

論文要旨

十文字学園女子大学大学院人間生活学研究科食物栄養学専攻
21DA002・廣瀬 桂子

病院給食経営に関する研究

背景:病院給食収支は、食費として政府や患者から病院に支払われる費用（収入）と、病院が食事提供に関わる総費用（支出）の差額である。食費は政府によって規定され、一般的な食事は640円/食、疾患別治療食は+76円/食加算される。病院は病床数によって病院の機能が分類され、一般病院200床未満（一般的な診療）、地域医療支援病院200床以上（24時間重症患者を受け入れる）などがある。病院機能が異なっても食費は一律に規定されている。2023年12月、政府によって2024年以降食費が670円/食に値上げされることが公表された。しかし近年、病院機能別に病院給食収支の実態を明らかにした報告は認められない。近年の病院給食収支において、670円/食への食費の値上げが、病院機能別にどの程度正の影響を及ぼすかは不明である。さらに、経費節減のために病院厨房へ設備投資を行ったことによる、作業時間短縮や経費節減についての報告も認められない。

本研究の目的は、病院機能別に近年の病院給食収支の実態を明らかにすることである（研究1）。研究2では病院厨房に全自動炊飯器導入、研究3では集塵機能付き床洗浄機導入による、作業時間短縮や経費節減について明らかにする。

研究1:病院給食収支の実態

方法:A協会が経営する病院で、多施設後ろ向きコホート研究を実施した。2019年から2021年の3年間、病院機能別に給食収支に関する調査を行い、実態を明らかにした。対象は13の一般病院（200床未満）、10の地域医療支援病院（200床以上）とした。

結果:2019年から2021年の3年間、13の一般病院の平均年間総収支は約-1800万（±約1500万）円、10の地域医療支援病院の平均年間総収支は2019年約-30万（±約1900万）円、2020年、2021年は約-800万（±約3000万）円の大幅な赤字であった。本調査の結果から、2021年食費が670円/食へ30円/食値上げされていた場合〔年間総収支+（年間総提供食数×30円/食）〕、一般病院は約-1600万円、地域医療支援病院は約-210万円の大幅な赤字の試算である。2021年以降物価や人件費は急騰している。この結果から、2024年以降食費が値上げされても、大幅な赤字が解消できない可能性がある。本研究の結果から、政府によって、2024年以降病院の食費が値上げされても、さらなる食費の見直しが必要であることを、病院機能別に明らかにした。

研究2:全自動炊飯器導入による経費節減

方法:457床のB病院で後ろ向きの横断研究を実施した。従来の自動炊飯器と全自動炊飯器による炊飯作業について6か月間の記録から調査した。炊飯作業時間と経費の結果から、年間の経費節減について試算した。

結果:457床の病院厨房において、全自動炊飯器を導入すると、炊飯作業時間を約80%短縮でき、年間約272万円の経費節減が可能であった。

研究3:集塵機能付き床洗浄機導入による経費節減

方法:457床のB病院（研究2の対象病院）で後ろ向きの横断研究を実施した。従来の床洗浄用具と集塵機能付き床洗浄機による調理室（清潔区域）の床洗浄作業について、6か月間の記録から調査した。作業時間と経費の結果から、年間の経費節減について試算した。

結果:457床の病院厨房において、集塵機能付き床洗浄機を導入すると、床洗浄作業時間を約33%短縮でき、年間約142万円の経費節減が可能であった。

結論:以上の結果から、A協会の一般病院と地域医療支援病院の給食収支は近年大幅な赤字であり、2024年以降食費が670円/食へ値上げされても、大幅な赤字が解消できない可能性がある。病院の厨房に全自動炊飯器と集塵機能付き床洗浄機を導入すると、大幅に経費が節減できる可能性が示唆された。

SUMMARY

A study of hospital foodservice management

Background : Hospital meal service revenue refers to the difference between the expenses (expenditure) incurred by the hospital in providing meals and the costs (revenue) paid to the hospital by the government or patients as meal fees. Meal fees are regulated by the government, with general meals typically set at 640 yen per meal, and special therapeutic meals incurring an additional 76 yen per meal. Hospitals are categorized based on the number of beds, such as general hospitals with fewer than 200 beds (providing general medical care) and regional medical support hospitals with 200 beds or more (accepting critical patients 24/7). Regardless of differences in hospital functions, meal expenses are uniformly regulated by the government. In December 2023, the government announced an increase in meal fees to 670 yen per meal starting from 2024. However, there have been no reports in recent years revealing the actual state of hospital meal service revenue based on hospital functions. The extent to which the increase in meal fees to 670 yen per meal will positively impact hospital meal service revenue in recent years, considering different hospital functions, remains unclear. Furthermore, no reports of reduced work hours or cost savings due to capital investment in hospital kitchens to save money were observed. The objectives of this study are to clarify the actual status of hospital meal service revenue and expenditures in recent years by hospital function (Study 1). Study 2 will clarify the reduction of work hours and cost savings by introducing fully automatic rice cookers in hospital kitchens, and Study 3 will clarify the reduction of work hours and cost savings by introducing floor washing machines with dust collectors.

Study 1 : Financial Status of Hospital Meal Services

Methods) A cohort study was conducted at hospitals managed by Association A. Over the three-year period from 2019 to 2021, an investigation into the financial status of hospital meal services was carried out, focusing on different hospital functions. The study targeted 13 general hospitals with fewer than 200 beds and 10 regional medical support hospitals with 200 beds or more. **Results)** Over the three-year period from 2019 to 2021, the average annual total balance for 13 general hospitals was approximately -18 million yen (± 15 million yen), while the average annual total balance for 10 regional medical support hospitals was approximately -300,000 yen (± 19 million yen) in 2019 and sharply declined to around -8 million yen (± 30 million yen) in both 2020 and 2021, indicating significant deficits. Based on the findings of this study, if the meal cost in 2021 had increased by 30 yen per meal to 670 yen per meal, the estimated deficits would be approximately -16 million yen for general hospitals and approximately -2.1 million yen for regional medical support hospitals [Annual Total Balance + (Annual Total Meals Served \times 30 yen per meal)]. Since 2021, there has been a rapid increase in prices and labor costs. Consequently, even if meal costs are raised after 2024, there is a possibility that substantial deficits may not be resolved. The results of this research highlight the need for further reconsideration of meal costs, specifically categorized by hospital function, even if the government decides to increase hospital meal costs after 2024.

Study 2 : Cost Reduction through the Implementation of Fully Automated Rice Cookers

Methods) A retrospective cross-sectional study was conducted at B Hospital, a 457-bed facility. The study involved an examination of the rice cooking process using traditional automatic rice cookers and fully automatic rice cookers based on a six-month record. Through the analysis of the time spent on rice cooking tasks and associated expenses, calculations were made to estimate the annual cost reduction resulting from the introduction of fully automatic rice cookers. **Results)** Introducing a fully automatic rice cooker into the kitchen of a 457-bed hospital resulted in approximately an 80% reduction in rice cooking time, enabling an annual cost reduction of around 2.72 million yen.

Study 3 : Cost Reduction through the Introduction of Floor-Cleaning Machines with Dust Collection Function

Methods) A retrospective cross-sectional study was conducted at B Hospital (the subject hospital in Study 2), a 457-bed facility. The study focused on the floor cleaning tasks in the kitchen (clean area) using traditional floor cleaning tools and floor cleaning machines with dust collection function based on a six-month record. Through the analysis of the time spent on the cleaning tasks and associated expenses, calculations were made to estimate the annual cost reduction resulting from the introduction of floor cleaning machines with dust collection function. **Results)** By introducing a floor-cleaning machine with dust collection functionality into the kitchen of the same 457-bed hospital, floor cleaning time was reduced by approximately 33%, leading to an annual cost reduction of around 1.42 million yen.

Conclusion Based on the above results, the meal service finances of general hospitals and regional medical support hospitals in Association A have been significantly in the red in recent years, and there is a possibility that even with the increase in meal costs to 670 yen per meal from 2024 onwards, the substantial deficit may not be resolved. The introduction of fully automatic rice cookers and floor-cleaning machines with dust collection functionality into the Hospital kitchens has been suggested as a potential for significant cost reduction.