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More Staff Is Not Enough

Effects of Combining Higher Staffing Levels with Qualification-Oriented Work Organization in Long-Term Care

INTERNATIONAL LONG-TERM CARE POLICY NETWORK
London 9–11TH SEPTEMBER 2026

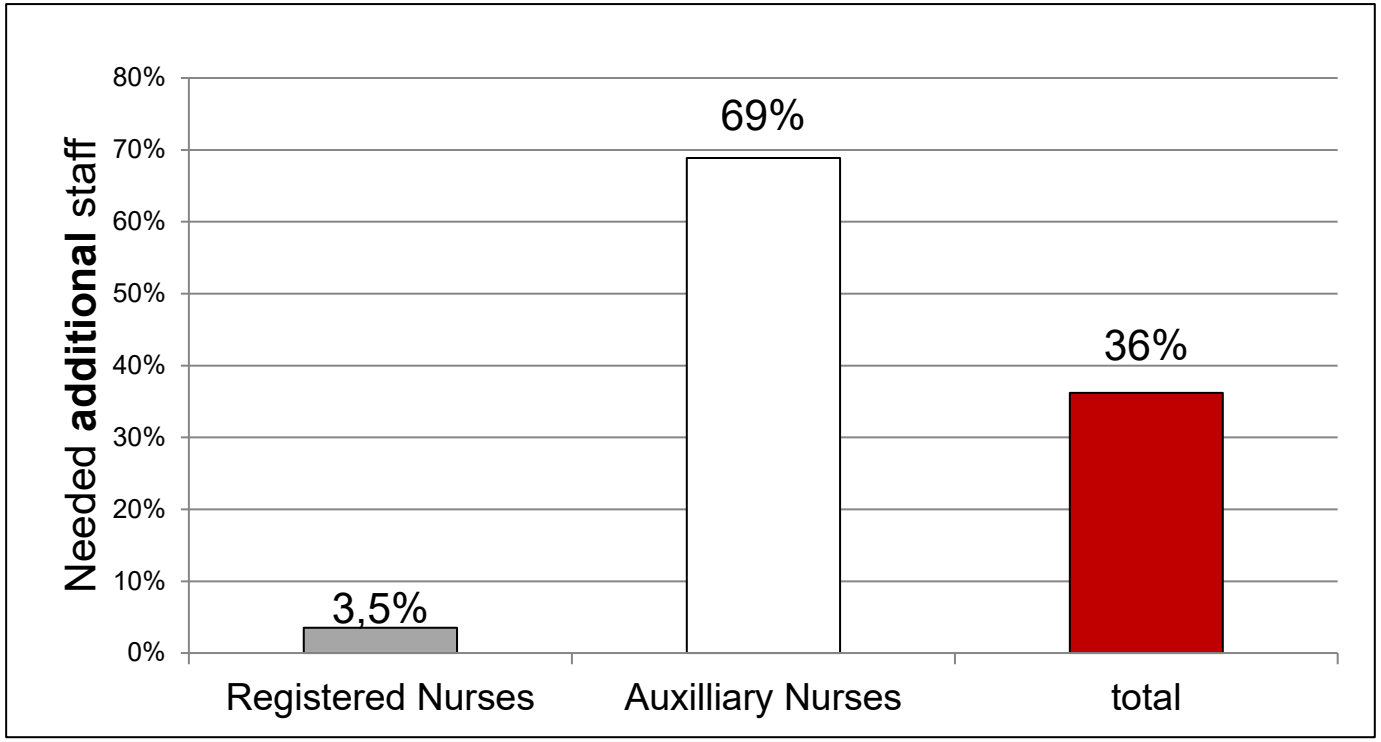
Corinna Burfeindt - Universität Bremen, Germany

Background

Our previous study PeBeM1 developed an algorithm for staffing ratios. (Rothgang et al. 2020)

(Translating residents' care needs into qualification-specific staffing requirements).

→36% more staff needed



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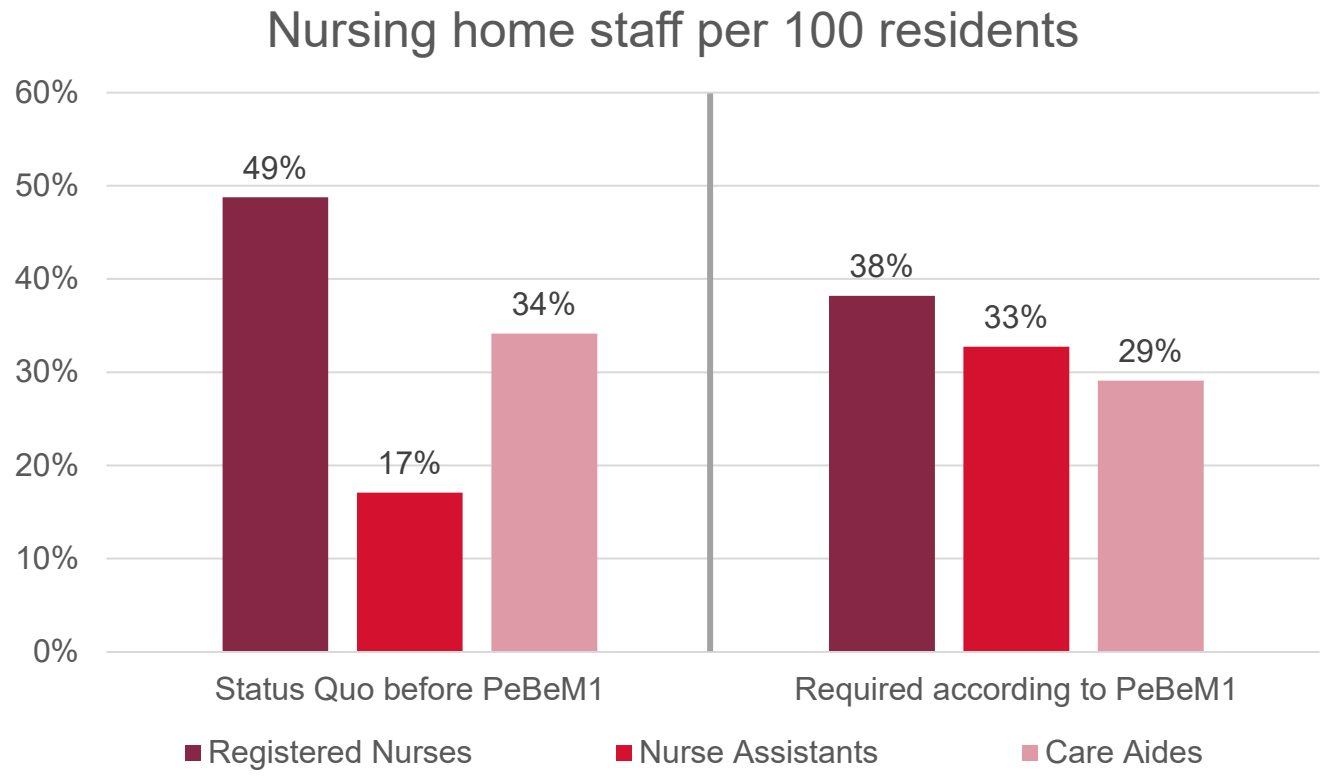
→36% more staff needed

→Leads to changed staffing composition



How can work be organized in this new composition?

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Model Programme

Primary aims:

- Development and implementation of a new work organization.
- Evaluation of the intervention.
- Parametrisation of the staffing algorithm.

Burfeindt *et al. BMC Nursing* (2024) 23:201
https://doi.org/10.1186/s12912-024-01883-3

BMC Nursing

STUDY PROTOCOL Open Access

Study protocol for the development, trial, and evaluation of a strategy for the implementation of qualification-oriented work organization in nursing homes

Corinna Burfeindt[1,2*], Ingrid Darmann-Finck[2,3], Carina Stammann[5], Constance Stegbauer[5], Claudia Stolle-Wahl[4], Matthias Zündel[4] and Heinz Rothgang[1,2]

Abstract

Background Staffing ratios in nursing homes vary among the federal states of Germany, but there are no rational grounds for these variations. In a previous study, a new instrument for the standardized calculation of staffing requirements in nursing homes was developed (*Algorithm* 1.0). The development was based on a new empirical data collection method that derives actual and target values for the time and number of care interventions provided. *Algorithm* 1.0 found an increased requirement of 36% of staff in German nursing homes. Based on these results, the German legislature has commissioned a model program to trial and evaluate a complex intervention comprising increased staffing combined with strategies for organizational development.

Methods The mixed-methods study consists of (i) developing a concept for restructuring the work organization, (ii) the application of this concept combined with increased staffing in 10 nursing homes (complex intervention), and the further development of the concept using a participatory and iterative formal evaluation process. The intervention consists of (a) quantitative measures of increased staffing based on a calculation using *Algorithm* 1.0 and (b) qualitative measures regarding organizational development. The intervention will be conducted over one year. The effects of the intervention on job satisfaction and quality of care will be evaluated in (iii) a comprehensive prospective, controlled summative evaluation. The results will be compared with ten matched nursing homes as a control group. Finally, (iv) prototypical concepts for qualification-oriented work organization, a strategy for the national rollout, and the further development of *Algorithm* 1.0 into *Algorithm 2.0* will be derived.

Discussion In Germany, there is an ongoing dynamic legislation process regarding further developing the long-term care sector. The study, which is the subject of the study protocol presented here, generates an evidence-based strategy for the staffing requirements for nursing homes.

Ethics and dissemination.

This study was approved by the Ethics Committee of the German Association of Nursing Science (Deutsche Gesellschaft für Pflegewissenschaft) on 02.08.2023 (amended on 20.09.2023). Research findings are disseminated through presentations at national and international conferences and publications in peer-reviewed scientific journals.

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Intervention | 2 components

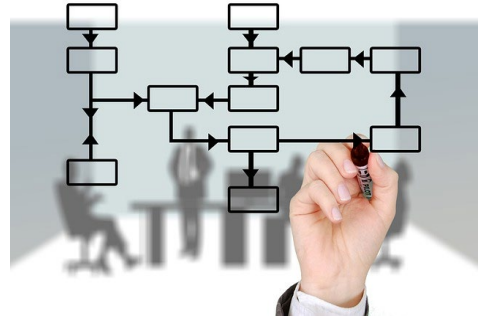
1) Increased staffing

Additional staffing based on a standardized staffing algorithm.

source: Pixabay

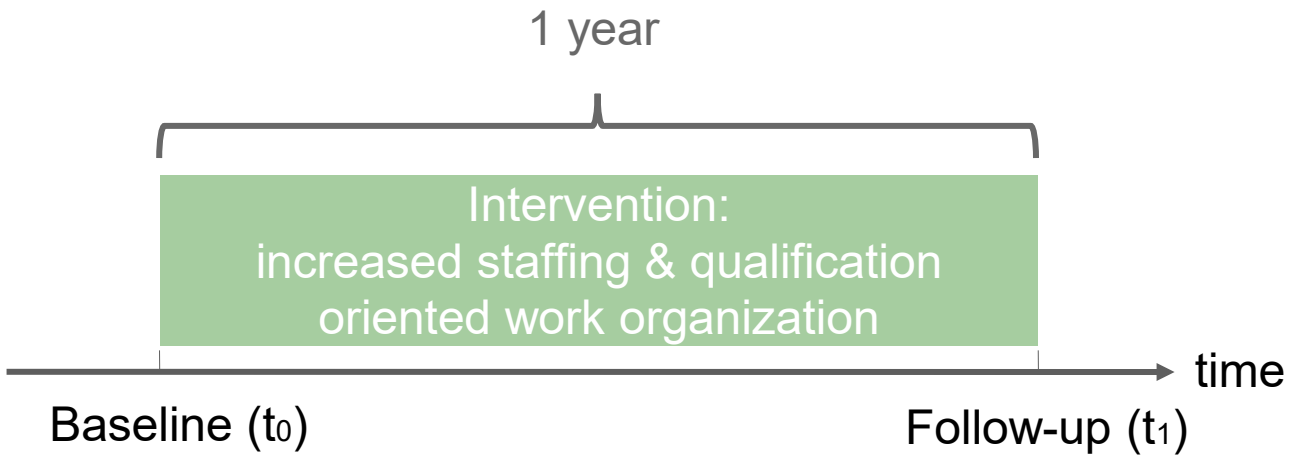
2) Qualification-oriented work organization

Systematic allocation of care interventions according to qualification requirements.



source: Pixabay

Methods | Study Design



Multi-center longitudinal pre-post study

- 10 nursing homes across Germany
- One care unit per nursing home
- Baseline sample: 200 residents and 130 nursing staff members
- Intervention period ~ 1 year

Methods | Evaluation

Method	Instrument	Outcome
Staff surveys	Employee Experience Questionnaire (EXQ), StressBarometer	Working conditions & job satisfaction
Resident & proxy surveys	ASCOT questionnaire, EQ-5D, QUALIDEM questionnaire	Perceived care quality & quality of life
Time-and-motion study	One-to-one observation of care provision with 1. Documentation of provided and required qualification level, 2. Time measurement and professional **assessment of care provision**	Different aspects of care quality: 1. Qualification match 2. Care time coverage
Quantitative analysis	Quality assurance data	Care quality indicators
Shadower surveys	Standardized interviews	Care quality perception

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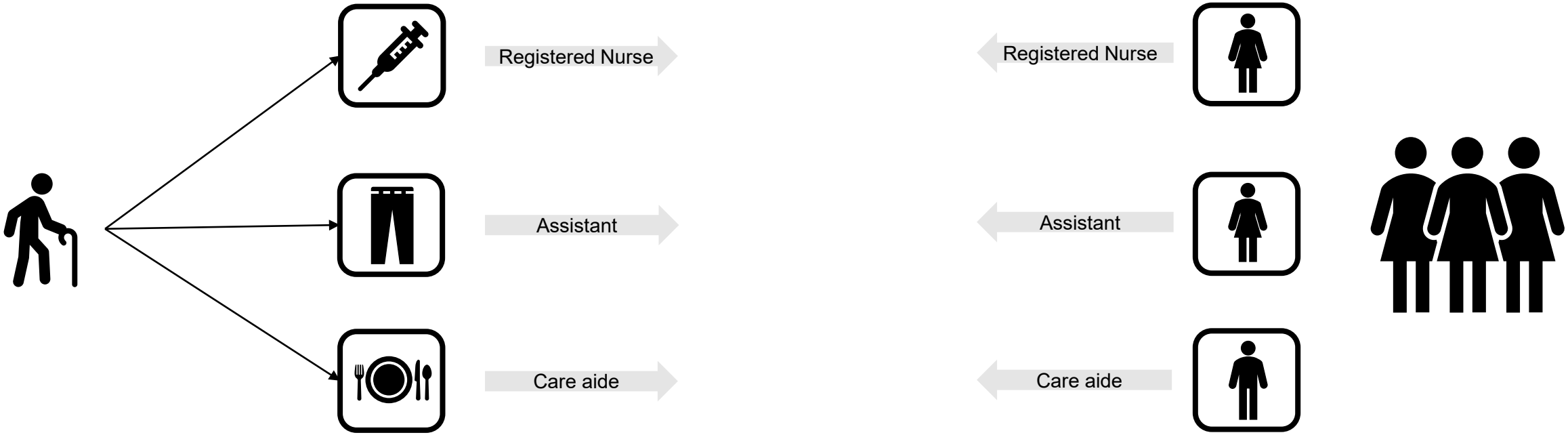
Methods | Qualification Match

There is limited evidence on how staffing resources are organized in daily care delivery.



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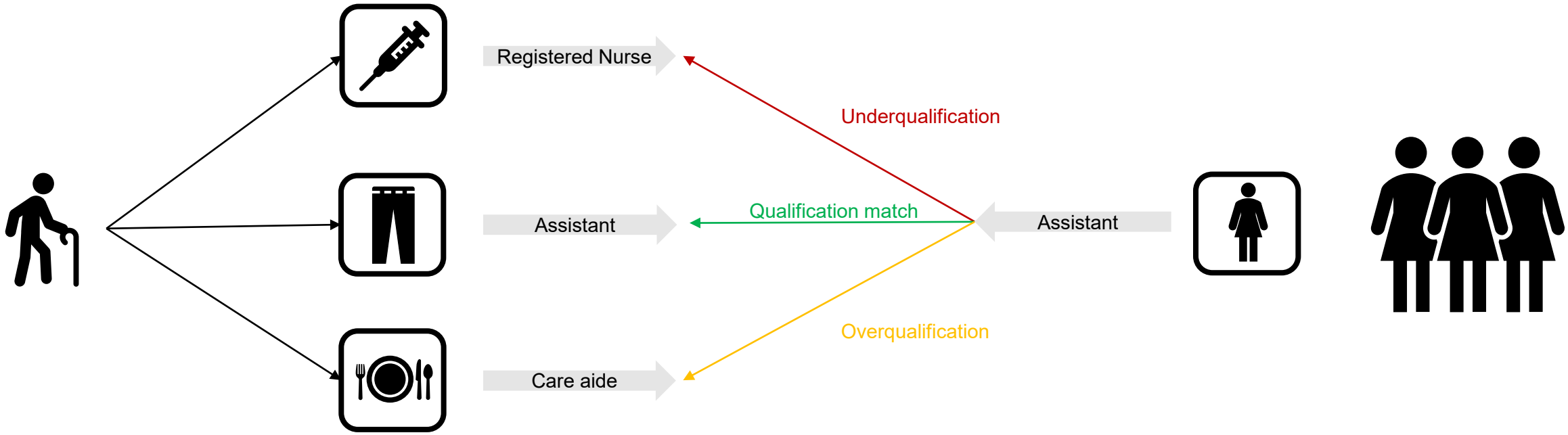


Results | Qualification Match

	Underqualified		Qualification match		Overqualified	
	t_0	t_1	t_0	t_1	t_0	t_1
Time share						

t_0 n= 83,787

Results | Qualification Match

	Underqualified		Qualification match		Overqualified	
	t_0	t_1	t_0	t_1	t_0	t_1
Time share	29,7%		38,2%		32,1%	

t_0 n= 83,787

Hypothesis: augmentation of qualified care provision after 1 year of new work organization.

Results | Qualification Match

	Underqualified		Qualification match		Overqualified	
	t_0	t_1	t_0	t_1	t_0	t_1
Time share	29,7%	12,8%	38,2%	40,3%	32,1%	46,9%

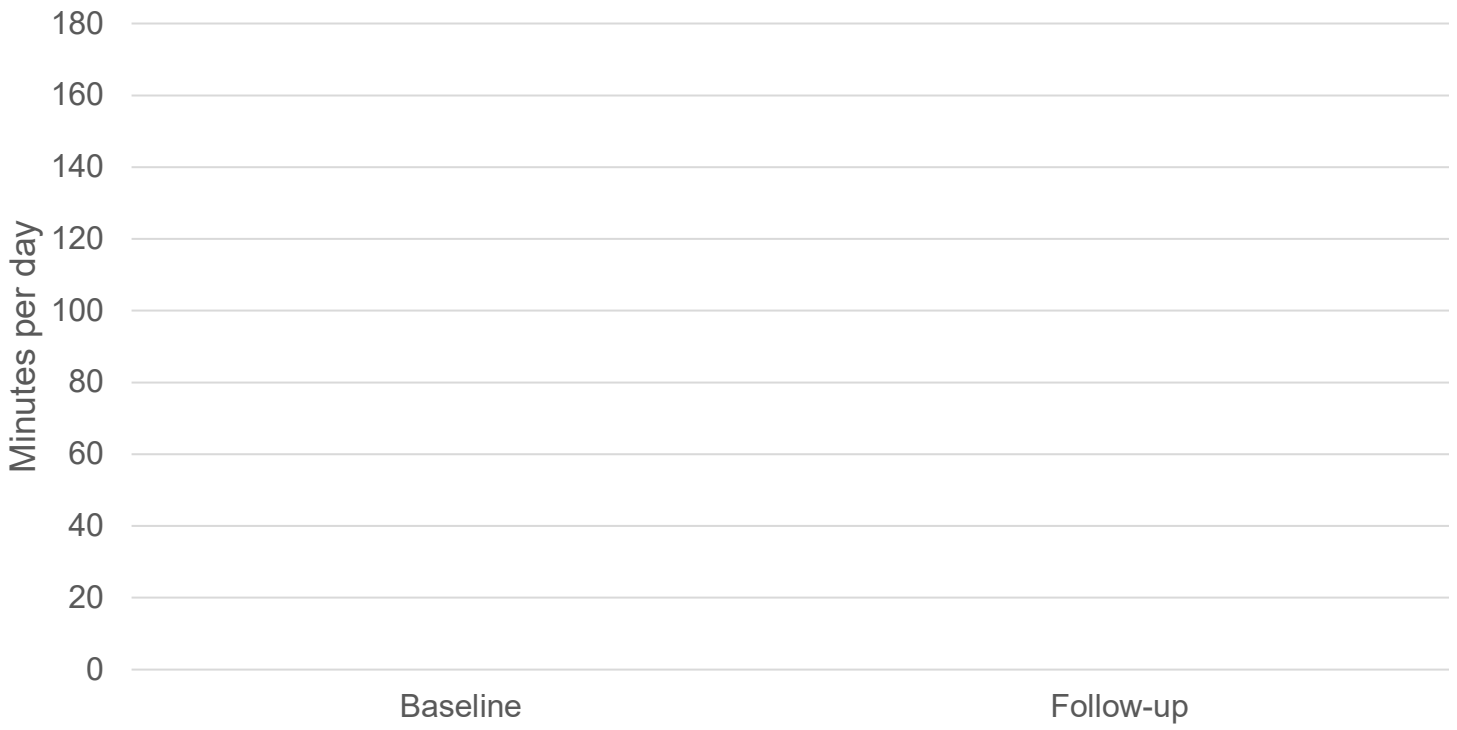
t_0 n= 83,787

t_1 n= 92,517

→ Substantial reduction of underqualified care provision.

→ Reduction of potential threats to quality of care.

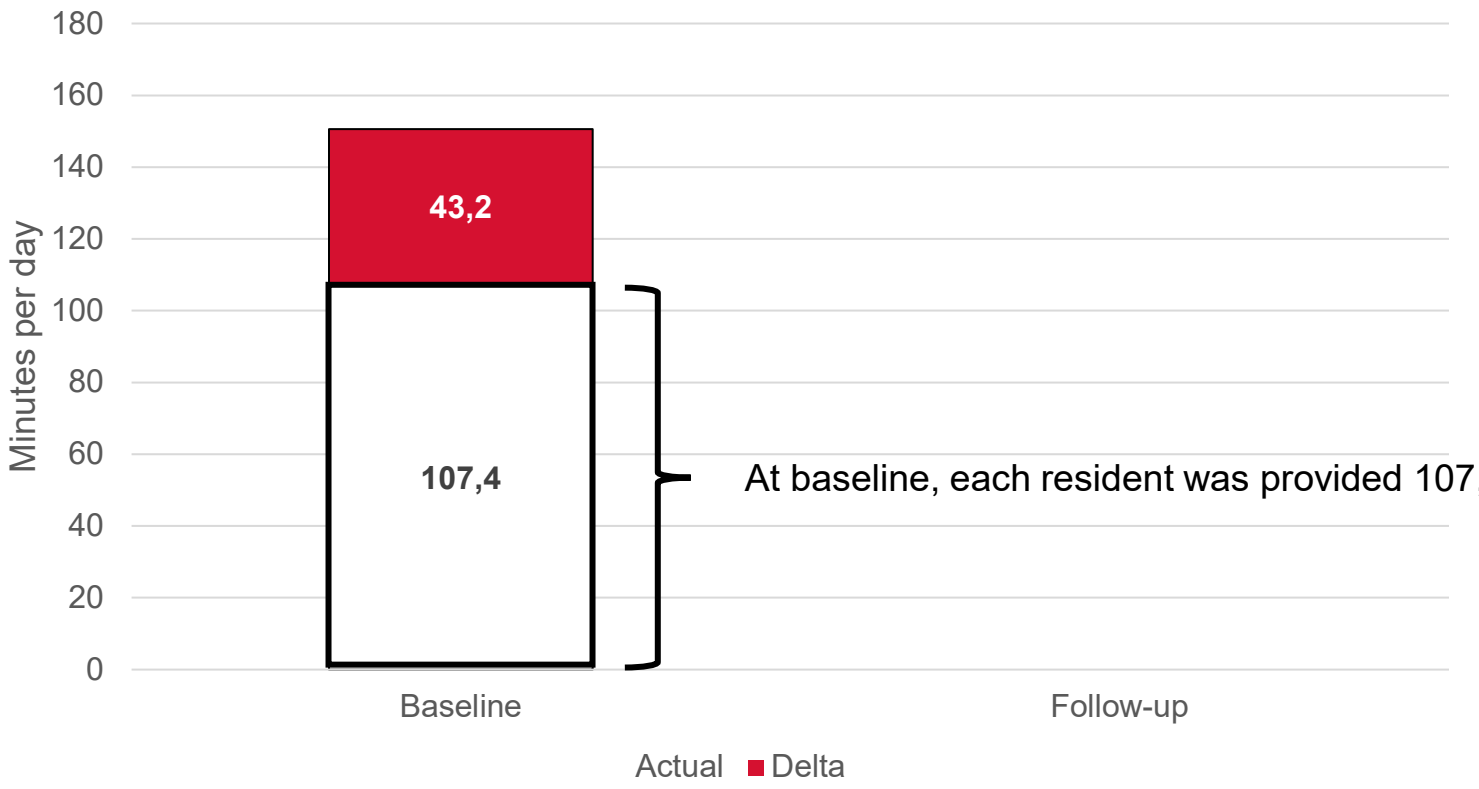
Results | Care time coverage



t_0 n= 29,203

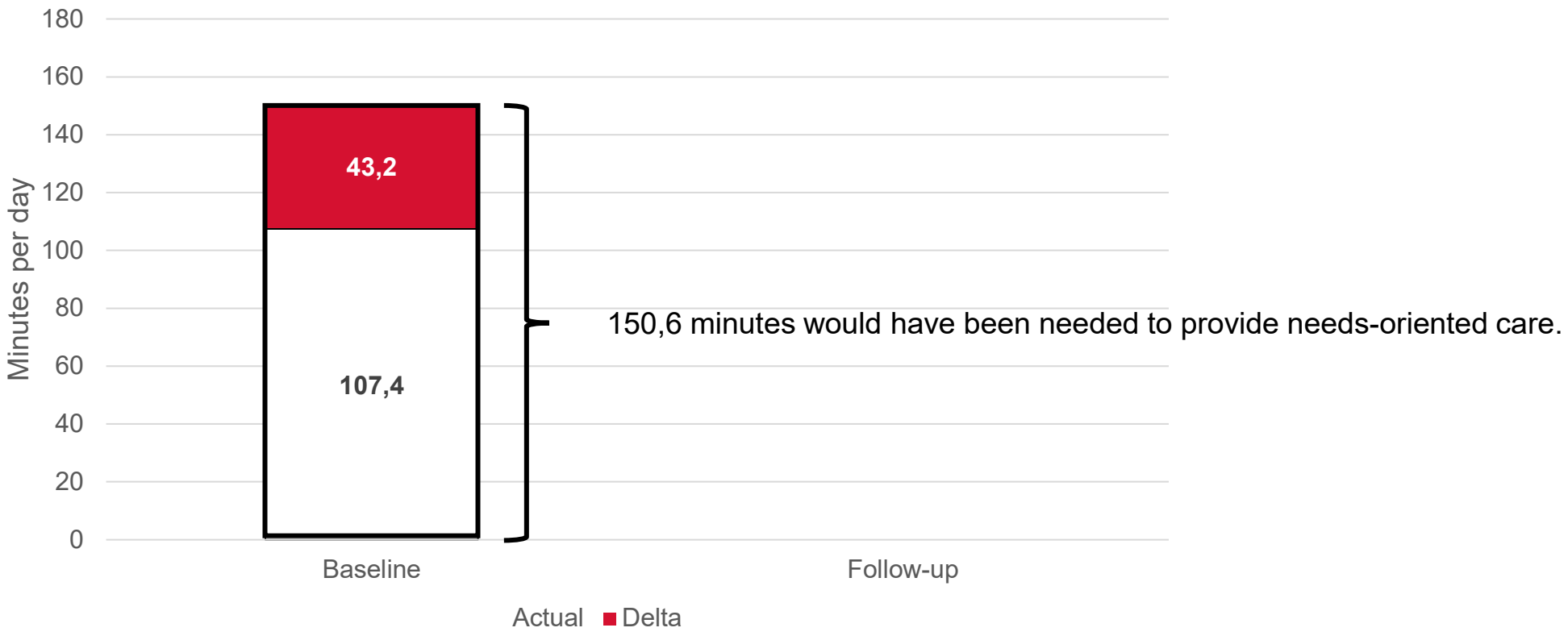
t_1 n= 27,309

Results | Care time coverage



At baseline, each resident was provided 107,4 minutes care time per day.

Results | Care time coverage



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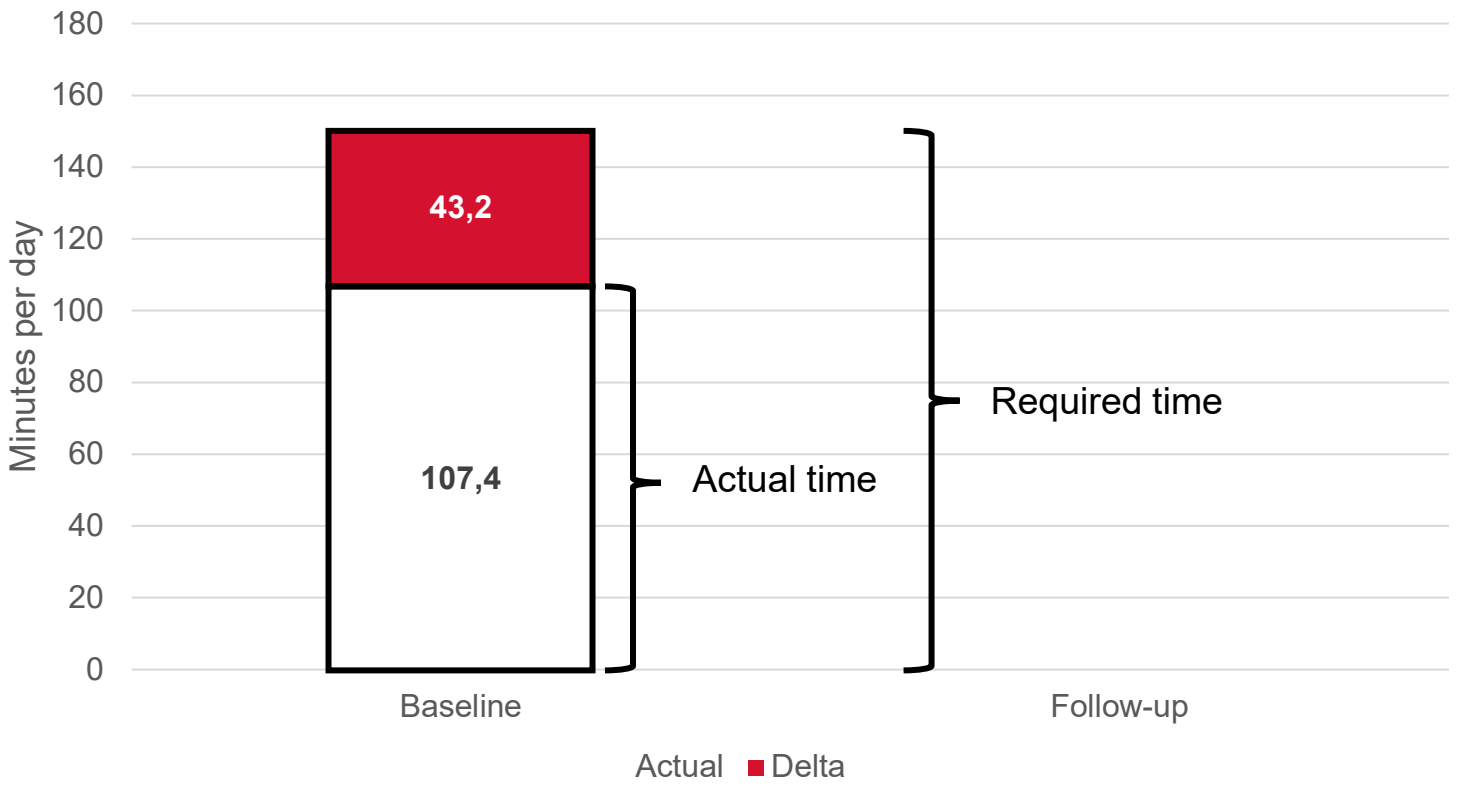
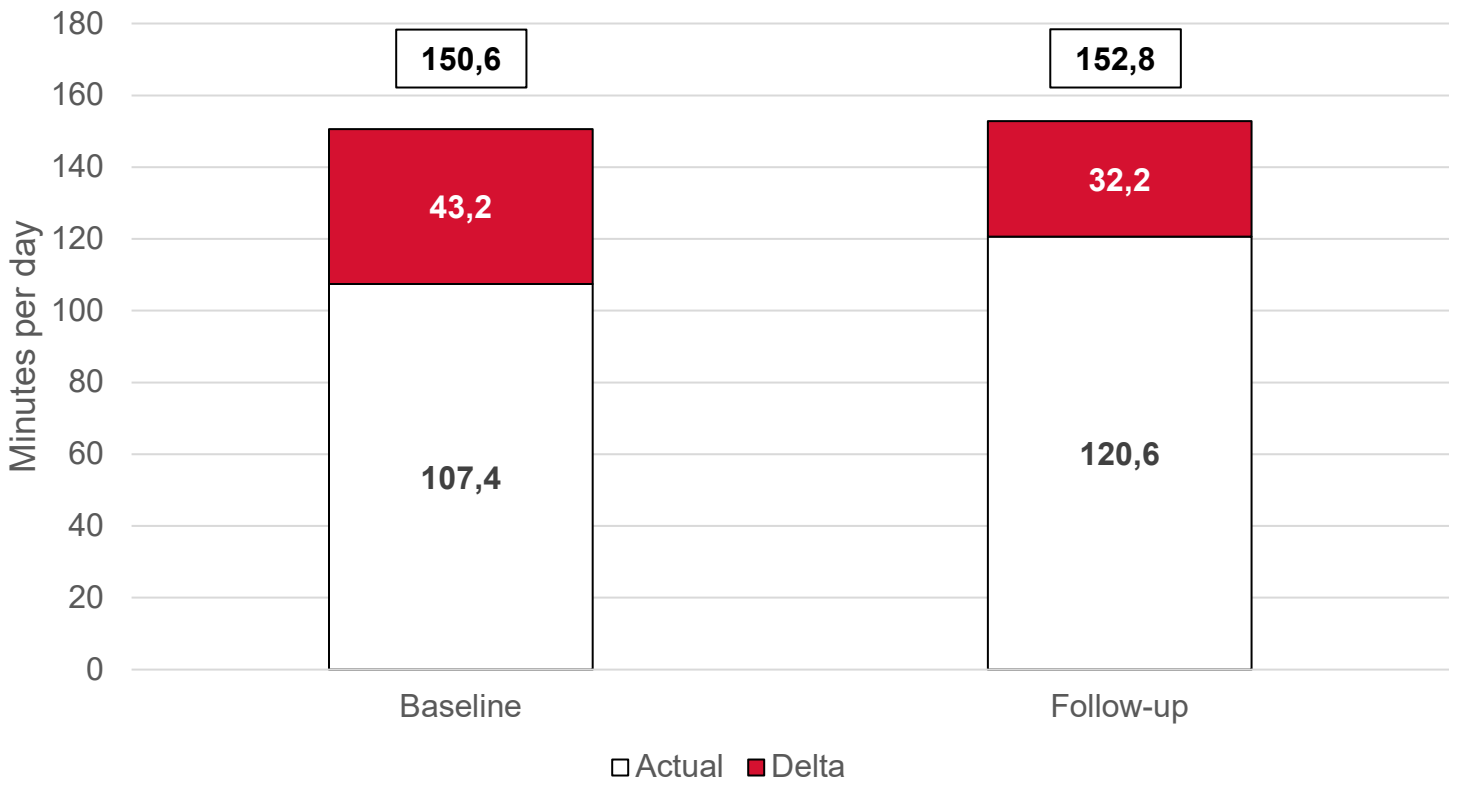


$$Care\ time\ coverage = \frac{Actual\ time}{Required\ time}$$

→ The higher the coverage, the more care needs are met.

Results | Care time coverage



Care time coverage

t_0 = 71,3%

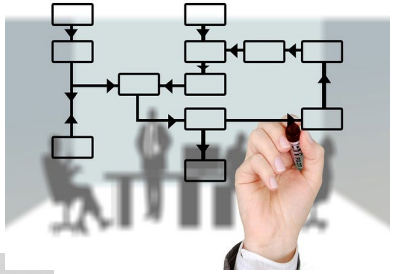
t_1 = 78,9%

Conclusion | More staff is not enough

→ Complex intervention shows positive results.

→ Reduction of potential threats to quality of care.

→ Higher share of met care needs.



source:
Pixabay

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Staffing policies should not only address how many staff is available, but also their organization in daily practice.

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Thank you for your attention!

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Backup

- Methods | Actual and Required Time Measurement
- Results | Staff and Residents

Methods – Actual and Required Time

Data collector observes care provision

1) Starts and stops time of care provision (**actual** care time)

2) Assesses substeps

hand desinfection was not provided (properly)

Standardized time surcharge (**required** care time)

Results | Staff and Residents

Significant improvements of job satisfaction and quality of life

Staff

- Less time pressure
- Better working conditions
- Higher job satisfaction

Residents

- More time from staff
- Better organization of daily routines
- Satisfaction with social participation and daily activities

Residents with cognitive impairment

- Improved quality of life