

National Database of Health Insurance Claims and Specific Health Checkups of Japan (NDB) in Economic Evaluation 費用対効果評価におけるレセプト情報・特定健診等情報データベース(NDB)



大寺 祥佑 *Shosuke Ohtera*

国立保健医療科学院 保健医療経済評価研究センター 主任研究官

Senior researcher, Center for Outcomes Research and Economic Evaluation for Health, National Institute of Public Health

2008年京都大学医学部保健学科卒業。亀田総合病院理学療法士、京都大学医学部附属病院助教などを経て、2020年より国立保健医療科学院保健医療経済評価研究センター主任研究官。費用対効果評価におけるNDBデータの分析を担当。博士（社会健康医学）。専門は健康情報学、リハビリテーション。

Dr. Shosuke Ohtera is a senior researcher at the Center for Outcomes Research and Economic Evaluation for Health, National Institute of Public Health, Japan. From 2020, he is in charge of the analysis of National Database of Health Insurance Claims and Specific Health Checkups of Japan (NDB) in Economic Evaluation. He has worked as a physical therapist at Kameda Medical Center, as an assistant professor at Kyoto University Hospital and so on. He earned his PhD from Kyoto University School of Public Health. He specializes in health informatics and rehabilitation.

日本の費用対効果評価制度では、評価対象品目の製造販売業者が、国立保健医療科学院と共同でレセプト情報・特定健診等情報データベース（NDB）の解析を行うことが可能である。また国立保健医療科学院が、大学等と実施する公的分析においてNDBデータを利用する場合もある。これまで費用対効果評価では、評価対象技術や比較対照技術に関連する費用、分析対象集団におけるサブグループごとの患者数の推定などのために、NDBデータが利用されてきた。2019年度の制度化以降、費用対効果評価対象品目の増加とともに、NDBデータの利用実績も数を伸ばしてきた。しかしその詳細について、これまで報告する機会は少なかったことから、国内外において多くは知られていないと思われる。そこで本講演では、費用対効果評価におけるNDBデータの利用について、国立保健医療科学院の分析環境や過去の分析事例を挙げながら紹介する。

Under Japan's cost-effectiveness evaluation system, manufacturers of evaluated medicine or medical devices can collaborate with the National Institute of Public Health (NIPH) to analyze the National Database of Health Insurance Claims and Specific Health Checkups of Japan (NDB). In addition, the NIPH may also use the NDB data in academic analysis conducted with universities and other organizations. In cost-effectiveness evaluations, NDB data has been used to estimate the costs associated with the evaluated products and comparisons, and the number of patients in each subgroup in the target population. Since the full-scale implementation of cost-effectiveness evaluation was introduced in 2019, the number of evaluated products has increased, and the number of NDB data usage has also increased. However, since there have been few opportunities to report on the details, it is thought that not much is known about it both in Japan and overseas. In this lecture, I will introduce the use of NDB data in cost-effectiveness evaluation, citing the analysis environment of the National Institute of Health Sciences and past analysis cases.

National Database of Health Insurance Claims and Specific Health Checkups of Japan (NDB) in Cost-Effectiveness Evaluation

Shosuke Ohtera, PhD
 National Institute of Public Health, Japan
 Center for Outcomes Research and Economic Evaluation for Health (C2H)

What is NDB?

- Short term of the “National Database of Health Insurance Claims and Specific Health Checkups of Japan”
- Managed by the Ministry of Health, Labour and Welfare (MHLW)
- Collecting information of electronic health insurance claims and specific health checkups across the country
- Covering almost whole Japanese population
- Originally used for medical expenditure regulation plan.
- Can also be used for policy and research purposes.

NDB use in cost-effectiveness evaluation process

- Manufactures’ analysis phase
 - Called “joint analysis”
 - Claims data analysis based on manufactures’ request
 - National Institute of Public Health (NIPH) helps to handle data.
- Academic analysis phase
 - Claims data analysis
 - Academic analysis group and the NIPH conduct analysis.

Analysis environment for NDB in C2H

- Managing data in a dedicated room at the NIPH
- Cooperation with data engineers
 - Operating and maintaining servers
 - Developing databases
 - Designing specification for data analysis
 - Creating dataset
- > Reducing the burden on researchers

Analysis purposes

- Estimating the costs associated with the technology under evaluation and the comparison
 - Estimating the number of patients per subgroups in the population for the evaluation
 - Estimating the usage of the technology under evaluation, the comparison, and related technologies
- etc.

Example. Prescription of basic treatment drug for heart failure among patients prescribed CORALAN Tablets (ivabradine)

	NDB		SHIFT Trial,	J-SHIFT Trial,
	N	%	%	%
Total	1,083			
ACE inhibitors	348	32.1	78.6	48.8
ARB	355	32.8	14.3	20.1
ACE inhibitors or ARB	662	61.1	91.1	68.5
Aldosterone antagonists	538	49.7	60.3	77.6
Beta blockers	923	85.2	89.5	95.3

Cost Effectiveness Evaluation Report [Japanese Version]
https://c2h.niph.go.jp/results/C2H196/C2H1905_Report.pdf