



# Intelligent In-Home Care Scheduling

Case Study

## The Client

An in-home care provider schedules a fleet of 75+ mobile nurses to visit patients with differing care requirements, ranging from general nursing and support services to rehabilitation and chronic disease management.

## Their Challenge

Providing reliable and high quality home healthcare has many complexities. This particular provider manages more than 75 mobile nurses that visit 5-10 patients at their homes each day. Deciding which nurse is to look after a specific patient requires consideration of many factors including the nurse's skills, patient availability and location, continuity of care and patient preferences. The time spent on road between home visits is an important consideration also.

This home care provider utilises a bespoke planning software, created in-house, that requires a team of planners to schedule the nurses on a daily basis. They found this method to be too manual and time-intensive, placing a significant burden on the planners and resulting in sub-optimal schedules.

## Daitum's Solution

Daitum made it possible for the customer to add optimisation capabilities to their existing software. This allows the users to replace the previously manual assignment and sequencing jobs at the click of a button, utilising Daitum's proprietary optimisation technology.

The integrated solution considers the entire list of patients to be seen the next day, as well as the many constraints that need to be accounted for. The planners make minor adjustments on a daily basis to the roster of contract nurses based on their availability, skill level and allowable travel distance.

Upon clicking the "Optimise" button, the system allocates and schedules all nurses simultaneously, which previously had to be done separately. The schedules are then distributed to the nurses working the following day. The ability to quickly generate optimal schedules also allows for adaptability should a nurse have to cancel their shift last minute.

## The Results

The most immediate impact of optimising the mobile workforce scheduling has been the reduction in time taken to produce the schedules, down from many hours to just minutes.

On-time compliance of the nurses has improved by 70 percent and minimising the distance travelled (by 10%-15%) led to a 30-percent reduction in agency staff. These factors combined with the reduced planning time produced an annual cost reduction of close to \$1million.

Integrating Daitum into the existing software tool through an API requires no additional software installation and allows users to continue working within the system they are already familiar with.

↑ 70%  
On-time compliance

↓ \$1m  
Costs

↑ 8x faster  
Schedule build

↓ 30%  
Agency staff

↓ Key person  
risk

*"Integrating Daitum's optimisation platform into the existing software tool through an API is effortless."*



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