

May 23, 2023

Members of the Maine State Legislature

Re: Evidence that mandated minimum hospital nurse staffing standards are in the public's best interest

My name is Professor Linda Aiken from the University of Pennsylvania. I am the Founding Director of the Center for Health Outcomes and Policy Research, the world's leading research center on the nursing workforce and outcomes of hospital nurse staffing. We have been conducting NIH-funded research on the patient, nurse, and financial outcomes of variation in hospital nurse staffing for 35 years in the U.S. and 30 other countries. I am an elected member of the National Academy of Medicine and the American Academy of Arts and Sciences. My research on nurse staffing has won all major interdisciplinary research prizes including the Individual Codman Award from the Joint Commission that accredits hospitals, the Lienhard Award for Improving Healthcare from the National Academy of Medicine, AcademyHealth Distinguished Researcher award in health services research, and Research America Impact Award.

There is a very large and rigorous research literature of more than 35 years consisting of hundreds of studies and multiple systematic reviews published in the most prestigious scientific journals in health care showing that the more patients nurses in hospitals care for each, the worse the outcomes are including preventable deaths, preventable hospital acquired infections, poor patient satisfaction and worse financial outcomes for hospitals resulting from longer patient stays, Medicare penalties for excess readmissions, and high nurse turnover that costs hospitals many millions of dollars every year. These studies document very large variations in nurse staffing levels across hospitals in the U.S. and within all states that have been studied. The public has no way of knowing that such large variations in nurse staffing exist and that their health and very life is threatened by chronic nurse understaffing in the majority of U.S. hospitals. Chronic nurse understaffing predates the Covid-19 Pandemic and thus a return to pre-Covid hospital nurse staffing will continue to imperil the public's health.

California has had mandated minimum nurse staffing since 2004, almost 20 years. Today, patients in California hospitals receive on average 3 more hours of nursing care than hospitalized patients in other states (Dierkes et al., 2022). Our research estimated that Pennsylvania and New Jersey, if staffed at levels mandated in California would reduce surgical mortality by 13% annually (Aiken et al., 2010). Staffing in Californian safety net hospitals improved dramatically after the implementation of mandated minimum nurse staffing (McHugh et al.) and there were no unintended negative consequences of the unfunded mandate (McHugh et al.). Opponents of mandated minimum nurse staffing standards often claim that research on the outcomes of California nurse staffing legislation is "mixed". As a leading scientist, I challenge that statement. Mixed means to the average person that there were some negative as well as positive outcomes. There has never been a study showing that more nurses are bad for people's health. The so-called mixed results are from flawed research that used unmeasurable outcomes or was not designed well enough to detect significant outcomes. Some point to recent labor disputes in

California as evidence that the legislation did not work but the Governor waived the ratio requirements during Covid-19.

The gold standard for evaluating whether nurse ratio legislation improves health outcomes is from Queensland, Australia, by the Center for Health Outcomes and Policy Research, and published in the top scientific journal, *The Lancet* (McHugh et al.). It is the gold standard because the government of Queensland funded a prospective evaluation of the legislation before it was implemented and after two years. California legislation was never evaluated prospectively which has resulted in disputes over its impact. The *Lancet* paper documents that after implementation of the mandated minimum safe nurse staffing standards that thousands of hospital deaths were prevented annually, and millions of dollars were saved by reductions in average length of stay and averted hospital readmissions within 30 days of discharge.

Recently the Center for Health Outcomes and Policy Research has instituted a Rapid Strike Research Initiative to conduct policy evaluations of pending state nurse staffing legislation to inform policy decisions. Recently we have conducted outcomes evaluations of pending legislation in New York state (Lasater et al., 2021 and 2022), Illinois (2022), and Pennsylvania (2023). In each of these states we have conducted original primary research collecting data from tens of thousands of hospital nurses to create best possible measures of actual patient to nurse staffing in all hospitals in these states. We linked the nurse staffing data with independent, objective patient outcomes either from state hospital discharge records or Medicare. We estimated the effects on patient and cost outcomes if all the hospitals in each state improved their staffing at least to the minimum required safe staffing levels mandated in the legislation. The conclusions reached in each of these 3 states were the same as we found in Queensland:

- Hospital staffing on adult medical and surgical units varied from the best staffing of 3 patients per nurse to the worst staffing of 10 or more patients per nurse.
- This large variation in nurse staffing was associated with over a thousand preventable deaths annually in each state had the legislation been implemented.
- Variation in staffing was associated with significantly more cases of sepsis, a high mortality infection, and of those suffering from sepsis, significantly more in poorly staffed hospitals died than would have happened if the ratio legislation was passed.
- The cost of adding additional nurses to meet the minimum staffing standards in pending legislation would be largely offset by millions of dollars of annual savings by reductions in average length of stay, reductions in Medicare readmissions penalties, and reductions in very expensive nurse turnover.

In summary, there are decades of rigorous research showing that implementing safe minimum nurse staffing standards will save lives and money. There is plenty of evidence to act now. There is no credible evidence that any harm will come to the public from mandating minimum nurse staffing standards in hospitals and plenty of actionable evidence that the public will benefit from reducing great variation in hospital nurse staffing that has persisted for decades.

Professor Linda H Aiken, PhD, RN, FAAN
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References cited:

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- Invited Testimony, New York State Joint Legislative Budget Hearing, February 25, 2021 on Safe Staffing for Quality Care Act (S.1032/A.2954). Written testimony available via the NYSENATE.GOV site: https://www.nysenate.gov/sites/default/files/center_for_health_outcomes_and_policy_research_university_of_pennsylvania.pdf . Video of oral testimony (start at 9hrs:57min:45sec): <https://www.nysenate.gov/calendar/public-hearings/february-25-2021/joint-legislative-public-hearing-2021-executive-budget> .
- Aiken LH. Invited Expert Testimony, Pennsylvania House Health Committee, Public Hearing, [Patient Safety Act HB106](#), May 2, 2023.

Sincerely,

A handwritten signature in blue ink that reads "Linda Aiken". The signature is written in a cursive style with a large initial "L".

Linda H. Aiken, PhD, RN, FAAN