National Center for Geriatrics and Gerontology (National Research and Development Agency)

http://www.ncgg.go.jp/

1. Summary of operations implemented using FILP funds The National Center for Geriatrics and Gerontology (NCGG) constructs new buildings for medical care services, installs medical equipment there, implements surveys, research and technology development for medical care regarding aging-related diseases that exert great impacts on citizens' health and allows the provision of medical care services and training of technicians for these operations to integrally function in order to provide better medical care services to citizens. 2. Amount of lending under FY2020 FILP (Unit: billion yen) FY2020 FILP Estimated outstanding amount of FILP lending at the end of FY2019 0.2 7.3 3. Estimated policy cost analysis of the project (3) Year-to-Year comparison analysis (1) Policy cost (Unit: billion yen) (Unit: billion yen) (Computing any fluctuation from previous year) FY2020 Fluctuation FY2019 FY2020 FY2019 Simple fluctuation Category 1. Government expenditure Simple compariso 2.4 1.2 -1.2 5.3 1.1 -4.3 before adia (subsidies, etc.) cost 2) Adjusting assumed interes 2. Government revenue 1) Adjusting initial years Real rates Past year (Analysis results after adjusting Policy . (payments to the government, etc.)*1 (Analysis results of re-estimation fluctuation initial year to that for FY2020 comparison using assumed interest rate for (2-1) 3. Opportunity cost of capital analysis) FY2019) 3.0 -0.1 -3.1 (after investments, etc. adjustment) 4.7 1.9 -2.8 Total (1+2+3=policy cost(A)) 5.3 1.1 -4.3 [Real fluctuation factor analysis] OFactors behind policy cost increase 32 years 33 years Analysis period (years) -1 year - None (2) Breakdown of policy cost by the time of the provision of funds (Unit: billion yen) OFactors behind policy cost decrease FY2019 Decrease due to fall in medical services expenses (-1.4 billion yen) FY2020 Fluctuation Category Decrease in subsidies, etc. regarding retirement allowances (-1.3 (A) Policy cost (previously cited) 5.3 -4.3 1.1 billion ven) Others (decrease due to revision of demand projection) (-0.1 billion Opportunity cost of capital investments, rovided before the beginning of the analysis 2.4 1.4 -1.1 yen) 2) Policy cost expected to be newly 2.9 -0.3 -3.2 accrued during the analysis period Government expenditure 2.4 1.2 -1.2 (subsidies, etc.) Government revenue (payments to the government, etc.)*1 Opportunity cost of surplus, 0.5 -1.5 -2.0 etc Opportunity cost of capital investments, etc. (4) Sensitivity analysis (cases where assumptions change) (Unit: billion yen) Case before the (A) Policy cost negative interest rate 2. Government revenue Fluctuation 1. Government expenditu 3. Opportunity cost of (previously cited) (payments to the government policy*2 (subsidies, etc.) capital investments, etc. etc.)*1 2.9 ± 1.8 -0.1 +1.91.1

(Note) Components in each column may not add up to the total because of rounding.

*1 Government revenue (payments to the government, etc.) is booked as a negative amount. Example: -10 b. yen for 10 b. yen in payments to government, etc.

*² Assumed interest rates (discount factor and future interest rate) are based on the market yield on Japanese government bonds on January 28, 2016, before the introduction of the negative interest rate policy.

4. Outline of estimation and project prospect employed in the analysis

[Outline of estimation]

•Operations subject to the analysis construct buildings and install medical equipment there for the NCGG to provide medical care regarding aging-related diseases that exert great impacts on citizens' health.

•Subject to the analysis are FY2019-2021 operations worth 3.8 billion yen. The analysis period is 33 years during which borrowings regarding those operations will be repaid. [Approach on future operations]

Medical services revenues and expenses that exert great influence on policy cost changes are assumed to change according to data in Article 28 of the Public Finance Act. As for the future, a hospital building will be completed at the end of FY2021. Medical services revenues are conservatively estimated to remain unchanged from FY2020. Among medical services expenses, personnel cost is estimated to gradually decline, reflecting plans to reduce the number of senior doctors by some five and the rate of regional allowance for doctors from 15% to 6%.

. The revision of medical services represents an uncertain factor and is not reflected in the estimation.

| (Unit: | million | ven) |
|--------|---------|------|

| | | | | | | | | | | (Om. | minon yen) |
|---------------------------|--------|-------|-------|-------|-----------|---------|-----------------------------|-------|-------|------|------------|
| | Result | | | | Estimated | Planned | Assumptions for calculation | | | ion | |
| FY | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | | 2051 |
| Medical services revenues | 5,555 | 5,616 | 5,723 | 6,012 | 6,502 | 6,776 | 7,061 | 7,061 | 7,061 | | 7,061 |
| Medical services expenses | 5,250 | 5,304 | 5,291 | 5,894 | 5,958 | 6,207 | 6,345 | 6,270 | 6,269 | | 6,195 |

5. Reasons for granting of subsidies, mechanism and underlying laws

(Reasons)

In order to contribute to the progress and improvement of public health through the improvement of advanced technical medical services for age-related diseases as a national medical policy by carrying out investigation, research, and exploitation of techniques of medical services for age-related diseases, and providing medical services closely related to these works and giving training to technicians.

(Underlying laws and regulations)

Article 46 of the Act on General Rules for Incorporated Administrative Agencies (Act No.103 of 1999)

(Delivery of Financial Resources)

Article 46 The national government may give incorporated administrative agencies grants equivalent to all or any part of the funds necessary for their operations.

(Underlying laws and regulations for the payments to the national treasury)

Article 20, Paragraph 1 and 2 of the Act on National Research and Development Agencies that Conduct Research related to Advanced and Specialized Medical Care (Act No.93 of 2008)

Paragraph 1 of Article 20

(Disposition of Reserve Funds)

National Centers for Advanced and Specialized Medical Care may, if there is a reserve fund as prescribed by Article 44, Paragraph 1 of the Act after the deposition as prescribed by Article 44, Paragraph 1 or 2 of the Act in the last fiscal year of the project in the period of the medium to long-term target (hereinafter referred to as "medium to long-term target period") as prescribed by Article 35-4, Paragraph 2, Item 1 of the Act, use the amount approved by Minister of Health, Labour and Welfare as revenue for operations which National Centers for Advanced and Specialized Medical Care conduct, as prescribed by from Article 13 to 19 in the next medium to long-term target period as specified in the medium to long-term plan approved as prescribed by Article 35-5, Paragraph 1 of the Act concerning next medium to long-term target period (if any change is approved as prescribed by the same Paragraph, use the plan after the change).

Paragraph 2 National Centers for Advanced and Specialized Medical Care may deduct from the amount equal to the reserve specified in Paragraph 1 the amount approved under the said Paragraph. After the deduction, the remaining amount, if any, shall be paid to the national treasury. Paragraph 3 (omitted)

6. Special remarks

•Under provisions of the Act on Incorporated Administrative Agency engaging in Research on Highly Specialized Medicine (Act No. 93 of 2008), the National Center for Geriatrics and Gerontology covered by the now-defunct special account for national advanced medical centers became an incorporated administrative agency with the same name. Later, under provisions of Article 130 of the Act on the Arrangement of Relevant Acts Incidental to Enforcement of the Act Partially Amending the Act on General Rules for Incorporated Administrative Agencies (Act No. 67 of 2014), the National Center for Geriatrics and Gerontology became a national research and development agency with the same name.

•In addition to subsidies from the national Government for hospital building construction, the NCGG plans to receive 1 billion yen in local government subsidies from FY2019 to FY2021.

(Reference) Outcome and social and economic benefits of operations

1. Diagnostic treatment

The Center provides advanced pioneering medical technologies concerning diseases unique to elderly people and tries to standardize geriatrics and gerontology to enhance effectiveness and safety for elderly people.

1) Compiling its research outcomes and knowledge of domestic and overseas research institutes and medical institutions, etc., and providing advanced pioneering medical services to prevent, diagnose, and treat diseases unique to elderly people and to restore their deteriorated functions.

2) Promoting the standardization of geriatrics and gerontology based on the outcomes of cooperative clinical research between the research institute and the hospital, by providing medical services based on the most recent scientific grounds and seeking more effective and safer application of existing medical technologies whose effectiveness has already been proven, such as minimally invasive operations safer for elderly people and optimal drug therapies for them.

3) Offering medical services and comprehensive assistance related to dementia and providing model medical care services at home

- 4) Implementing comprehensive medical examination of frailty, sarcopenia, and locomotive syndrome as the world's first epoch-making outpatient service
- 5) Implementing the five-sense examination at the Center for Sensory Organ

2. Research

The Center promotes studies for figuring out the onset mechanism of dementia and preventing deterioration of elderly people's self-reliance levels, and has also been carrying out longterm research and surveys on age changes covering broad fields of medical science, psychology, exercise physiology, nutrition science, etc.

The Center has tackled essential investigation, prevention, diagnosis and therapy approach development for diseases that it covers, particularly dementia (Alzheimer's disease) and made great contributions to the promotion of medical care by taking the following measures:

1) Promoting the world's first initiative to make practical use of blood biomarkers

2) Advancing the development of a preemptive medicine for Alzheimer's disease and conducting talks on its commercialization

3) Conducting the world's first cohort research covering young to geriatric ages

3. Educational training

To become a base for developing useful human resources for Japan and other countries, the Center nurtures human resources who would lead the promotion of medical care and research regarding aging-related diseases.

1) Fostering and training dementia support doctors (six training sessions were held in FY2019 for a total of 1,305 persons, with the cumulative number of training session participants since their initiation in FY2005 reaching 11,255)

2) Training sessions for initial dementia patient support team members (five sessions were held in FY2019 for 1,669 persons, with the cumulative number of training session participants since their initiation in FY2015 reaching 10,046)

3) Comprehensive nursing training for geriatrics and home care (one training session was held in FY2019 for 166 persons, with the cumulative number of training session participants since their initiation in FY2014 reaching 1,175)

4) Training sessions for cognicise (cognition and exercise) instructors (two sessions were held in FY2019 for 65 persons, with the cumulative number of training session participants since their initiation in FY2015 reaching 318)

5) Training for cognicise practitioners (two training sessions were held fin FY2019 for 159 persons, with the cumulative number of training session participants since their initiation in FY2015 reaching 720)

6) Training for urination (one training session was held in FY2019 for 22 persons, with the cumulative number of training session participants since the training's initiation in FY2018 reaching 51)

Overview of policy cost analysis results

[Changes in policy costs]



Note: Policy costs for each fiscal year differ in assumptions including interest rates applied to estimates.

| | | | | | | | | | (Unit: bil | lion yen) |
|--|------------|--------|--------|-------------|--------|--------|--------|------------|------------|-----------|
| | FY2011 | FY2012 | FY2013 | FY2014 | FY2015 | FY2016 | FY2017 | FY2018 | FY2019 | FY2020 |
| Policy costs (total amount) | | | | \setminus | 3.6 | 7.1 | 5.0 | | 5.3 | 1.1 |
| Government expenditure (subsidies, etc.) | | | | \setminus | 4.0 | 3.3 | 4.2 | | 2.4 | 1.2 |
| Government revenue (payments to the government, etc.) | | | | \setminus | - | - | - | | - | - |
| Opportunity cost of capital investments, etc. | \nearrow | | | | -0.4 | 3.8 | 0.8 | \nearrow | 3.0 | -0.1 |

[Explanation of policy cost trends]

• The policy cost includes the opportunity cost of Government subsidies (including operational subsidies) and capital investments from the Government for developing hospital buildings and other facilities and installing medical equipment regarding medical services.

[FILP agency's self-assessment of policy cost analysis results (FY2020)]

• In the FY2020 analysis, the policy cost decreased due to a cut in medical services expenses and a fall in operational subsidies regarding policy-related medical services. This has no problem in terms of financial soundness.

• In the sensitivity analysis (in which interest rates before the negative interest rate policy were substituted for the assumed interest rates), the policy cost increased by 1.8 billion yen from the basic case. In the future, the Center will try to reduce medical services expenses exerting great influence on the policy cost even amid interest rate hikes.

| (Reference) Financial Statements | |
|----------------------------------|--|
|----------------------------------|--|

| I4 | End of FY2018 | End of FY2019 | End of FY2020 | 14 | End of FY2018 | End of FY2019 | End of FY2020 |
|--|---------------|---------------|---------------|--|---------------|---------------|---------------|
| Item | (Result) | (Estimated) | (Planned) | Item | (Result) | (Estimated) | (Planned) |
| (Assets) | | | | (Liabilities and equity) | | | |
| Current assets | 3,866 | 3,709 | 3,909 | Current liabilities | 2,464 | 2,234 | 2,285 |
| Cash and bank deposits | 2,633 | 2,363 | 2,540 | Debt from grants for operation cost | 123 | - | - |
| Accounts due for medical operations | 999 | 1,123 | 1,139 | Donation received | 135 | 146 | 156 |
| Accounts receivable | 159 | 149 | 157 | Long-term loans to be repaid within a year | 51 | 71 | 186 |
| Inventory assets | 54 | 54 | 54 | Accounts payable | 254 | 330 | 334 |
| Other current assets | 20 | 20 | 20 | Money unpaid | 1,307 | 1,089 | 1,007 |
| Fixed assets | 14,613 | 17,703 | 17,626 | Unpaid consumption tax, etc. | 17 | 17 | 17 |
| Tangible fixed assets | 14,595 | 16,027 | 16,009 | Advances received | 128 | 128 | 128 |
| Buildings | 9,695 | 9,247 | 9,101 | Deposit received | 122 | 122 | 122 |
| Structures | 234 | 214 | 194 | Temporary receipts | 0 | | |
| Medical instruments and equipment | 711 | 1,048 | 987 | Accrued expenses | 0 | 0 | C |
| Other instruments and equipment | 655 | 503 | 274 | Reserves | 0 | 0 | 0 |
| Vehicles | 2 | 1 | 0 | Reserve for bonuses | 326 | 330 | 335 |
| Land | 3,294 | 3,294 | | Fixed liabilities | 7,668 | 11,189 | 11,240 |
| Construction in progress | | 1,717 | 2,156 | Asset collateral liabilities | 680 | 922 | 1,159 |
| Other tangible fixed assets | 3 | 3 | 2,100 | Grants for asset collateral operation cost | 337 | 313 | 232 |
| Intangible fixed assets | 17 | 13 | 10 | Asset collateral subsidies | 309 | 199 | 88 |
| Software | 13 | 10 | 6 | Asset collateral contributions | 34 | 24 | 14 |
| | - | | - | | 5. | | |
| Telephone subscription right | 0 | 0 | 0 | Collateral facilities expenses for construction in progress | - | 328 | 555 |
| Other intangible fixed assets | 4 | 4 | 3 | Collateral subsidies for construction in progress | - | 59 | 270 |
| Investment and other assets | 1 | 1,662 | 1,608 | 8 15 | 5,537 | 7,253 | 7,219 |
| Long-term loan receivable | 5 | 5 | 5 | Unpaid long-term expenses | 1,278 | 1,179 | 1,080 |
| Reserves for repayment exemption | -5 | -5 | -5 | Reserves | 174 | 1,835 | 1,781 |
| Bankruptcy or rehabilitation claims, etc. | 11 | 11 | 12 | Provision for retirement benefits | 108 | 1,769 | 1,715 |
| Loan loss provisions | -11 | -11 | -12 | Reserves for environment protection measures | 66 | 66 | 66 |
| Return for provision for retirement benefits | - | 1,661 | 1,608 | (Total liabilities) | 10,131 | 13,422 | 13,524 |
| | | | | Capital | | | |
| | | | | Financing by the Government | 10,334 | 10,334 | 10,334 |
| | | | | Capital surplus | -2,153 | -2,223 | -1,991 |
| | | | | Capital surplus | 2,936 | 3,100 | 3,570 |
| | | | | Other administrative costs accumulated | -5,089 | -5,322 | -5,56 |
| | | | | Amount equivalent to accumulated depreciation cost (-) | -4,867 | -5,100 | -5,339 |
| | | | | Amount equivalent to accumulated net gains or losses on | | | |
| | | | | sale or disposal (-) | -222 | -222 | -222 |
| | | | | Retained earnings or deficit carried forward Reserve carried forward during former medium-term target | 166 | -121 | -331 |
| | | | | period | 473 | 166 | |
| | | | | Unappropriated loss for the period (-) | -306 | -287 | -210 |
| | | | | (of this, gross loss (-)) | -306 | -287 | -210 |
| | | | | (Total equity) | 8,347 | 7,990 | 8,011 |
| Total assets | 18,478 | 21,412 | 21,536 | Total liabilities and equity | 18,478 | 21,412 | 21,536 |

Note: Components may not add up to the total because of rounding.

| Income Statement | | (Ur | nit: million yen) | | | | |
|---|----------|-------------|-------------------|--|--|--|--|
| Item | FY2018 | FY2019 | FY2020 | | | | |
| Itelli | (Result) | (Estimated) | (Planned) | | | | |
| Ordinary expenses | 11,903 | 12,014 | 12,068 | | | | |
| Operating expenses | 11,849 | 11,959 | 12,009 | | | | |
| Research operating expenses | 1,018 | 1,191 | 1,269 | | | | |
| Clinical research operations expenses | 3,527 | 3,143 | 3,032 | | | | |
| Medical care operations expenses | 6,468 | 6,750 | 6,843 | | | | |
| Education and research operations expenses | 322 | 275 | 275 | | | | |
| Information operating expenses | 70 | 68 | 69 | | | | |
| General and administrative expenses | 444 | 533 | 521 | | | | |
| Other ordinary expenses | 54 | 54 | 59 | | | | |
| Ordinary income | 11,591 | 11,726 | 11,857 | | | | |
| Income from grants for operating expenses | 2,754 | 2,802 | 2,811 | | | | |
| Operating income | 8,460 | 8,522 | 8,697 | | | | |
| Research operating income | 30 | 17 | 17 | | | | |
| Clinical research operations income | 1,635 | 1,408 | 1,408 | | | | |
| Medical care operations income | 6,598 | 6,901 | 7,076 | | | | |
| Education and research operations income | 190 | 188 | 189 | | | | |
| Other operating income | 6 | 8 | 7 | | | | |
| Other ordinary income | 377 | 402 | 349 | | | | |
| Ordinary loss | -313 | -288 | -210 | | | | |
| Temporary losses | 4 | 1,758 | - | | | | |
| Loss on retirement of fixed assets | 4 | - | - | | | | |
| Other temporary losses | - | 1,758 | - | | | | |
| Temporary profits | 10 | 1,758 | - | | | | |
| Other temporary profits | 10 | 1,758 | - | | | | |
| Net loss | -306 | -287 | -210 | | | | |
| Gross loss | -306 | -287 | -210 | | | | |
| Note: Components may not add up to the total because of rounding. | | | | | | | |