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「エビデンスに基づく日本の保健医療制度の実証的分析」（H26-地球規模一般-001）

平成 26 年度分担研究報告書

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Assessment of service provision within the Japanese health system

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研究要旨

Japan's health system is built around a complex set of institutional arrangements operating at national, prefectural and municipal level and covering public health, primary care, basic medical and long-term aged care dimensions. Understanding how these components of the system are funded and operated and how they interact is essential to a proper understanding of the challenges facing the system and proper reforms. This report describes the key service provision modalities of the Japanese health system, and the primary challenges that the system faces.

A. 研究目的

Japan has experienced rapid improvement in life expectancy over the past 50 years after development of a comprehensive universal health coverage (UHC) system that ensures equity at low cost (Ikegami, 2011). However, the service provision mechanisms in this system are complex and operate at the national, prefectural and municipal level. They also incorporate both extensive private and public sector elements in service provision, with an element of private out of pocket payment and purchasing split across national and local institutions.

Because Japan faces a growing ageing population and increasing prevalence of NCDs it is important to understand how the system of service provision operates, in order to analyze the reforms necessary to ensure adequate function of the system as it deals with the full consequences of aging and the demographic transition. This report gives a comprehensive overview of how services are provided in Japan and summarizes the challenges facing Japan's health system.

B. 研究方法

This report used a comprehensive assessment of government reports and published material describing the structure of the Japanese health system. Reports were accessed on the Ministry of Health, Labour and Welfare website, through published literature in Japanese- and English-language peer-reviewed journals, and through key reports. The information was synthesized and summarized by healthcare area and type of service provided.

C. 研究成績及び考察

C-1 Vital statistics

Japan has a comprehensive vital registration system, with 99.9% of deaths recorded in this system. Mortality due to cancer, cardiac diseases, pneumonia and cerebrovascular diseases were 2901, 1564, 978 and 941 per million population respectively.

Cancer was the most common cause of death in Japan in 2010, followed by ischemic heart disease and cerebrovascular disease, which has

shown a rapid decline in mortality since 1980 due to improvements in blood pressure control (Ikeda, 2011). Lung cancer was the largest cause of cancer mortality in men, followed by stomach, colon, liver, pancreas and esophagus; in women colon was the commonest cancer, followed by lung, stomach, pancreas, and breast cancer.

Life expectancy in 2010 was 79.64 and 86.39 years for men and women, respectively, whereas in the USA it was 75.4 and 80.4, respectively, in 2007. The reasons for this discrepancy are multifactorial, but have been attributed to health system and lifestyle factors (Murray 2011). The recent increase in diabetes and CKD are important issues in Japanese health care, as in many other developed countries, and the Japanese health system faces challenges in dealing with a growing burden of non-communicable diseases in an ageing population. (Gilmour 2014)

C-2 Public health

Public health activities in Japan are governed by the Community Health Act, which was passed in 1994. This act sets

out the responsibilities of municipalities, prefectures and national government in protecting public health, describes the organizations responsible for delivering public health services, and aims to better manage public health as Japan comes to the end of the demographic transition.

In 1997, the Infectious Disease Surveillance Center (ICDS) was organized in the National Institute of Infectious Diseases (NIID). The ICDS is responsible for surveillance of all targeted infectious diseases which are divided into five categories. Based on the Infectious Disease Control Law, the ICDS conducts nationwide surveillance of infectious disease by collecting reports on detection of infectious agents from prefectural public health institutes. The center also collects reports on incidents of infectious diseases from sentinel clinics and hospitals across Japan. This information is publicly reported weekly or monthly.

Japan maintains a childhood vaccination program that is broadly consistent with the WHO recommended vaccination schedule. Key elements of Japan's vaccination schedule are listed

below.

- *Routine immunization:* BCG, MR, rubella, smallpox, polio, DPT/DT, DPT-IPV, Japanese encephalitis, Influenza (for the elderly), Pneumococcal, Haemophilus influenzae type b, HPV
- *Non-routine immunization:* mumps, yellow fever, rotavirus, tetanus toxoid, hepatitis B virus, hepatitis A virus, rabies

Despite the inclusion of measles vaccination in the routine vaccination schedule, sporadic outbreaks of measles were observed among college students in 2006 due to weakened herd immunity. To strengthen herd immunity, the combined Measles, Mumps and Rubella (MMR) vaccine was introduced in 2006 and five to seven years old children started to receive second booster vaccinations. Efforts have been made to eradicate measles; but 283 patients had measles in 2012. Japan is now also experiencing an ongoing outbreak of rubella due to weakened herd immunity, possibly amongst adult males who were not vaccinated in childhood, and also facing controversy over decision making

regarding the HPV vaccine and handling of adverse events (Gilmour 2013). Improvements in management and oversight of the vaccination program are required in order for Japan to properly fight these preventable infectious diseases.

The MHLW promoted the National Health Promotion program 2000-2010, "Health Japan 21", which emphasized the prolongation of healthy life without disabilities. Japan faces a growing number of older people with disabilities, and this program aims to ease the burden on carers and ambulatory services through promoting healthy ageing. The second term of the National Health Promotion program 2013-2022 (Health Japan 21, the second term) is ongoing. (MHLW, 2012b)

Its basic goals are:

- Improve healthy life expectancy and reduce health inequalities,
- Prevent onset and progression of life-style related diseases (cancers, cardiovascular diseases, diabetes and chronic obstructive pulmonary disease),
- Maintain and improve functions

necessary for a healthy social life,

- Establish a social environment where individual health is protected and healthy behaviors are supported, and
- Improve life-style factors affecting health, such as nutrition, physical activity and other risk factors.

Prefectural governments must set targets within a national framework and ensure these targets are easy for local residents to understand. They should also monitor municipal-level variations in health and lifestyle, while municipal governments should incorporate national and prefectural targets into local policy.

The Health Promotion Act, enacted in 2002, established the Healthy Japan 21 program. This act requires prefectural and municipal governments to develop health promotional plans, mandates the National Health and Nutritional Survey and requires governments at all levels to monitor lifestyle-related diseases for effective health promotion. The Act also sets out anti-smoking activities, including efforts to fight second-hand

smoke exposure.

The smoking rate has been steadily declining in Japan. According to the National Health and Nutritional Survey, the smoking rate for men decreased from 47.4% in 2000 to 34.1% in 2012, and that for women from 11.5% in 2000 to 9.0% in 2012. The smoking rate for women is lower than that in most developed countries. This decline has been achieved through increases in taxation, implementation of smoking bans in public spaces and public buildings, and the gradual expansion of the use of non-smoking areas in private businesses. However, Japan remains behind other developed nations in the quality of implementation of the measures demanded by the Framework Convention on Tobacco Control, to which it is a signatory (Yorifuji 2010).

According to the survey of junior and senior high school students conducted by the government, the rates of smoking in the last one month were 21.7% in male and 9.7% in female students of the 12th grade in 2004. These rates have been decreasing; they were 5.6% in male and 2.5% in female students in 2012.

C-3 Maternal and child health

The Maternal and Child Health Act was enacted in 1965. This Act is the basis for maternal and child health services in Japan. Infant mortality in Japan used to be as high as 150–160 per 1000 live births until the early 20th century, but declined sharply to below 10 per 1000 live births in 1975. The infant mortality rate of 2.2 in 2012 is one of the lowest even among developed countries.

The Maternal and Child Health Act entitles babies to free publicly-funded preventive health services, including access to the Maternal and Child Health Handbook for parents before birth, and continued guidance and consultation with public health nurses after birth., and publicly-funded mass screening for congenital metabolic diseases. Babies born to mothers living with hepatitis B virus are given free immunoglobulin and vaccination. Additionally, newborns are entitled well-baby check-ups twice within the first 3 years of life, provided free by municipal government. The first of these examinations checks growth, nutritional status, oral health, possible physical and mental development

problems, and vaccination history. At 3 years, ophthalmic and ear, nose and throat examinations are included in the checkup.

C-4 Patient pathways

In contrast to some health systems in the OECD, such as the UK, the Japanese medical care system does not maintain a gatekeeping system through general practitioners. Instead, patients can choose either a clinic or a hospital as their first point of contact. Most hospitals have outpatient departments where patients regularly consult with their physicians.

The Japanese healthcare system does not distinguish between primary and secondary care. Instead, health care services are divided directly into specialties such as internal medicine, surgery, pediatrics, ophthalmology, otolaryngology and gynecology. These services are accessed directly at an affordable cost without the need for referral from a gatekeeper. These specialist services can be provided locally at small clinics or treatment centres, or at outpatient departments of larger hospitals that would be

considered tertiary care centers in a gatekeeper-based system.

Use of outpatient departments has declined since the 1990s, and health service utilization has shifted to smaller community-based clinics, which have increased in number. These clinics often have access to advanced equipment such as magnetic resonance imaging machines, enabling provision of hospital-level services at local centres.

Hospital outpatient services are available without a referral, although the government has attempted to introduce a referral system for the use of hospital services through clinic services. However, this referral-promotion has not been successful, because private hospitals have financial incentives to focus on outpatients who attend without referrals, and the bulk of hospital services in Japan are provided by private hospitals. Those hospitals that require a referral letter are primarily large public sector hospitals, such as university hospitals or national centers, and patients attending them must pay an extra fee if they do not have a referral letter.

For example, a man with diabetes might

be diagnosed through any of the following mechanisms:

- Being asymptomatic, he is diagnosed either through screening or as part of a health check.
- He is identified as diabetic whilst being treated for another condition in a hospital or a clinic.
- Owing to symptoms or a complication, he consults a doctor, either by presenting himself to a private clinic-based physician or visiting a specialist of his choice at a hospital without referral.

When he is diagnosed with diabetes mellitus, he will be referred for management by a specialist. After initial management and stabilisation of his condition by the specialist, he will be referred back to his local clinic for follow-up. Follow-up may continue in the tertiary hospital specialist clinic, as the tertiary care hospital often functions as the first contact health care provider for its area, or if he has complications that require specialist care. He can also be referred back to the specialist clinic at any point from his

local clinic if he develops a complication or he requires specialist opinion.

Clinic-based physicians will prescribe all necessary medications and order any necessary tests that are covered by public health insurance. If his diabetes worsens, and he develops an acute complication such as ketoacidosis, and he is in need of inpatient care, he will be admitted to any hospital at which he presents himself or he will be transferred after stabilization to a tertiary care hospital from a smaller hospital.

C-4 Inpatient care

Approximately 70% of Japan's hospitals and 55% of hospital beds are provided by the private sector. Hospitals owned by medical corporations and individuals are independent of direct government management, and subject to only limited investment regulation. Payment for medical services is organized and strictly controlled by the government, however.

Japan utilizes a case-mix system called the Diagnosis-Procedure Combination (DPC) to pay health-care providers. This patient classification system was

launched in 2002 by the MHLW, and it was linked with a lump-sum payment system from 2003. The number of participating hospitals is 1391, which includes 82 university hospitals that were obliged to adopt the DPC system. Approximately 50% of all acute care inpatient admissions in Japan were covered by this system.

DPC databases contain not only administrative data, but also detailed patient demographic, diagnostic and procedure data that are collected for all inpatient discharges. Japan uses the International Statistical Classification of Diseases, 10th Revision (ICD-10) codes, and procedures are coded with the Japanese original codes in their records. Hospital staff record the dates of all procedures, examinations and drug or device utilization. Submission of accurate data from this system is a condition of payment reimbursement.

C-5 Emergency medical care

As of 2013, there were 556 weekend and nighttime emergency rooms available for patients with non-severe illness who can visit emergency rooms on foot. A holiday on-duty doctor system is also

available in 630 districts. The total number of users of these systems was 6.2 million in 2013.

As of 2013, there were 3,259 secondary emergency medical centers, which have a role in performing first aid for emergency patients and, if needed, inpatient care.

As of 2013, there were a total of 265 Tertiary Emergency Medical Centers located in the 47 prefectures, and the number is increasing year by year. However, there was a large difference between the centers in the number of full-time doctors or the number of severe patients received. Some facilities do not fulfill the function of accepting all severe patients 24 hours a day. The number of patients with severe trauma has declined, while the number of Tertiary Emergency Medical Centers is increasing, resulting in a decline in the number of patients per hospital (FDMA 2013). Centralization may be necessary to maintain a high quality of trauma care.

Advanced Critical Care and Emergency Centers have a specific role to play in treating patients with several illnesses requiring special care including severe

burns, drug poisoning and traumatic digital amputation in addition to the same role as tertiary emergency medical centers. As of 2013, there were 23 advanced critical care and emergency centers across Japan.

In-hospital triage in receiving hospitals is defined as the use of assessment for prioritizing patients for treatment according to their severity of illness and injury. The purpose of in-hospital triage is to efficiently use human resources in hospital through assessment of patients' severity. The fee for the assessment of in-hospital triage was added to the tariff of medical procedures in the public insurance system in 2010.

An Advanced Perinatal Center is defined as a center with six or more beds in a Maternal-Fetal Intensive Care Unit (MFICU) and 9 or more beds in Neonatal Intensive Care Unit (NICU). Regional Perinatal Centers do not meet the criteria for nomination as an Advanced Perinatal Center. As of 2014, there were 100 Advanced Perinatal Centers and 292 Regional Perinatal Centers.

The MHLW reported in 2011 that approximately half of cardiac arrest

cases in pregnant mothers were caused by non-obstetric diseases including stroke and cardiovascular diseases. In some cases, first aid for such cases was delayed due to failure of cooperation between Perinatal Centers and Emergency Medical Center.

C-6 Pharmaceutical care

The global pharmaceutical trade accounts for 953 billion dollars in 2013, and Japan shares approximately 11.7% of this. (Japan Pharmaceutical Manufacturers Association, 2013) Japanese pharmaceutical companies sold 6,894 billion yen of pharmaceuticals annually, including 6,194 billion yen for prescribed medicine and 700 billion yen for over-the-counter (OTC) drugs in 2013. (MHLW 2013b). Imported and exported medicine in 2012 accounted for 1941 billion yen and 320 billion yen, respectively.

Among the top 30 pharmaceutical companies in the world, the market share of US companies was 41.8%, followed by Switzerland (14.8%), Japan (12.3%), the UK (11.8%), France (8.0%), Germany (6.2%) and others (5.0%). The number of Japanese pharmaceutical

companies decreased from 1123 in 2000 to 341 in 2011, due to mergers and acquisitions, and sales from the five leading companies accounted for 43.3% of all prescribed medicine.

The proportion of research costs in total sales was 12.0% in 2011. The success rate of developing new drugs was 1:27,000 between 2007 and 2011.

The pharmaceutical industry employed 192,000 workers in 2011 (0.3% of all workers). There are approximately 60,000 medical representatives (MR) in Japan. They visit physicians to provide information on efficacy and safety and to collect information on adverse effects. As of 2015, 83 wholesale companies are affiliated with Japan Pharmaceutical Wholesalers Association, and there were 45,000 people working in the wholesale industry (0.1% of all workers). More than 10,000 different prescribed medicines are sold; most of these are supplied to approximately 160,000 hospitals and clinics by the wholesale companies. OTC drugs are sold at about 70,000 drug stores.

Medicine costs accounted for 21.9% of all health expenditures in 2011. A total of 794.3 million prescriptions were

written, and 7038 billion yen disbursed for prescribed medicines from public health insurance.

The percentage of all pharmaceuticals purchased that were generic drugs was 21.7% by volume and 8.5% by sales in 2011, which is substantially lower than in other developed countries, including the United States, Canada, the United Kingdom, and Germany, whose generic market shares were above 60% as of 2009. (National Federation of Health Insurance Societies 2013)

Brand-name pharmaceuticals received market protection for a long time in Japan, and generics were not widely used after patent expiration. Recent government policies have been developed to improve rates of generic substitution, and promotion of generic drugs has formed one of the centerpieces of the medical expenditure reduction effort. In 2007, the Cabinet Office's Council on Economic and Fiscal Policy set a target to increase the quantity-based share of generic pharmaceuticals to 30% by fiscal year 2012. This amounts to a two-thirds increase of the share within five years, with an expected cost reduction of 500

billion yen (approximately 4.1 billion dollars at the contemporary exchange rate) over the five-year period. These policies included the provision of bonuses to prescribing physicians and dispensing pharmacies and the facilitation of generic substitution by pharmacists. Despite these initiatives, the actual share of generics has so far not kept pace with the high expectations. There has been a significant increase since 2002, when the share was only 12.2%, but a large part of the gain occurred between 2002 and 2003, and the increase during 2003–2009 has only been 0.6 percentage points per year on average.

C-7 Long term care

The Japanese Government instituted the national long-term care insurance (LTCI) system in 2000 under the Long-Term Care Insurance Act. This system sets out a mechanism for measuring elderly care needs and a financing system to provide care services suited to the level of care required. A total of 5 million elderly people were certified as in need of this service in 2011 (MHLW 2011).

Municipalities are also insurers in Japan, as they are responsible for implementing the Long-Term Care Plan and for determining insurance premiums based on the balance between the needs of the population and the quantity of services provided in the area. Under the Long-Term Care Insurance System, prefectures support the municipalities, while the national government decides the overall direction of the system. Half of municipal financing comes from tax and half is derived from premium contributions. The beneficiaries are divided into two categories: elderly aged 65 or over, and people aged 40 to 64 years. Premiums for people aged 65 and over are withheld from pension payments, while the premium for those aged 40-64 is added to their standard health insurance premium.

When people wish to receive LTC, they must apply to the municipal government for needs assessment. The applicant is then assessed by a qualified care manager using a uniform assessment tool, which consists of 73 survey items to measure daily activities and health. According to the assessors'

records, computer-assisted evaluation is conducted for preliminary assessment of care levels. Municipal governments ask attending doctors their professional opinions. A Needs Assessment Review Committee, composed of health and welfare professionals, reviews and adjusts the assessment before funding decisions are made. In 80% of cases, the preliminary assessment are not altered. The system provides benefits to cover both institutional and domiciliary services. Domiciliary services include health care (visiting nursing, visiting rehabilitation and ambulatory rehabilitation) and welfare services (home help services, catering bathing and day services). For-profit corporations are permitted to provide welfare services.

Licensed care managers coordinate different service providers within a geographical region, and aim to provide services within a fixed budget. They are expected to serve as neutral representatives of the interests of those seeking LTC, rather than as salespeople for providers.

Currently, the number of insured people (4,550,000 beneficiaries) in the Long-

Term Care Insurance System is two times higher than it was when the system was implemented in 2000 (2,180,000 beneficiaries) (Olivares-Tirado, 2014). However, the sustainability of the system remains an issue.

D 結論

Services within the Japanese health system are provided by a network of private and public sector providers, and purchased primarily by government through general taxation and specific insurance premiums, administered at both national, prefectural and municipal levels. The system has seen growth in pharmaceutical costs and rapid expansion of long-term care needs, with potential future cost pressures that have not yet been resolved through policy action.

While Japan's health system has historically been able to ensure equity of access and quality of care through this system, careful attention to incentives and policy changes will be necessary to ensure the system continues to function effectively in the future as non-communicable diseases and aging

increase the pressure on many parts of the system, especially its long-term care components.

E. 健康危険情報

なし

F. 研究発表

1.論文発表

なし

2.学会発表

なし

G. 知的所有権の取得状況の出願・登録状況

1.特許取得

なし

2.実用新案登録

なし

3.その他

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平成 26 年度分担研究報告書

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近年の主要な保健医療制度改革とその影響についてレビューに関する研究

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研究要旨

本分担研究班では、次期Health Systems in Transition（世界保健機関）の枠組みのうち、Principal health reformsのセクションのフォーマットに則り、概ね過去10年間の保健医療及びそれに影響を与える制度改革についてのレビューを行う。主要な改革について、その健康および健康格差への影響を文献的・数量的に評価する。初年度は、取り扱う制度や構想の整理を行い、また分析方法について検討した。そのうえで必要な政府統計の二次利用申請を進めた。

A. 研究目的

少子高齢化が世界有数の速度で進んでいる我が国の保健医療制度の行く末に、国際的に大きな関心が示されている。特に、近年のUniversal Health Coverage推進の動向をもとに、戦後早期の、まだ発展途上だった時期に国民皆保険を達成し、現在に至るまでその枠組みを維持している日本を見倣い、保健医療制度の本格的な整備に取り掛かろうとしている発展途上国は多く、日本の経験を客観的に評価し、国際発信することが強く国際社会から要請されている。

しかし、医療制度や、関連するその他の制度変更についての客観的な評価結果は乏しく、十分な説得力を持って発信できる情報は限られている。

本分担研究班は、本研究班メンバーが執筆を予定している、世界保健機関のHealth Systems in Transition (HiT) レポートのうち、第6章 Principal health reformsの執筆を担当する予定

となっている。同レポートは、出版元である世界保健機関から、各章ごとに盛り込むべき内容が「テンプレート」形で公表されている。本分担研究では、HiT第6章のテンプレートに則り、過去概ね10年間の主要な保健制度やその他の制度の変遷をレビューし、重要な事項について、利用可能な統計データを取得し、分析を進めることで、客観的な評価結果を踏まえたレポートをまとめる。さらに、その過程で実施した実証分析成果を国内外で積極的に報告し、今後の各国の保健医療改革に資することを目的としている。

B. 研究方法

初年度であるH26年度は、まず、評価すべき制度内容を検討するための準備的会議を行い、その結果を踏まえて、数量的評価に必要な政府統計の二次利用申請を進めた。

C. 結果

年度内に複数回の会合を開いた。特に力を入れて検討すべき制度改正や議論中の事項として、a.医療介護総合確保法と地域医療構想および、b.地域包括ケアシステムがあげられた。

a.医療介護総合確保法と地域医療構想に関しては、未曾有の少子高齢化という特徴を持つ日本が社会保障費の増大に具体的にどのように対応しており、今後どう対応していくのかを評価する際に重点的に検討すべき法的根拠となる。介護の中では、現在の法整備や構想の内容が効果・効率・公平性の点で十分であるか否かについての理論的・数量的実証を進め、考察することの必要性が確認された。

b.地域包括ケアシステムについては、国際的に大きく注目されている構想であるが、省庁内の各部署において定義が異なるなどの課題がある。このことから、まず文献的な検討を行い、主に介護医療・疾病や介護の予防・それらのための地域ガバナンスのあり方、という3つの視点から政府方針をレビューしたのち、そのパフォーマンスについての実証分析を試みる、という方向性が確認された。

これを受けて、使用すべき政府統計情報を整理し、二次利用申請を行った。申請したデータは以下の通りである。

人口動態調査

人口動態職業・産業調査患者調査医療施設調査

病院報告

医師・歯科医師・薬剤師調査
社会医療診療行為別調査
平成12年介護サービス世帯調査
介護給付費実態調査
国民生活基礎調査
21世紀出生時縦断調査

D. 考察

我が国の国民皆保険制度の質を維持するには、地域医療構想のような包括的な資源の再分配と効率的配置のビジョンが求められる。また、地域包括ケアシステムについては、省庁内の各局間で解釈が異なるため、画一的な定義が存在せず、このことが制度のデザインや評価の方向性の決定を困難にしている。次年度は、文献的研究により、地域包括ケアの定義を明確にし、それをもとに持続可能な制度のあり方に資する実証分析を追加していく。

また、皆保険制度が未整備の発展途上国の国々では、全体的なパフォーマンスに加えて、健康格差対策への評価も特に重要になる。「公平性、あるいは、健康格差を視点とした評価は特に重要になると考えられる。

E. 結論

近年の医療保険制度改革のレビューと評価を行うための考察とデータ取得準備を進めた。今後具体的なレビューと実証研究を進めていく。

F. 健康危機情報

特になし

G. 研究発表

1. 研究発表

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2. 学会発表

特になし

H. 知的財産権の出願・登録状況（予定を含む）

特になし

平成 26 年度厚生労働科学研究費補助金（地球規模保健課題推進研究事業）
「エビデンスに基づく日本の保健医療制度の実証的分析」（H26-地球規模-一般-001）

平成 26 年度分担研究報告書

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一般病床を有する病院の看護配置と平均在院日数に対する価格政策効果に関する定量分析

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研究要旨

本研究の目的は、「病院報告」及び「医療施設調査（静態）」（厚生労働省）の個票データ（1984-2008 年）を用いて、2000 年と 2006 年における診療報酬改定を「自然実験」とみなし、当該改定が一般病床を有する病院の看護配置（Patient-Nurse Ratio: PNR）と平均在院日数（Length of Hospital Stay: LHS）にもたらした効果を、「差の差」分析（Difference-in-Difference : DID）の手法を用いて、定量的に検証することにある。分析の結果、医療サービスの供給者である病院は、診療報酬点数の改定に対して弾力的に反応し意思決定を行っていることが示された。超高齢化社会を迎えた我が国において、現行の診療報酬制度による価格調整メカニズムの下、医療サービスの質の維持・向上を図りつつ、持続可能な医療保険制度を確立するためには、より一層の医療サービス供給の効率化が求められる。こうした政策目的のため、とりわけ今世紀に入って以降、厚生労働省は、急性期病院における PNR を改善し、LHS を短縮化するインセンティブを強化するような診療報酬点数の改定を継続的に行ってきた。当該政策目的が達成されつつある反面、他方では、供給側が価格メカニズムに弾力的に反応したために、看護配置が 7:1 の急性期病床数が急増し、高齢者医療を根幹から支える亜急性期病床の減少という意図しない結果をもたらした。以上の結果から、診療報酬点数という公定価格による調整機能が政策目的に適合するかどうかに対する定量的検証の必要性が示唆させる。

配置と平均在院日数に対する価格政策効果に関する定量的検証を行うことにある。

A. 研究目的

本研究の目的は、「エビデンスに基づく日本の保健医療制度の実証的分析」という本研究課題の一環として、我が国の医療政策の根幹である診療報酬制度について、病院の看護

B. 研究方法

当該研究課題により厚生労働省統計情報部に二次利用申請を行った「病院報告」及び

「医療施設調査（静態）」の個票データ（1984-2008年）を用いて、2000年と2006年における診療報酬改定を「自然実験」とみなし、当該改定が病院の看護配置（Patient-Nurse Ratio: PNR）と平均在院日数（Length of Hospital Stay: LHS）にもたらした効果を、「差の差」分析（Kernel Propensity Score Matching Difference-in-Difference: DID）の手法を用いて、定量的な検証を行った。すなわち、2006年改定における7:1の看護配置基準かつ平均在院日数19日以内という入院基本料の基準を2000年と2006年の改定以前に既に満たしている病院を対照群（control group）、基準を満たしておらず診療報酬改定に影響を受ける病院を処置群（treatment group）と仮定する。尚、本研究では、一般病床に対する看護配置に基づく入院料に焦点を当てることから、一般病床を有する病院に限定した分析を行う。

C. 研究結果及び考察

C-1. PNR と LHS の時系列分布

図1は、1984-2006年までのPNRの変化とPNR及びLHSに重点を置いた診療報酬点数の改定を図示したものである。本研究では、図1の診療報酬点数改定に基づき、研究対象期間を、1988以前、1988-1991年、1992-1999年、2000-2005年、2006年以降の5つに分ける。

図2と図3は、当該5期間（1984-2008年）におけるPNRとLHSのKernel分布を、病床数規模別に時系列で示したものである。1984-1987年においては、PNRの平均値/中央値（標準偏差）は、大病院（一般病床数>500床）、中病院（100床<=一般病床数<500床）、小病院（一般病床数<100床）で

それぞれ、3.5/2.3 (4.0), 6.7/3.3 (10.7), 9.6/6.4 (10.1)であったが、2006-2008年においては、1.2/1.1 (0.7), 1.6/1.3 (0.8), and 2.4/1.9 (2.1)まで縮小した。同様に、LHSについても、1984-1987年において、31.6/30.3 (9.3), 33.7/28.6 (16.1), and 41.8/37.8 (21.5)であったのが、2006-2008年においては、18.0/16.7 (6.7), 25.9/21.1 (15.0), 38.3/33.5 (22.7)にまで減少した。標準偏差をみると、大病院では縮小傾向にあるが、中小病院ではさほど変化が見られないことがわかる。

図2と図3から、病床規模にかかわらず、時系列でみるとPNRとLHSの分布は全体的に左方向へシフトしているが、とりわけ、2000年以降における中病院と大病院の減少傾向が顕著であり、2006年の7:1入院基本料の改定以前に、大病院では既に78%が、中病院でさえ43%が当該改定の基準を満たしていることがわかる。

以上の結果から、2006年の7:1入院基本料の値上げ改定以前に、大・中病院では価格政策の方向性をあらかじめ予想し、施設内の人的資源に対する意思決定を行っていたことが示唆される。他方、小病院では、2006年以降も7:1入院基本料の基準を満たしている病院が20%と少数であることから、価格政策に対する弾力性は、病床規模に代表される施設属性に依存していることがわかる。したがって、ここでは、対照群と処置群の属性を均衡させるため、Kernel Propensity Score Matching (PS) 法を用いる。PS法に用いた病院の属性は、病床数、経営主体、病院の所在市区町村の人口規模である。

C-2. Kernel Propensity Score Matching Difference-in-Difference の結果