




Nurses as catalysts for quality & change

Anne Marie Rafferty DBE



With
thanks to:

- RN4Cast Consortium
 - Linda Aiken
 - Walter Sermeus
 - Danny van Heusden
 - EU FP7
 - Magnet4Europe Consortium
 - H2020
- 



Aims

- . to reflect on nurses' roles as catalysts for quality & role of evidence in driving policy change
- . to introduce an organizational intervention designed to improve quality of care and outcomes patients & nurses
- . to consider tactics and strategies nurses can use to champion quality & make change happen

Search input field

Health Econ Policy Law. 2018 Jul;13(3-4):475-491. doi: 10.1017/S1744133117000482. Epub 2018 Feb 14.

Nurses as change agents for a better future in health care: the politics of drift and dilution

Anne M Rafferty ¹

Affiliations + expand

PMID: 29441837 DOI: 10.1017/S1744133117000482

FULL TEXT LINKS

CAMBRIDGE Journals Online Full text

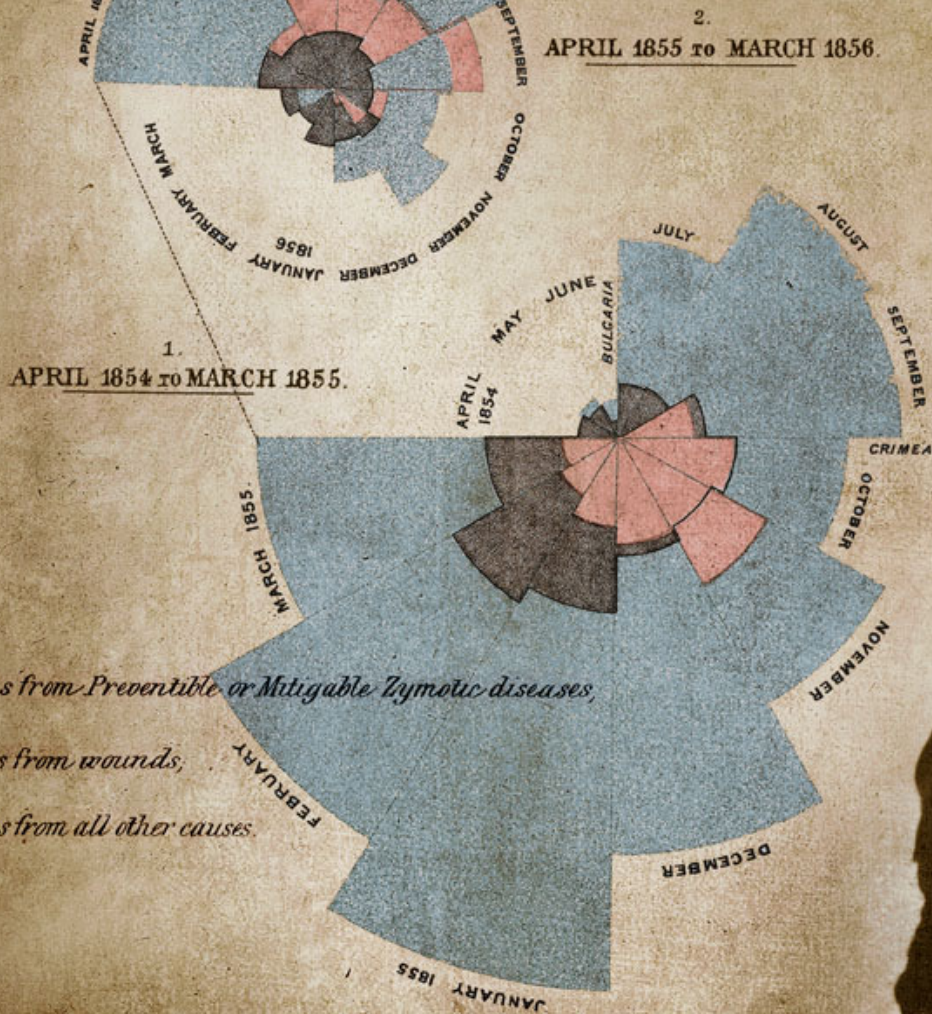
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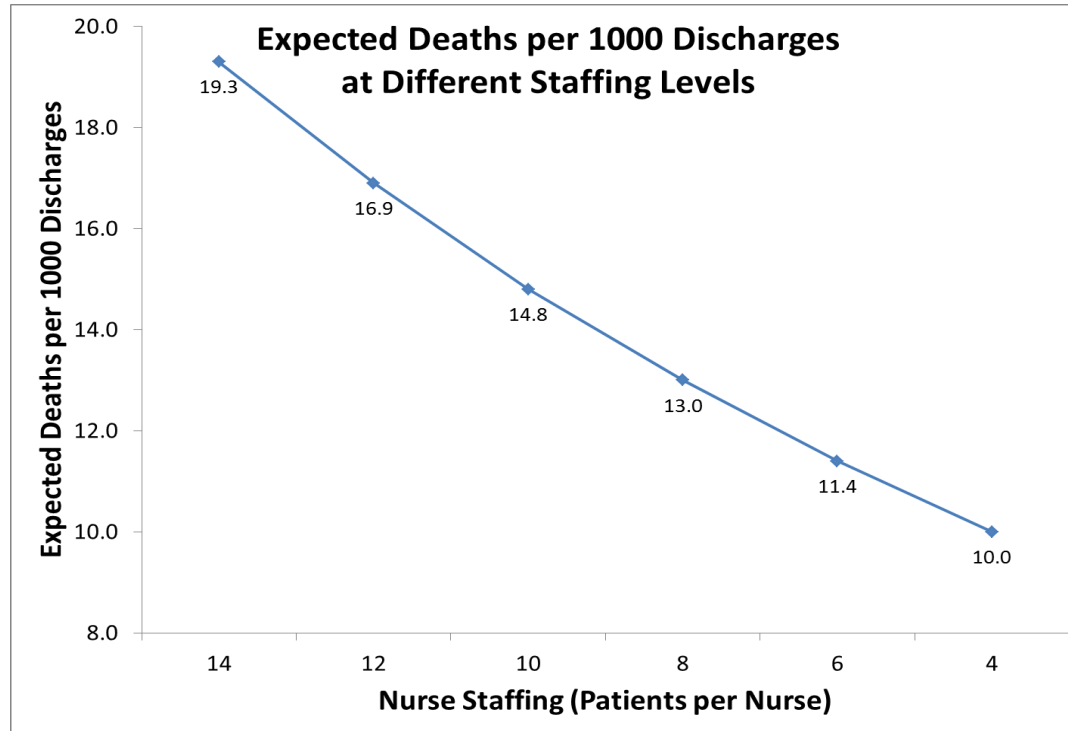
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DIAGRAM OF THE CAUSES OF MORTALITY
IN THE ARMY IN THE EAST.





Aiken et al., Lancet, 2014

Deaths are significantly lower in hospitals with fewer patients per RN and more bachelor's educated RNs

- Every 1 patient added to a RN's workload is associated with a 7% increase in deaths after common surgery
- Every 10% increase in bachelor's educated RNs is associated with 7% lower mortality
- If all hospitals in the 9 European countries in our study had at least 60% bachelor's RNs and RN workloads of no more than 6 patients each, more than 3500 deaths a year might be prevented

Nursing Standard, Aiken, Rafferty 2014

Nurse Staffing, Readmissions, Infections, Patient Satisfaction, Costs

- Patients in hospitals with **BETTER NURSE STAFFING** have lower odds of **INFECTIONS** and **HIGHER PATIENT SATISFACTION**
- Each 1 patient increase in RN workloads is associated with increases in **READMISSIONS** by:
 - 9% for heart failure, pneumonia, AMI
 - 8% hip & knee replacements
 - 3% for general surgery
 - 11% for children
- Cost of additional nurses is offset by **SAVINGS** in preventing expensive complications
- 40% fewer **ICU ADMISSIONS** after surgery for matched patients in hospitals with best compared to worst nurse resources
- McHugh et al., Medical Care 2013; Cimiotti et al, Am J Infection Control, 2012; Silber et al, JAMA Surgery, 2016; Aiken et al, BMJ Open, 2018

Cost + cost effectiveness of improved nurse staffing levels

The screenshot shows a web browser window displaying a PubMed article. The browser's address bar shows the URL `pubmed.ncbi.nlm.nih.gov/37742413/`. The PubMed logo is visible at the top left of the page, with a search bar and a 'Search' button to its right. Below the search bar are buttons for 'Save', 'Email', 'Send to', and 'Display options'. The article title is 'Costs and cost-effectiveness of improved nurse staffing levels and skill mix in acute hospitals: A systematic review'. The authors listed are Peter Griffiths, Christina Saville, Jane Ball, Chiara Dall'Ora, Paul Meredith, Lesley Turner, and Jeremy Jones. The article is identified as a 'Review' and is available 'Online ahead of print'. It is a 'Free article' and is linked to Elsevier Open Access. The page also features 'Cite' and 'Collections' buttons, and social media sharing options for Twitter, Facebook, and LinkedIn. The Windows taskbar at the bottom shows the time as 20:08 on 13/10/2023.

Costs and cost-effectiveness of improved nurse staffing levels and skill mix in acute hospitals: A systematic review

Review > Int J Nurs Stud. 2023 Sep 4;147:104601. doi: 10.1016/j.ijnurstu.2023.104601.
Online ahead of print.

Costs and cost-effectiveness of improved nurse staffing levels and skill mix in acute hospitals: A systematic review

Peter Griffiths¹, Christina Saville², Jane Ball³, Chiara Dall'Ora⁴, Paul Meredith⁵, Lesley Turner⁶, Jeremy Jones⁷

Affiliations + expand
PMID: 37742413 DOI: 10.1016/j.ijnurstu.2023.104601
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[Int J Nurs Stud.](#) 2018 Feb;78:10-15. doi: 10.1016/j.ijnurstu.2017.08.004. Epub 2017 Aug 24.

Post-operative mortality, missed care and nurse staffing in nine countries: A cross-sectional study

Jane E Ball¹, Luk Bruyneel², Linda H Aiken³, Walter Sermeus², Douglas M Sloane³, Anne Marie Rafferty⁴, Rikard Lindqvist⁵, Carol Tishelman⁶, Peter Griffiths⁷; RN4Cast Consortium

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PMID: 28844649 PMCID: PMC5826775 DOI: 10.1016/j.ijnurstu.2017.08.004

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OPEN ACCESS

ORIGINAL RESEARCH

Nurse staffing and inpatient mortality in the English National Health Service: a retrospective longitudinal study

Ben Zaranko ¹, Natalie Jean Sanford ², Elaine Kelly,^{1,3} Anne Marie Rafferty,² James Bird,⁴ Luca Mercuri,⁵ Janice Sigsworth,⁴ Mary Wells ⁴, Carol Propper^{1,6}

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To cite: Zaranko B, Sanford NJ, Kelly E, et al. *BMJ Qual Saf* Epub ahead of print; please include Day Month Year]. doi:10.1136/bmjqs-2022-015291

ABSTRACT

Objective To examine the impact of nursing team size and composition on inpatient hospital mortality.

Design A retrospective longitudinal study using linked nursing staff rostering and patient data. Multilevel conditional logistic regression models with adjustment for patient characteristics, day and time-invariant ward differences estimated the association between inpatient mortality and staffing at the ward-day level. Two staffing measures were constructed: the fraction of target hours worked (fill-rate) and the absolute difference from target hours.

Setting Three hospitals within a single National Health Service Trust in England.
Participants 19 287 ward-day observations with information on 4498 nurses and 66 923 hospital admissions in 53 inpatient hospital wards for acutely ill adult patients for calendar year 2017.

Main outcome measure In-hospital death.
Results A statistically significant association between the fill-rate for registered nurses (RNs) and inpatient mortality (OR 0.9883, 95% CI 0.9773 to 0.9996, p=0.0416) was found only for RNs hospital employees. There was no association for healthcare support workers (HCSWs) or agency workers. On average, an extra 12-hour shift by an RN was associated with a reduction in the odds of a patient death of 9.6% (OR 0.9044, 95% CI 0.8219 to 0.9966, p=0.0416). An additional senior RN (an NHS pay band 7 or 8) had 2.2 times the impact of an additional band 5 RN (fill-rate for bands 7 and 8: OR 0.9760, 95% CI 0.9551 to 0.9973, p=0.0275; band 5: OR 0.9893, 95% CI 0.9771 to 1.0017, p=0.0907).

Conclusions RN staffing and seniority levels were associated with patient mortality. The lack of association for HCSWs and agency nurses indicates they are not effective substitutes for RNs who regularly work on the ward.

INTRODUCTION

Teams of nursing staff play a critical role in healthcare delivery. Identifying strategies to optimise the staffing of these teams is a priority for health service providers and policymakers. A growing body of research suggests that a richer nursing skill-mix,

greater education levels and higher nurse-to-patient ratios are associated with better patient outcomes, increased staff well-being, decreased healthcare spending and improved workforce retention.^{1–11} Patient outcomes that have been examined include mortality,^{8–11,12} missed care^{13–18} and nurse-driven outcomes like pressure injuries, falls and medication errors.^{14–17–20–22} While there is consensus that improving nurse staffing improves patient outcomes, the role of the nursing team and the impact of its size and composition on outcomes remains relatively unexplored. Human capital theory suggests that team composition, in addition to size, matters. Becker²³ distinguishes between general and firm-specific human capital. The former is derived from higher skills or qualifications. The latter is built up from the workers' familiarity with their physical environment and co-workers. Teams are composed of individuals with different levels of general and firm-specific human capital and these factors, in addition to team size, will influence outcomes.

Exploration of the role of different types of human capital has been undertaken in various settings outside^{24–26} and inside^{28–30} healthcare. Related research has examined skill-mix, an element of human capital, in the nursing context.^{27–32} This has typically been done by distinguishing between two groups: registered nurses (RNs) and healthcare support workers (HCSWs). RNs are fully qualified nurses on the Nursing and Midwifery Council register, who have completed formal training and typically hold a university diploma or degree-level qualification.

Zaranko, B., Sanford, N. J., Kelly, E., Rafferty, A. M., Bird, J., Mercuri, L., ... & Propper, C. (2022). Nurse staffing and inpatient mortality in the English National Health Service: a retrospective longitudinal study. *BMJ quality & safety*.

- **Nurses Save Lives:**
 - One additional nurse during a 12-hour shift decreases the individual odds of patient death by 9.6%
 - Senior nurses are especially valuable (Bands 7 or 8 have 2.2x the effect of Band 5 nurses)
 - Adding healthcare support workers or agency nurses has no statistically significant effect

Research on Nurse Staffing Interventions

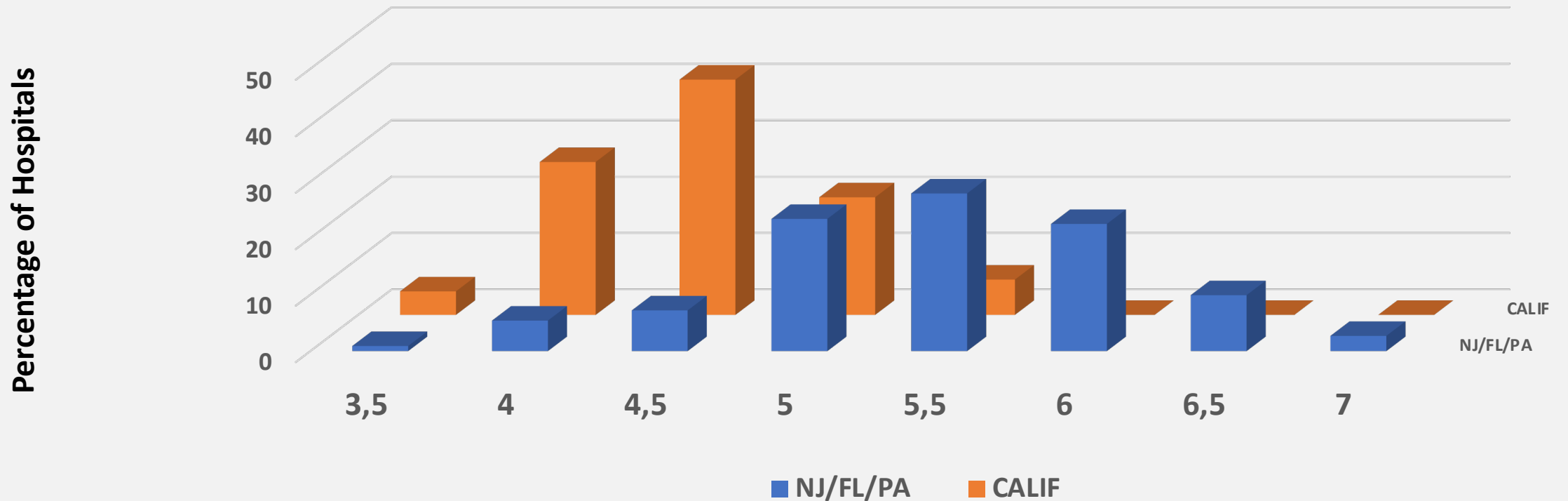
- Victoria, AU, in 2000 1st public jurisdiction to establish nurse-to-patient ratios but little outcomes research
- California 2004 unfunded legislative mandate associated with
 - improved staffing and more rapid decline in mortality
 - improved nurse outcomes and end nurse shortage
 - historic gains for safety net hospitals and their patients
 - no major adverse unintended consequences
- Wales, Scotland, Ireland (pilot), Queensland, AU (27 public sector hospitals)

Establishing a Minimum Nurse Staffing Standard in Hospitals

- Research from other countries suggests this could improve quality of care, patient outcomes, and **nurse recruitment and retention** in England
- Other countries have accomplished this as an unfunded mandate

15 years later **California hospitals** still have significantly better RN staffing and hospital outcomes than other states

Patient to RN ratios



Results One Year After Implementation of Patient to Nurse Ratios in Queensland, AU

Reduction of 1 patient per nurse in 1st year associated with significantly lower odds of:

Mortality	12%
Failing grade on patient safety	35%
Failing grade on infection prevention	12%
Patients rating hospital less than excellent	8%
Patients would not recommend hospital	12%
Inadequate time to complete necessary care	16%
Inadequate time to detect patient changes	13%
Nurse job dissatisfaction	8%
Nurse burnout	7%

Data Source:
RN4CAST-Australia



International Council of Nurses
The global voice of nursing

RECOVER TO REBUILD



INVESTING IN THE NURSING WORKFORCE
FOR HEALTH SYSTEM EFFECTIVENESS

March 2023

Authors

James Buchan, Adjunct Professor, University of Technology, Sydney

Howard Catton, Chief Executive Officer, International Council of Nurses

“The shortage of nurses should be treated as global health emergency...”

[https://www.icn.ch/system/files/2023-03/ICN Recover-to-Rebuild report EN.pdf](https://www.icn.ch/system/files/2023-03/ICN_Recover-to-Rebuild_report_EN.pdf)



Magnet4Europe:

Improving Mental Health and Wellbeing in the Healthcare Workplace

Funded under: H2020-EU.3.1.2

June 2022

The Magnet4Europe study described herein is under the European Union's Horizon 2020 Research and Innovation programme from 2020 to 2023 (Grant Agreement 848031). The protocol of Magnet4Europe is registered in the ISRCTN registry (ISRCTN10196901).

Magnet4Europe Consortium



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Oliver Sergeant



Prof. Peter Van Bogaert, Danny Van Heusden, Dr. Kaat Siebens, Paul Van Aken

About the project



www.magnet4europe.de



Twitter: @magnet4europe

Magnet4Europe at a Glance

Duration

01/2020 – 12/2023

Objective

To evaluate the effect of organizational redesign, guided by the Magnet[®] blueprint of organizational redesign, on nurses' and physicians' mental health.

Design

Wait-list cluster randomized controlled trial with a nested mixed-methods evaluation

Sample

Acute general hospitals (n=67) in six European countries (Belgium, Germany, Ireland, Norway, Sweden, UK)

Proposed intervention: Magnet[®] hospital intervention



Transformational
Leadership



Structural
Empowerment



Exemplary
Professional
Practice

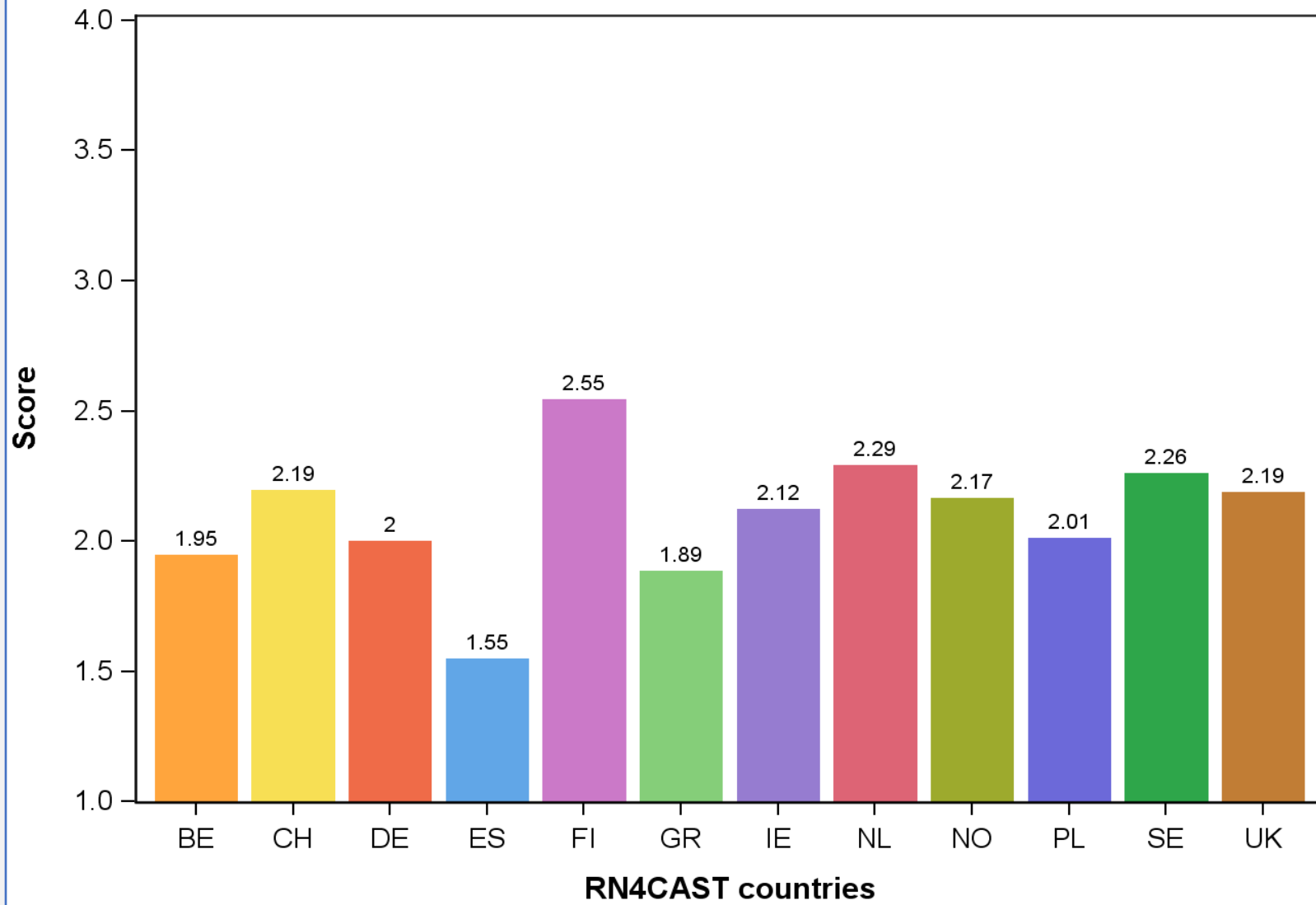


New
Knowledge



Empirical
Quality Results

Opportunity for registered nurses to participate in policy decisions



Invisible women

Nursing indicators

The screenshot shows a web browser window displaying the author's website for 'Invisible Women'. The browser's address bar shows the URL 'carolinecriadoperez.com/book/invisible-women/'. The website header features the author's name 'CAROLINE CRIADO PEREZ' and a navigation menu with links for 'Books', 'Speaking', 'About', 'Media', 'News', and 'Contact'. The main content area is a red background with two book covers. The left cover is a 3D perspective view of the book, with the title 'INVISIBLE WOMEN' and author 'CAROLINE CRIADO PEREZ' clearly visible. It includes several endorsements: 'Eye-opening' by Cordelia Fine, 'HELL YES!' by Caitlin Moran, 'The Sunday Times Bestseller', 'Exposing data bias in a world designed for men', 'Hugely readable' by Robert Webb, and 'A game-changer' by The Times. The publisher 'VINTAGE' is noted at the bottom. The right cover is a flat 2D view of the same book, featuring the same text and endorsements. Below the 2D cover is a red button labeled 'BUY NOW'. The Windows taskbar at the bottom shows the search bar, task view, and various application icons, with the system clock indicating 12:23 on 08/06/2022.

Invisible Women | Caroline Criado Perez

Not secure | carolinecriadoperez.com/book/invisible-women/

Microsoft Office Ho... Intranet Home Islington Women's... REFweb Ways into creative... Spain Travel Health Day 2 COVID-19 tra... Spain travel advice...

CAROLINE CRIADO PEREZ Books Speaking About Media News Contact

'Hell yes'
CAITLIN MORAN

'Hugely readable'
ROBERT WEBB

Eye-opening
CORDELIA FINE

'HELL YES!'
CAITLIN MORAN

THE SUNDAY TIMES BESTSELLER

INVISIBLE WOMEN

EXPOSING DATA BIAS IN A WORLD DESIGNED FOR MEN

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THE TIMES

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INVISIBLE WOMEN

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CAROLINE CRIADO PEREZ

Hugely readable
ROBERT WEBB

A game-changer
THE TIMES

BUY NOW

Type here to search

12:23
08/06/2022

MARIANA
MAZZUCATO
THE VALUE OF
EVERYTHING

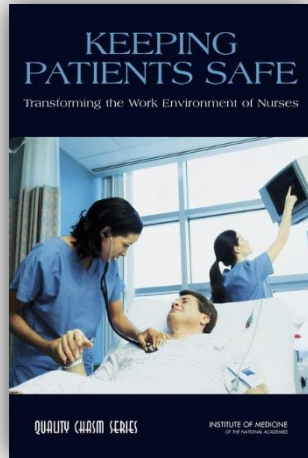
MAKING AND
TAKING IN
THE GLOBAL
ECONOMY

'Forces us to confront long-held
beliefs about how economies work
and who benefits'

MARTIN WOLF, FINANCIAL TIMES



Nurses matter: nurses are an asset and not a cost



“As nurses are the largest component of the health care workforce, and are also **strongly involved in the commission, detection, and prevention of errors and adverse events**, they and their environment are **critical elements** of stronger patient safety defences”.

IOM, 2004



Effects of Nurse Staffing and Nurse Education on Patient Deaths in Hospitals With Different Nurse Work Environments

Aiken, Linda H. PhD, RN¹; Cimiotti, Jeannie P. DNSc, RN²; Sloane, Douglas M. PhD³; Smith, Herbert L. PhD⁴; Flynn, Linda PhD, RN⁵; Neff, Donna F. PhD, APRN⁵

Author Information ©

Medical Care: December 2011 - Volume 49 - Issue 12 - p 1047-1053
doi: 10.1097/MLR.0b013e3182330b6e

“decreasing nurse workloads by 1 patient per nurse had **no measurable effect** in hospitals with **poor work environments**, while **reducing** the odds of death by 9-10% in hospitals with the **best work environments** ”

(Aiken et al, 2011)



Business case

- “A business case is a **recommendation** to decision makers to take a particular course of action for the organization” (Gambles, 2009)
- The development of a business case is a **strategic tool for change** (Weaver & Sorrell-Jones, 2007)
- “ A well-developed business case **can provide** strategic rationale for change, generate robust comparative data for analysis, and mobilize support for innovation” (Shirey,2011)
- Building BC: **Alignment** with strategic priorities of the organization as well as organizational vision and mission (Drenkard 2022)

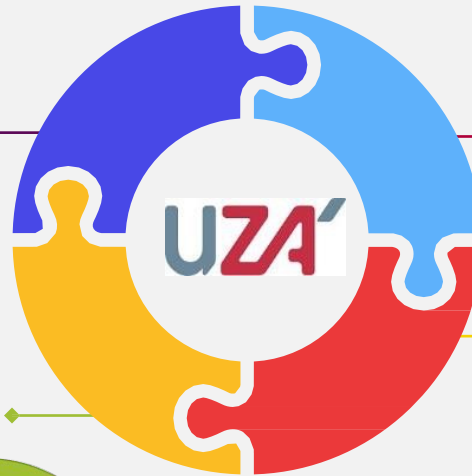
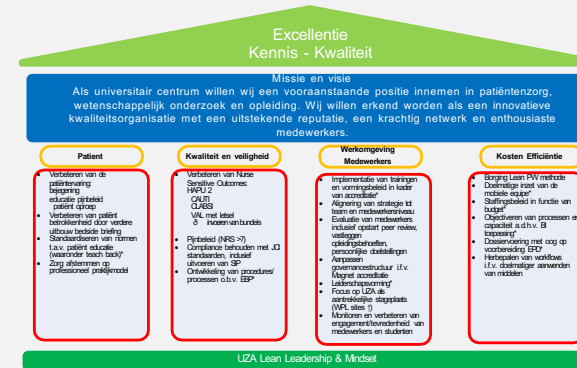
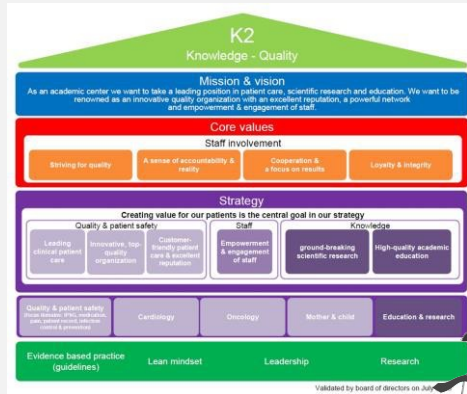


Our secret sauce



- **Strong leadership**
- **The nurse strategic plan**
- **Collaboration**

Alignment: from corporate strategy to individual goal



UZAstrategy

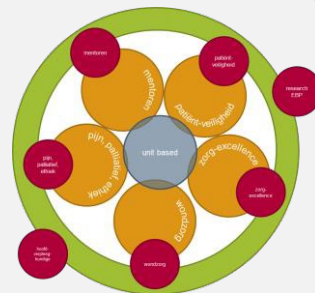
Departement strategy

Goals unit level

Feedback loop

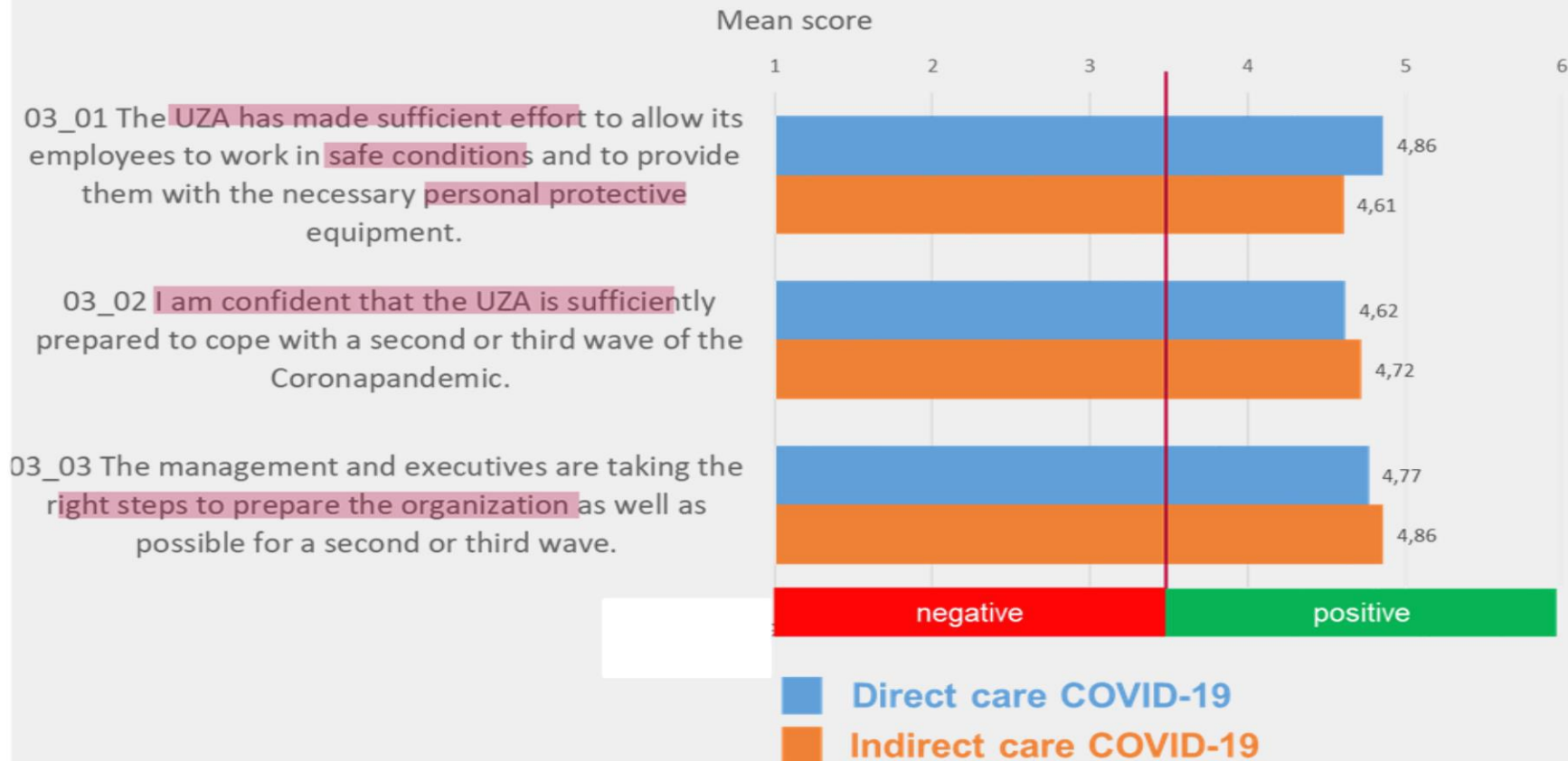
Doelstellingen afdeling: 2016 -2018

Doelstelling	indicator	Laatste resultaat	Wie is aanspreekpunt	Acties
Verbeteren van prevalentie CAUTI met X %	CAUTI	Q2 2016	Ref. VK patientveiligheid	Focus op HOUDINI
Verbeteren van prevalentie CLABSI met X %				
Verbeteren van prevalentie HAPU 2 met X %				
Verbeteren van prevalentie Vallen met letsel met X %				
Patiënt ervaring: zich voorstellen aan de patiënt				



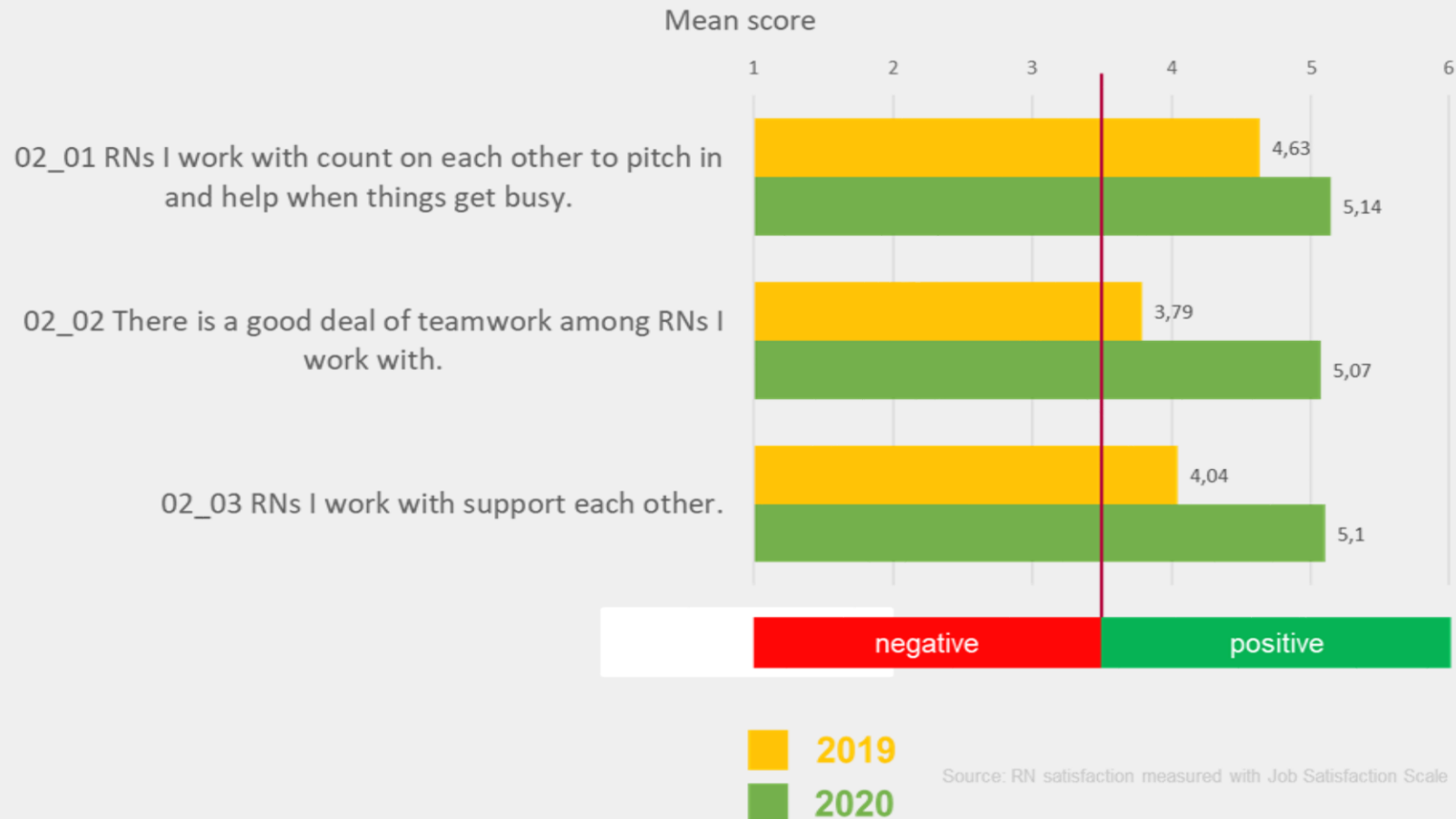
Leadership and trust

Leadership and trust



Interaction between nurses

Interaction between nurses



Source: RN satisfaction measured with Job Satisfaction Scale

Intention to leave

Intention to leave

	UZA	RN Forecast Flanders (BEL)
2009	7,0	29,9
2013	6,8	-
2020	7,7	28,9

The Pro-Judge Study

Inside the Black Box of Nurses' Professional Judgement in Nurse Staffing
Systems in England and Wales

Aims

- How do clinical leaders and nurse managers deploy professional judgement in assessing need, planning staffing levels, deploying nurses, and organising nursing work in response to changing demand patterns?
- What are the skills and knowledge that underpin nurses' professional judgments on staffing decisions?
- How do nurses articulate professional judgement in nurse staffing decisions?
- What weight is given to professional judgement in the triangulated approach to staffing decisions?
- What is the relationship between professional judgement, planning tools, and nurse sensitive patient outcomes data?
- Are there elements of nurses' professional judgement that could be supported by new measurement or decision tools?
- What are the implications of the research for nurse education, professional development, and leadership?
- What are the implications of the research for nurse staffing systems and future policy and practice?

SUMMARY FINDINGS



1. Despite national policy differences in England and Wales, the role of professional judgement in nurse staffing systems followed a common pattern.



2 Two kinds of professional judgement were deployed in the nurse staffing systems: the judgement of clinical nurses and the judgement of senior nurse managers.



3. Nurses' professional judgement was central to the generation of data, its interpretation and contextualisation.



4. Healthcare organisations relied on the professional judgements of clinical nurses and senior nurse managers in making operational decisions to mitigate risk, where real-world understanding of the status of the organisation was privileged over formal data.



5. Professional judgement had attenuated authority for the purposes of workforce planning, where data was a master actor and strategic decision-making prioritised safety and efficiency rather than quality.



6. Nurses expressed concerns that formal measurement systems did not capture important aspects of care quality or staff wellbeing, which made it difficult to articulate their professional judgement for the purposes of workforce planning.



7. There were no obvious differences in the policy impacts between England and Wales.



8. The operation of staffing systems in England and Wales were impacted by the workforce and recruitment challenges.



The operation of staffing systems in England and Wales were impacted by financial constraints.

On the picket line in Northern Ireland





**SAFE STAFFING
SAVES LIVES**

Will there be
enough staff when
you need care?
Today's shortages
cost lives



**FAIR PAY
FOR NURSING**

It's time
to pay
nursing
staff fairly

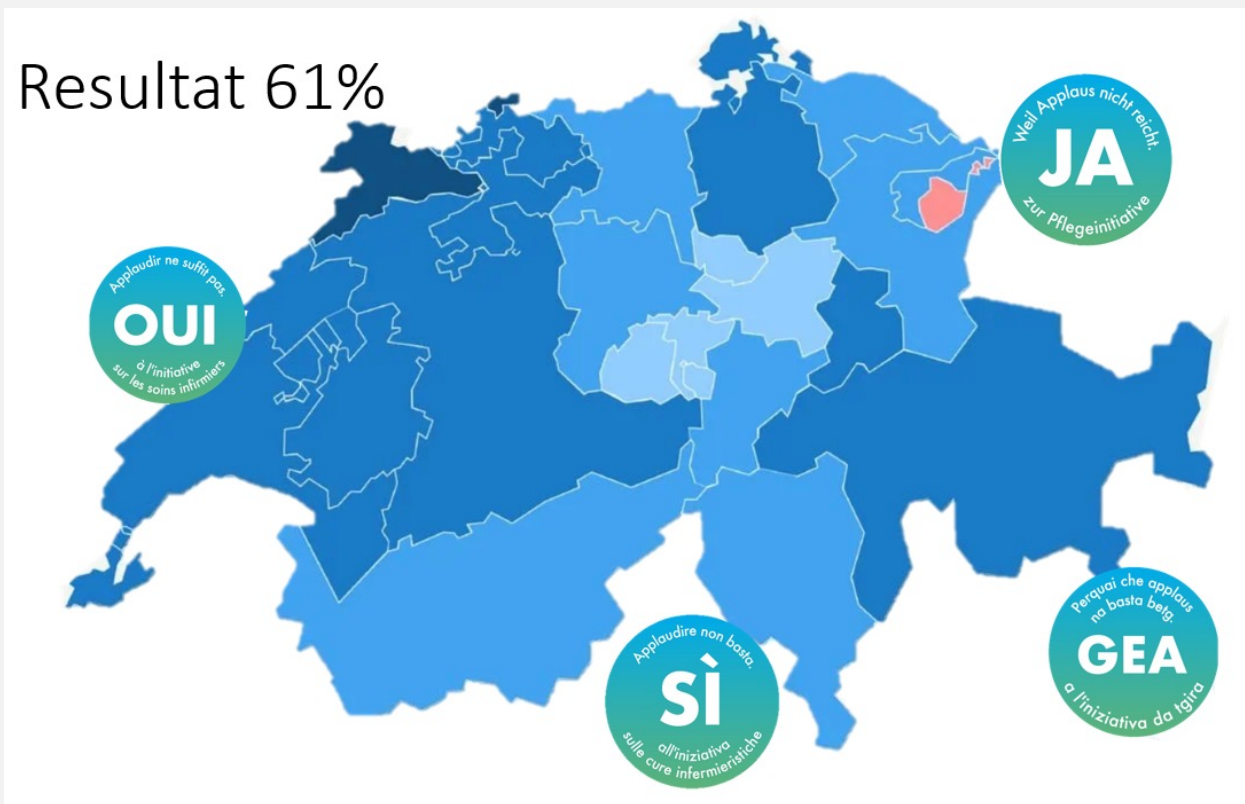


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Vous souvenez-vous?



Campaigning

- Let's start to think of nursing as a social movement and agent for change
- What's good quality for nurses is ultimately good for patients, communities and the population as a whole
- Let's learn from workforce legislation successes internationally as we run the Safe Staffing campaigns and share ideas
- **THANK YOU. ANY QUESTIONS?**



empowerment

When I dare to be powerful, to use my strength in the service of my vision, then it becomes less important whether I am afraid' (Audre Lord)



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