

日本医療研究開発機構 介護 DX を利用した抜本的現場改善事業 事後評価報告書

公開

I 基本情報

研究開発課題名：（日本語）介護テクノロジーの定量的改善および投資効果を提示する機能を有する
介護 DX パッケージモデルの開発 ―愛知県、福岡県、東京都、北海道―
（英 語）Study of the Development of a Care DX Package Model with Functions for
Quantitative Improvement of Care Technology and Investment Effect
‐ Aichi, Fukuoka, Tokyo, Hokkaido Prefectures

研究開発実施期間：令和 7 年 8 月 18 日～令和 8 年 3 月 31 日

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II 研究開発の概要

本事業では、川崎重工業株式会社、コンサルティング事業者、介護施設、介護機器メーカー、ならびに介護機器の貸与事業者が参画するコンソーシアムを形成し、介護現場における介護 DX 推進手法として、「課題調査・分析」から「課題抽出」、「機器の選定・導入」、「活用定着の支援」、「改善効果および投資効果の可視化」までを一体で進める介護 DX パッケージモデルの有用性を検証した。

実証は、介護付き有料老人ホーム、特別養護老人ホーム、サービス付き高齢者向け住宅等、施設種別、運営体制、施設規模、既存機器の導入状況が異なる複数施設で実施した。各施設では、職員が業務に忙しさを感じる一方、管理者がその要因を十分に把握できていないこと、また見守り機器や移乗支援機器等を導入していても、訪室回数、待ち時間、身体的負担、運用ルール等に課題が残ることが確認された。このため、介護行動計測、施設課題調査、利用者情報調査、ヒアリングを組み合わせ、職員・利用者・介護機器の行動、業務負荷、利用者特性、既存機器の活用状況を定量的・定性的に把握し、施設ごとの改善方策を検討した。

補助金活用や機器購入を目的とした単発導入ではなく、施設課題に即した機器選定、導入前後の比較、職員教育、対象者アセスメント、運用ルール・手順書の整備、活用・定着支援を通じ、現場で継続的に使われ

る仕組みとして実装することを重視した。日本ノーリフト協会の導入支援・研修の知見を活用し、機器メーカーと連携しながら、施設環境、利用者像、職員体制、既存業務プロセスを踏まえた導入コンサルティングを行い、介護行動計測データに基づき改善効果および投資効果を可視化した。

成果として、現場課題に基づき介護テクノロジーを選定・導入し、活用・定着まで伴走する一連のプロセスを整理し、再現性のある介護DXパッケージモデルを構築した。介護行動計測により、職員の感覚に依存していた「忙しさ」や機器活用状況を客観的に把握できるようになり、既存機器の運用改善、新規機器導入の妥当性が確認できた。この結果、機器導入後のオペレーション変容を定量的に捉えることができた。東京都の実証施設では、移乗支援機器Hugの導入により、排泄介助における職員2名対応の一部を1名対応へ転換し、職員負担の軽減や他業務時間の創出を確認した。

また、見守りセンサー等の既存機器についても、居室別の訪室回数や滞在時間を可視化した結果、介助を要しないアラートに基づく訪室が含まれる可能性が明らかとなった。これを踏まえ、利用者状態に応じたアラート対象者の再設定や運用ルールの見直しを行い、頻回な訪室の抑制と適切なタイミングでの訪室につながる運用改善を進めた。

実証を通じて、既存もしくは今回新たに導入した介護テクノロジーの運用上の課題や改良点が明らかとなり、介護現場の実態やニーズを踏まえた機器開発に向けて、機器メーカーとの連携が可能となった。これらの成果は、介護DXパッケージの横展開と介護機器開発の高度化・導入促進に寄与し、介護現場の継続的な改善に貢献する。

In this project, a consortium was formed with the participation of Kawasaki Heavy Industries, Ltd., consulting service providers, long-term care facilities, care equipment manufacturers, and care equipment rental service providers. The project verified the usefulness of a Care DX package model as a method for promoting DX in long-term care settings, integrating the entire process from “survey and analysis of issues,” “identification of issues,” “selection and introduction of equipment,” and “support for utilization and establishment,” through to “visualization of improvement effects and investment effects.”

The demonstration was conducted at multiple facilities with different types, operational structures, facility sizes, and levels of existing equipment implementation, including fee-based homes for the elderly with long-term care services, special nursing homes for the elderly, and serviced housing for the elderly. At each facility, it was confirmed that while staff perceived their work as busy, managers did not fully understand the underlying causes. It was also found that, even where monitoring devices, transfer assistance devices, and other equipment had already been introduced, issues remained regarding the number of room visits, waiting time, physical burden, and operational rules. Accordingly, care activity measurement, facility issue surveys, user information surveys, and interviews were combined to quantitatively and qualitatively understand the activities of staff, residents, and care equipment; workload; resident characteristics; and the utilization status of existing equipment, and to examine improvement measures tailored to each facility.

Rather than pursuing one-off implementation aimed solely at using subsidies or purchasing equipment, the project emphasized implementation as a mechanism that would be continuously used in practice. This was achieved through equipment selection based on facility-specific issues, before-and-after comparisons, staff education, assessment of target users, development of operational rules and procedures, and support for utilization and establishment. Drawing on the

Japan No-Lift Association's expertise in implementation support and training, and in collaboration with equipment manufacturers, the project provided implementation consulting based on each facility's environment, resident profiles, staffing structure, and existing work processes, while visualizing improvement effects and investment effects based on care activity measurement data.

As a result, the project organized a series of processes for selecting and introducing care technologies based on on-site issues and providing accompanying support through utilization and establishment, thereby developing a reproducible Care DX package model. Care activity measurement made it possible to objectively understand "busyness" and the utilization status of equipment, which had previously depended largely on staff perceptions, and confirmed both the need to improve the operation of existing equipment and the appropriateness of introducing new equipment. As a result, changes in operations after equipment implementation could be captured quantitatively. At the demonstration facility in Tokyo, the introduction of the Hug transfer assistance device enabled some toileting assistance tasks that had previously required two staff members to be converted to one-person assistance, confirming a reduction in staff burden and the creation of time for other duties.

In addition, for existing equipment such as monitoring sensors, visualization of the number of room visits and length of stay by room revealed the possibility that some visits were being made in response to alerts that did not require assistance. Based on this finding, the project reviewed alert target settings and operational rules according to residents' conditions, thereby promoting operational improvements that helped reduce frequent room visits and enable visits at more appropriate times.

Through the demonstration, operational issues and areas for improvement were identified for both existing care technologies and those newly introduced in this project. This enabled collaboration with equipment manufacturers toward the development of equipment that reflects the actual conditions and needs of long-term care settings. These results will contribute to the horizontal deployment of the Care DX package, the advancement and promotion of care equipment development and implementation, and the continuous improvement of long-term care settings.