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Health Reform Monitor

Improving hospital nurse staffing during the pandemic: Implementation of the 2019 Fund for Health Care Staff in Belgium

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ABSTRACT

Chronic hospital nurse understaffing is a pre-existing condition of the COVID-19 pandemic. With nurses on the frontline against the pandemic, safe nurse staffing in hospitals is high on the political agenda of the responsible ministers of Health. This paper presents a recent Belgian policy reform to improve nurse staffing levels. Although the reform was initiated before the pandemic, its roll-out took place from 2020 onwards. Through a substantial increase of the hospital budget, policy makers envisaged to improve patient-to-nurse ratios. Yet, this ambition was considerably toned down during the implementation. Due to a shortage of nurses in the labour market, hospital associations successfully lobbied to allocate part of the budget to hire non-nursing staff. Moreover, other healthcare settings claimed their share of the pie. Elements of international best-practice examples such as ward managers supernumerary to the team and increasing the transparency on staffing decisions were adopted. Other measures, such as mandated patient-to-nurse ratios, nurse staffing committees, or the monitoring or public reporting of ratios, were not retained. Additional measures were taken to safeguard that bedside staffing levels would improve, such as the requirement to demonstrate a net increase in staff to obtain additional budget, staffing plan’s approval by local work councils and recommendation to base staff allocation on patient acuity measures. This policy process makes clear that the engagement of budgets is only a first step towards safe staffing levels, which needs to be embedded in a comprehensive policy plan. Future evaluation of bedside nurse staffing levels and nurse wellbeing is needed to conclude about the effectiveness of these measures and the intended and unintended effects they provoked.

1. Introduction

Nurses’ contribution as frontline responders to the COVID-19 pandemic is widely recognized [1]. Nevertheless, many countries faced the largest challenge of modern healthcare with a nursing workforce that was already under strain as a consequence of chronic nurse understaffing. [2] As the pandemic continued, an increasing number of reports on the detrimental impact of this crisis on nurse wellbeing is getting published [3–6]. This resulted in a plea for rapid and substantial investments in nursing. Central and recurrent elements to improve working conditions are decreasing patient-to-nurse ratios and increasing salary [7]. This demand for improved working conditions is not new. Among others, the International Council of Nurses [8] published in 2018 a position statement on evidence-based staffing with recommendations for safe nurse staffing levels based on more than two decades of research illustrating that lower nurse staffing levels are associated with poor patient outcomes and wellbeing [9–12].

Several countries used this evidence to set up safe staffing policies. While the strategies vary (e.g. mandatory patient-to-nurse ratios in California, Victoria and Queensland [13]; creating transparency through staffing plans in England [14]; nurse staffing allocation based on patient acuity measurement in Ireland, mandated nurse staffing committees in Texas, differentiated inpatient nursing fees based on staffing levels in South-Korea [15]), all policies aim to improve patient outcomes and increase the attractiveness of the nursing profession [16,17].

In Belgium, no major policy action was undertaken in the past...
decade to achieve safe nurse staffing levels. This is remarkable since Belgium pioneered this research in Europe [18] illustrating, via the RN4CAST-study (2009), that patient-to-nurse ratios in Belgian hospitals are high (10.4 patients per nurse in 2009) in a European context and detrimental to secure safe patient care [18–21]. Contrary to other European countries (e.g. Wales [22], Scotland [23], Ireland [24], England [25], Germany [26]), this did not result in policy changes so far.

Ten years later – in 2019 – the RN4CAST-study was replicated in Belgium [16]. Between 2009 and 2019, there was a slight improvement in nurse staffing levels (i.e. decrease in the average patient-to-nurse ratio and increase in percentage of nurses with a Bachelor’s degree). While nurse staffing improved, also the ‘intensity of nursing care’ increased, due to the substitution from inpatient to day care, reduced length of stay and higher patient turnover [17]. Hence, the improvement in the Belgian patient-to-nurse ratios seems to be insufficient to accommodate the increase in intensity, evidenced by an increase in nursing care being left undone, which potentially puts patients at risk [17]. Moreover, more than one in three nurses reported to be dissatisfied with the job, to be at risk for burnout and having the intention to leave the job [17]. This led to a strong recommendation by the Belgian Healthcare Knowledge Centre (KCE; see acknowledgment section for more details about this organisation) to implement a safe nurse staffing policy in Belgium including five main action points: (1) install safe patient-to-nurse ratios (i.e. a maximum number of patients per nurse) adapted to the patient acuity levels of different disciplines; (2) monitor patient-to-nurse ratios and related factors (e.g. nursing work environment, patient acuity, nurse well-being) via a nationwide data-information system; (3) increase the use of nurses’ expertise by investing in ‘supporting roles’ that should complement nursing staff (not substitute them); (4) stimulate the hospital sector to implement a culture and practice where staffing matters from board to bedside; (5) evaluate the impact of the policy measures [17].

It lasted until the end of 2019 for policymakers to undertake significant action to improve nurse staffing levels in Belgian hospitals. With the creation of a ‘Fund’ a yearly budget increase for hospitals was provided. This additional budget, earmarked to hire (nursing) staff, has as main objective to improve the working conditions of bedside nursing staff and provide safe staffing levels.

This paper aims to describe this reform that aimed to improve nurse staffing levels, the actors involved during the implementation as well as the (dis-)advantages of the criteria used to implement the reform.

2. Political and policy context

2.1. Federal level decides on the budget, federated entities on licensing standards

The way the reform was implemented can be understood only against the background of macro-level governance arrangements in the Belgian healthcare system as competencies are shared between the federal level and the federated entities (Brussels, Flanders, Wallonia). Also with regard to hospital nurse staffing levels, responsibilities are shared between the federal (financing) and the federated entities (licensing standards which include pre-requisites about medical and nurse staffing, architecture and equipment, etc. to obtain a license). Yet, when the federated entities want to change licensing standards (e.g. mandatory patient-to-nurse ratios) with implications on the federal budget (e.g. additional budget to implement these staffing levels) this cannot be implemented without consent of the federal level. In contrast, the federal level can make changes to the hospital payment system (e.g. changes in budget and allocation rules) without involvement of the federated entities. Nevertheless, the federal Minister of Health must involve several stakeholder groups at various points in the decision-making process. Decisions about the overall budget and division across sectors must be concluded by the General Council of the National Institute for Health and Disability Insurance (NIHDI) which includes representatives of the government and the sickness funds but also of employers, employees and self-employed workers. Before changing the rules of the hospital payment system an advisory committee under auspices of the Ministry of Public Health (i.e. the Federal Committee of Hospital Facilities) has to be consulted. This committee includes representatives of several stakeholder groups (i.e. hospital umbrella organisations representing both acute and psychiatric hospitals; the professional organisations of nurses and physicians) [27]. As a consequence, several stakeholder groups have a large impact on the final decision regarding the budget for healthcare, its repartition between sectors and the final rules on how the hospital payment system is designed.

The hospital payment system is a closed-end budget that is distributed among hospitals via a complex set of rules. An important part is the basic budget for nurse staffing which is distributed based on the calculation of the number of justified beds per discipline (e.g. internal medicine, surgery, paediatrics) and the corresponding nurse-to-bed ratios for these services (e.g. 12 FTE per 30 internal medicine and surgical beds; 13 FTE per 30 paediatric beds). However the fact that ‘justified beds’ are not used for psychiatry hospitals illustrates the complexity in allocating the national budget. The number of ‘justified’ beds in acute hospitals is different from the licensed or operational beds in the hospital, as it is a financial ‘currency’ based on the national average length of stay per diagnosis related group (DRG) and the hospital case-mix. Furthermore, the hospital payment system includes a structural underpayment of nursing staff i.e. the amount per FTE allocated via the payment system does not cover the actual salary costs [28]. In addition to the basic budget, hospitals receive a budget based on the intensity of nursing care (i.e. calculated via the Belgian Nursing Minimum Data Set, B-NMDS), type of hospital (i.e. compensation for ‘academic role’), collective labour agreements (CLA) and other policy measures (e.g. float pools) [17,28].

The predominant financing system for nurses working in an ambulatory care setting is fee-for-service. As a consequence the revenue of self-employed home nurses or large ‘home nursing associations’ increases when performing more activities. Yet, the home care nurses employed by large home nursing associations receive a fixed salary.

3. The reform: a Fund with a yearly budget of 402 million euro to improve staffing levels

In response to the KCE recommendations, the federal government took action to improve nurse staffing levels by the creation of a Fund with a yearly earmarked budget of 402 million euro. This Fund comes on top of the regular budget for hospitals with the aim to improve nurse staffing levels within hospitals. The federated entities did not take any action (e.g. no changes in the staffing-related licensing standards).

3.1. A reform triggered by a power vacuum and reinforced by the pandemic

In 2019, the outgoing federal government had no majority in Parliament and only restricted power. In such circumstances a system of monthly budgets is set in place until a new government is formed with a majority in Parliament. Getting approval by the Parliament for these monthly budgets was always considered a formality as it guarantees the continuity of essential public services (e.g. payment of civil servants, pension and unemployment benefits). Yet, in October 2019, opposition parties submitted an amendment to the monthly budget, stating that a yearly additional budget of 402 million euro had to be freed to establish a special Fund to invest in nurse staffing.

An alternative majority approved a Law to establish a ‘Fund for Healthcare Staff’ (starting with 67 million euro for the two remaining months of 2019) [29]. The Law stipulated that it should be financed via general taxation (outside the yearly healthcare budget). The affordability of the ‘Fund for Healthcare Staff’ was subject to political debate. The financing of the Fund for the year 2020 was, despite the pressure of
the hospital umbrella organisations [30,31] and nursing associations [32,33], not immediately implemented by the resigning government.

The outbreak of the pandemic was a game changer, resulting in the structural approval of the Fund in June 2020 [29]. In October 2020 it was also adopted as one of the spearheads of the new government. Nevertheless, due to the unprecedented impact of the COVID-19 pandemic as well as the ongoing formation of a new government during the first 9 months of 2020, the (temporary) rules that hospitals had to follow to implement the additional budget from the Fund came too late (November 2020) for hospitals to use it for the recruitment of staff in 2020. It led to transition and alternative measures to use this 2020-budget in the same year or at a later stage. In this article, we will focus on the main principles that were concluded by Royal Decree in May 2021 [34]. On top of this Healthcare Fund, an additional investment of 600 million euro was made to increase the salary of healthcare staff (including nursing staff) working in hospitals and nurses working in ambulatory care (federal competencies). Salary increases are not within the scope of the reform discussed in the current paper. These salary increases were negotiated by the social partners at the macro-level (representatives of employers and employees) but are financed by the government which needs to approve the outcome of this negotiation process. The social partners negotiated a general salary for nursing and caring staff but with a proportionally higher increase at the start of the career, in an attempt to make the profession more attractive for young people [35].

3.2. Every sector demands its share of the pie

The primary aim of the reform initiators was to improve nurse staffing in general hospitals. Nevertheless, at several stages during the reform process the scope was enlarged and the available budget had to be divided across more sectors (See Fig. 1 for the final repartitioning of the budget). Soon after the first Parliamentary initiative (November 2019) associations representing self-employed home nurses claimed their share. Self-employed home nurses are predominantly financed via a fee-for-service system. A budget increase would therefore not automatically result in more nurses. As a consequence, 48 million euro of the original budget was reserved to improve working conditions (e.g. mentorship programmes) of home nurses. It was also decided to spend 10% of the remaining amount on initiatives to support the education and mentorship programmes. The remaining budget was divided between the hospitals and public services for home nursing (salaried home nurses) based on the numeric employment of FTE. Moreover, around 11,7 million of the Fund was used to finance staffing of newly established pilot projects for ‘victims of sexual violence’. As a result around 290 million euro remained to increase the hospital budget for nurse staffing. This was divided between general hospitals (250MIO€) and psychiatric hospitals (39,8MIO€) based on a general repartition rule for the budget between these sectors [36]. This is still a substantial investment (increase with about 3% of hospital budget and 10% of sub-budget for nurse staffing on hospitalization units, respectively [37]). The larger scope is clearly linked to the impact stakeholders have in the Belgian governance structure.

Fig. 1. Division of the Fund for nurse staffing between sectors.
3.3. Repartition and monitoring of the additional hospital budget

The allocation rules for the additional hospital budget were defined via legislation and instructions from the Ministry of Public Health for the years 2020 and 2021 [37–39]. We summarize the implementation criteria (see Table 1 for the criteria with main intended and unintended consequences) below:

Table 1
Criteria to implement the budget via the hospital payment system.

| Criterion | Rationale and intended effect | Unintended effect |
|-----------|-------------------------------|-------------------|
| **Budget for FTE per nursing ward** | • To have a supervisory role for nurse managers so that they can focus on management and leadership | • Reform not focused on wards where needs for additional resources are the highest |
| | • To improve the work environment | • Disincentive to reform inefficient wards (e.g. wards with a 24/7 staffing requirement with low activities) |
| | • To make a visible impact for the entire hospital nursing workforce (every ward receives additional resources) | |
| **Mandatory use of the budget for a net increase in FTE** | • To avoid that hospitals do not use the additional budget to improve the working conditions of nurses, they have to prove that the number of FTE in their hospital increased | • No change in bedside nurse staffing levels (i.e. improved patient-to-nurse ratio which was the main reform objective) when activity (e.g. more patient admissions) or absenteeism of staff increases |
| | | • Accounting tricks to demonstrate that the additional budget is used for additional FTE while in practice it does not result in extra staff (e.g. providing permanent contracts to previously outsourced services) |
| | | • Due to information imbalance (e.g. about the technicalities of the hospital payment system) hospital administrations risk to dominate this process |
| **Approval by local work council of the spending of additional budget** | • To create transparency about staffing allocation decisions and increase the participation of nursing staff in the decision-making process | |
| **Budget earmarked for nursing staff, care assistants or supporting staff** | • To alleviate the workload of nurses by task differentiation. Non-nursing staff takes up administrative and logistic tasks while nurses, with the support of care assistants, can concentrate on direct patient care | • The perception among bedside nurses that nurses, when leaving the ward, are not replaced but substituted by non-nursing staff (e.g. due to shortages on the labour market) |
| | • To enable hospitals to use the additional resources to hire additional staff when nurses cannot be recruited due to shortages on the labour market | • Imbalances in teams due to a too high proportion of non-nursing staff |
| **Yearly obligation for hospitals to report how the budget was used** | • To monitor and control that the additional budget is used for measures that improve the working conditions of nursing staff | • Reported measures (i.e. additional FTE) do not reflect the perceived workload by bedside nurses |
| | | • No benchmarking or public reporting of bedside staffing levels (e.g. patient-to-nurse ratios) |

- The additional budget should by preference be used to increase staffing levels with 1 additional FTE per ward. The legislator indicates that this measure aims to finance ward managers (currently included in the basic staffing budget e.g. the 12 FTE per 30 beds) outside the basic staffing norms. Furthermore, bedside staffing levels (priority on nursing and healthcare assistant staff) should improve.
- The budget must result in a net job increase. In contrast to nursing associations which preferred to earmark this budget for nurse staffing only, more flexibility to spend the budget was advocated by the hospital umbrella organisations. Hospital managers feared to lose the budget if they failed to recruit nurses due to shortages on the labour market. Hence, the legislator created the possibility to use the budget also for supporting staff on the condition that this results in more bedside availability of nursing/healthcare staff [40].
- The decision about budget spending must be approved by the local work council present in each hospital including representatives from both hospital management and employees. This would avoid that hospitals would use the budget for staff that would not make a difference at the bedside. Furthermore, a yearly evaluation has to be made of the number of staff (nurses/healthcare assistants/supporting staff) per ward and of the impact on bedside availability.
- The hospital administrator must submit a report about this local concertation process and the decision on budget spending to the Ministry of Public Health. The social partners (employees and employees) agreed that the report includes elements such as the number of FTE and limited list of functions of the staff hired via the fund.
- The Ministry of Public Health will perform an evaluation based on routinely collected accounting data to evaluate if the additional budget resulted in a net staff growth.
- Although the ultimate aim was to decrease the number of patients per nurse, this is not monitored. Lengthy discussions took place in advisory committees where mainly nursing representatives were in favour. The opponents (mainly hospital associations) argued it would increase the administrative burden. After all, the mandatory reporting of bedside nurse staffing levels via the Belgian Nursing Minimal Data Set (B-NMDS), which previously allowed monitoring of patient-to-nurse ratios, was stopped (2016) for this reason. Moreover the nursing shortage hampers to improve patient-to-nurse ratios. Instead, a patient-to-total staff ratio was proposed. The current policy documents include the ‘consideration of monitoring patient-to-nurse ratios’ after evaluation of its administrative burden [37].

Based on a first evaluation of the local concertation committees reports it was estimated that around 4 250 FTE (64.8% nurses/healthcare assistants) were recruited during 2020 (data for 96% of hospitals). This also includes agency staff, the transformation of temporary in permanent contracts, etc. [40]. It is possible that part of the additional budget was used to compensate the structural underpayment and to pay for staff hired in the past via other revenues (e.g. deductions physicians fees) [28]. Despite the positive evaluation, the perception of the bedside nursing staff seems different. In November/December 2021 Belgian hospitals were confronted with a fourth wave of the COVID-19 pandemic, putting once again a serious strain on hospitals. In December 2021 hospital staff went on strike. Nursing associations welcome the Fund but also state that staffing levels were poor before the pandemic, which makes the investment insufficient to provide safe care. Moreover, the pandemic resulted in high absenteeism and nurses leaving the profession. Therefore, on the floor, patient-to-nurse ratios worsened during and in the aftermath of the pandemic [5,41].

4. Discussion

The reform includes, in a Belgian context, a historic investment in nursing staff. Although additional staff was hired via this budget [36], it is uncertain if this investment will result in safe staffing and better
working conditions for bedside nursing staff, which were the main aims of the initiators. It is worthwhile to compare the implementation of the reform with international strategies to assess similarities/differences and highlight the potential intended and unexpected consequences of the used implementation criteria.

Internationally, the implementation of mandated patient-to-nurse ratios is widely debated to achieve safe staffing levels. Although the business case is taking shape, [15,42,43] only a limited number of regions have mandated ratios (e.g. Victoria/Queensland in Australia and California in the USA). A recent evaluation of this policy in Queensland concluded that the approach is feasible with a beneficial impact on patient outcomes and costs [13]. While it was also recommended for Belgium [16], the scattered competencies hamper its implementation. The current reform is exclusively focusing on policy levers disposable at the federal level: budget increase and allocation mechanisms that aim to improve nurse staffing levels. To ensure that the budget is spent on staffing, the legislator demands a net increase in jobs, otherwise budgets will be re-claimed. Nevertheless, a net job increase is no guarantee for better patient-to-nurse ratios since hiring more staff (the denominator of the ratio), can be offset by an increase in inpatient days (the numerator).

Moreover, due to difficulties to fill in nursing vacancies the possibility was created to spend the additional resources also on healthcare assistants/supporting staff. This is justifiable to some extent [16]. After all Belgian nurses perform quite a lot of non-nursing tasks (e.g. transporting patients/delivering food trays/administration). On the other hand, this will not result in the highly recommended decrease in patient-to-nurse ratios. A first evaluation suggests that spending was predominantly used for the recruitment of more healthcare and supporting staff [36]. As a result, bedside nurses did not perceive a change in daily practice [5,6]. This is not without risks since evidence indicates that additional non-nursing staff is only beneficial up to a certain tipping point and might have a negative impact on patient safety when this balance is surpassed [44–46]. Therefore, some regions include skill mix thresholds in their policies (e.g. maximum 20% healthcare assistants) [16]. Hence, if the only impact of the new policy is an increase in healthcare assistants and supporting staff while patient-to-nurse ratios remain at a high and unsafe level, the main objectives of the reform has not be obtained. Since evidence shows that decreasing patient-to-nurse ratios is crucial to improve nurse well-being and patient safety in Belgian hospitals it can be concluded that the absence of a clear ambition to achieve this in the current policy reform is not only a missed opportunity but also a serious shortcoming. Although the context is challenging (e.g. nursing shortage, COVID-19) there is no hard commitment to include patient-to-nurse ratios in the financing standards nor as mandatory licensing standards in the medium to long term. Even monitoring and public transparency is not pursued, despite that the effects of public reporting in some regions have been shown to be favourable (but less pronounced than mandated patient-to-nurse ratios) [47–49]. Therefore, it is remarkably that this easily implementable policy option was not adopted in Belgium, especially because it was possible to extract patient-to-nurse ratios automatically from the B-NMDS until 2017 [16, 50] when this registration was stopped under the pretext to reduce hospitals’ administrative burden. It is unclear why hospital associations are against its re-instalment (e.g. administrative burden?, fear of limited flexibility in the use of this additional budget? resistance to oversight?). What is certain is that it hinders to evaluate whether the additional budget makes a bedside difference and it is a missed opportunity for transparency and accountability.

The Belgian reform includes some elements of safe staffing policies identified abroad [49]. As in most safe staffing policies, ward managers are not included in the staffing standards [16]. This would increase time for ward managers to take up their management and leadership responsibilities which is essential to improve the work environment of nurses [51]. Nevertheless, since in Belgium this is implemented via the budget allocation rules and not via licensing standards the available budget is fragmented among many wards. It has the symbolic advantage that ‘every ward’ receives 1 FTE extra. The disadvantage is that the available budget is not allocated to the wards with the most urgent needs. Additional budget is also used to maintain low efficiency wards, such as wards with low occupancy rates [52]. An alternative approach, for which the nurse staffing registration in the context of the B-NMDS would have been an unique data source [50], could have been to allocate the budgets to wards with the largest discrepancy between staffing resources and care intensity. In Ireland such an approach has been tested with success [53].

Another international element that is also included in the Belgian reform is to create awareness about the staffing process from hospital board to bedside (e.g. mandated nurse staffing committees in the USA). [16,49] This creates a dynamic within hospitals to discuss staffing issues and might add to transparency However, without sufficient knowledge about the hospital payment system, employee representatives risk to have only a low impact on decisions approved by local concertation committees [54].

5. Conclusion

The discussed reform and how it was implemented hold some important lessons for policymakers abroad. Although the COVID-19 pandemic created a sense of urgency to invest in nursing, it is clear that it is not evident to improve the working conditions in the middle of a crisis situation. Since nurse staffing problems pre-existed before the pandemic it is key to tackle the core of the problem (i.e. chronic understaffing) outside a crisis period. The measures taken should really make a tangible difference in the daily practice of bedside nurses. Policies that use patient-to-nurse ratios (e.g. public reporting, mandated ratios) as a cornerstone seem to be most suitable to make the impact tangible. Policies solely focused on budgetary measures might be visible for hospital administrations but not for bedside nurses. When budget increases do not provide sufficient safeguards to change the core of the problem (i.e. too high patient-to-nurse ratios), especially in a context of a scarce nursing labour market, there is an eminent risk that the budget is used to hire healthcare assistants and other non-nursing staff. While this might be based on good and legitimate intentions of policymakers to alleviate the workload of nurses it might have an opposite effect. After all, when the patient-to-nurse ratio is not improved and nurses keep leaving the profession, the additional healthcare assistants will be perceived as a substitution of bedside nurses. To break this vicious circle, also in a context with few available nurses, strategies to achieve safe patient-to-nurse ratios (e.g. bed closure, reorganisation of the services to allow more efficient use of available nurse resources) need to be applied.

Future monitoring in Belgium (especially of patient-to-nurse ratios, skill mix, and nurse wellbeing) is necessary to assess to what extent this reform ultimately contributed to the achievement of safe staffing levels.

Declaration of Competing Interest

The authors declare that they have no competing interests.

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