicians engage in the inducement or enablement of unnecessary medical services, healthcare costs can become unnecessarily high. Additionally, when patients lack trust in their physicians, they may be less likely to follow treatment recommendations, potentially leading to poor health outcomes or provider shopping, both of which can increase healthcare expenditures. These factors suggest that healthcare costs may be significantly higher than necessary. Future research should focus on quantifying the extent of excess expenditure. Health provider payment methods, such as capitation, have been shown to discourage the inducement and enablement of unnecessary medical services in previous studies (Bamimore et al., 2021; Ding & Liu, 2021; Fang & Rizzo, 2009; McGuire, 2000). Policymakers could consider implementing these supply-side policy measures, along with demand-side cost sharing, patient education, physician re-orientation, and promoting better patient-doctor communication, as a means of addressing the issue.