

# " Nursing Shortage and Workforce Issues: Global Trends, Drivers, Consequences, and Policy Options (with an India Focus)."

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## ABSTRACT

**Background:** Health systems worldwide face persistent nurse shortages that threaten safety, quality, and universal health coverage. **Objective:** To synthesize the most recent evidence on the size and distribution of the shortage; analyze root causes across education, employment, retention, and migration; assess impacts on outcomes; and outline policy options—especially for India. **Methods:** Narrative review of authoritative global reports (WHO, ICN), national workforce plans (e.g., NHS England), and peer-reviewed studies on staffing, outcomes, and burnout published through August 13, 2025. **Findings:** WHO estimates a **global shortfall of ~4.5 million nurses by 2030**, concentrated in the African, South-East Asia and Eastern Mediterranean regions; the latest **State of the World's Nursing 2025** offers updated regional indicators and policy priorities. India's nurse density remains below global benchmarks and would require several million additional nurses to meet norms; regulatory reforms (NNMC Act, 2023) aim to standardize education and practice. Chronic under-investment in education capacity, poor working conditions, burnout, and inequitable international recruitment cycles drive the shortage. Robust evidence links better nurse staffing and education to reduced mortality and injuries, while burnout is consistently associated with lower care quality and higher turnover intention. **Conclusions:** Countries should expand and reform training pipelines; enact safe-staffing standards; improve pay, career ladders, and work environments; and adopt ethical international recruitment. India should operationalize NNMC implementation, expand seats and faculty, finance clinical placements, and improve retention—particularly in rural areas.

**Index Terms** - Nursing shortage; Workforce planning; Health workforce policy; Nurse migration; Burnout; Staffing and patient outcomes; Nursing education; Retention strategies; Global health workforce; India.

## 1. INTRODUCTION

Nurses constitute the largest professional group in health care and are essential to achieving UHC and SDGs. Despite pandemic-era attention, workforce gaps remain large and unevenly distributed. The **WHO Global Strategic Directions for Nursing & Midwifery (2021–2025)** organizes solutions across education, jobs, leadership, and service delivery—an approach reaffirmed in the **State of the World's Nursing (SOWN) 2025** update.

## 2. METHODS

We conducted a narrative review (to Aug 13, 2025) of:

- WHO/ICN global reports and data portals;
- National plans (e.g., NHS Long Term Workforce Plan)
- Peer-reviewed studies and recent systematic reviews on staffing, outcomes, burnout, and turnover.
- Priority was given to 2023–2025 sources and foundational studies widely cited in policy. (Full citation trail embedded.)

### 3. SIZE AND DISTRIBUTION OF THE SHORTAGE

- ✍ **Global:** WHO's latest fact sheet (July 2025) estimates **~29 million nurses** worldwide and projects a **~4.5 million nurse shortfall by 2030**, with the biggest gaps in Africa, South-East Asia, and Eastern Mediterranean regions.
- ✍ **Trend/data infrastructure:** WHO's **SOWN 2025** provides refreshed indicators on education capacity and remuneration, adding five policy priorities beyond the 2021–2025 SDNM set. WHO's NHWA/SDG 3.c.1 indicator tracks nurse/midwife density; 2022 global density was **~37.7 per 10,000** population (nursing & midwifery combined).

#### INDIA SNAPSHOT

- ✍ Reviews and policy analyses indicate India remains below thresholds needed for quality care and UHC, with **substantial nurse shortfalls** and stark geographic maldistribution. Estimates commonly cited in policy discourse suggest India would need **>4 million additional nurses** to meet benchmarks; recent academic and policy sources reiterate the gap.
- ✍ Parliament passed the **National Nursing and Midwifery Commission (NNMC) Act, 2023**, intended to replace the INC Act (1947), standardize education and practice, and establish national registers; implementation pace and governance transitions are ongoing discussion points.

### 4. KEY DRIVERS

#### 4.1 EDUCATION PIPELINE & CAPACITY

Limited faculty, clinical placement capacity, and uneven school quality constrain supply. SOWN 2025 highlights **education capacity and advanced practice** as new indicators; many countries graduate too few nurses relative to need. Example of scale-up: **NHS England's Long Term Workforce Plan (2023)** targets a **~92% increase in adult nursing training places** by 2031/32 (~38,000 places), with step-ups by 2028/29. Analyses by King's Fund and others stress feasibility risks (placements, educators).

#### 4.2 EMPLOYMENT CONDITIONS, WORKLOAD, AND SAFE STAFFING

High patient-to-nurse ratios, overtime, and injury risk fuel attrition. California's mandated ratios were associated with **lower mortality** and **better nurse outcomes** as well as **~30% reductions in RN injury rates** post-implementation.

#### 4.3 BURNOUT, MORAL DISTRESS, AND TURNOVER INTENTION

A 2024 systematic review/meta-analysis (85 studies) links **nurse burnout** to **lower safety and quality** and **lower patient satisfaction**. Multiple meta-analyses show burnout and low job embeddedness strongly predict turnover intention, while social support mitigates risk.

#### 4.4 INTERNATIONAL RECRUITMENT DYNAMICS

High-income countries increasingly recruit overseas—e.g., the NHS now has **~20% non-UK staff** and a large share of internationally educated nurses—raising ethical concerns when source countries are on WHO “red lists.” Reporting in 2024–2025 highlights tensions between domestic retention and cross-border recruitment, including critiques of “new forms of colonialism.”

### 5. CONSEQUENCES OF THE SHORTAGE

#### 5.1 Patient outcomes

Landmark multi-country studies show that each additional patient per nurse is associated with **higher surgical mortality**, while higher proportions of bachelor-educated nurses correlate with **lower mortality**. Subsequent reviews reaffirm strong associations between better staffing and reduced mortality.

## 5.2 Workforce health and safety

Safe staffing and workload limits reduce injuries; California's ratios were linked to **~29–32% reductions** in RN injury rates.

## 5.3 System performance and costs

ICN's **International Nurses Day 2024** report synthesizes evidence that **investments in nursing yield high economic returns** via productivity, resilience, and avoided downstream costs.

## 6. POLICY RESPONSES AND EVIDENCE

### 6.1 Safe staffing legislation/standards

Mandated minimum ratios (e.g., California) and transparent staffing plans are linked to improved outcomes and retention; however, context matters (implementation, funding, and enforcement).

### 6.2 Expand & reform education

- **Scale training seats** in step with faculty hiring and placement capacity (example: NHS plan).
- **Assure quality** via accreditation and competency-based curricula aligned to population needs (WHO SDNM; SOWN 2025).

### 6.3 Improve retention and work environment

- ✍ **Compensation, career ladders, advanced roles** (e.g., advanced practice) and shared governance.
- ✍ **Work design:** limit mandatory overtime; adequate skill-mix; safe rosters.
- ✍ **Well-being:** address burnout systematically; build social support and empowerment—both associated with lower turnover intention.

### 6.4 Ethical international recruitment

Align with the WHO Code of Practice; employ bilateral agreements with mutual benefit, investment in source-country education, and safeguards to avoid depleting fragile systems.

## 7. INDIA-FOCUSED RECOMMENDATIONS

**OPERATIONALIZE THE NPMC ACT (2023):** Stand up the Commission, national live registers, uniform standards, and explicit scopes of practice (including midwifery as a distinct discipline).

**EXPAND AND UPGRADE EDUCATION AT SCALE:** Add **seats and faculty** in government and accredited private colleges; fund **clinical preceptors** and simulation centers; incentivize schools in underserved states; ensure **placement capacity** (learning from NHS planning debates).

**RETAIN NURSES—ESPECIALLY IN RURAL/PRIMARY CARE:** Competitive pay and rural hardship allowances; safe housing; career fast-tracks (e.g., PHC/APHC leadership roles); enforce **safe workload standards** in public facilities. Evidence links staffing improvements to better outcomes and fewer injuries.

**SKILL-MIX AND ADVANCED ROLES:** Introduce/expand **nurse practitioner** roles in NCD clinics, maternal-child health, and telehealth; optimize **skill-mix** at facilities to reduce physician bottlenecks. (SOWN 2025 emphasizes advanced practice indicators.)

**WORK ENVIRONMENT & WELL-BEING:** Implement safe scheduling, rest breaks, counseling, and **violence-prevention** measures; systematize burnout surveillance and interventions (burnout ↔ safety/quality).

**DOMESTIC PIPELINE + TARGETED, ETHICAL INTERNATIONAL RECRUITMENT:** Prioritize **retain-and-return** programs, re-entry pathways for inactive nurses, and bilateral agreements that finance Indian training capacity when recruiting abroad, in line with WHO ethics discourse.

**DATA AND FORECASTING:** Invest in state-level NHWA cells, interoperable licensing registers, and annual **nurse labor market reports** to guide seat allocations and fiscal planning (following WHO SDG 3.c.1 indicator standards).

## 8. DISCUSSION

The shortage reflects **multiple market failures**: (i) under-funded education pipelines; (ii) weak retention due to workload, risk, and limited progression; and (iii) cross-border imbalances. The **evidence base** now robustly connects staffing and education to mortality and injuries; burnout to safety/quality and turnover; and investment in nursing to economic returns. Countries that plan long-term (e.g., NHS England) still face feasibility constraints (faculty and placements), underscoring the need for **whole-system** design, not seat expansion alone.

## 9. LIMITATIONS

This review synthesizes high-quality sources but does not include original primary data collection; some India figures rely on secondary estimates and policy analyses with varying methodologies. Implementation realities (financing, governance, labor relations) can moderate policy effects.

## 10. CONCLUSION

Closing nursing workforce gaps is **achievable** with coordinated action across **education, employment, retention, leadership, and ethical mobility**. India's regulatory modernization (NNMC) can catalyze quality and scale if paired with financing for faculty and placements, safe-staffing norms, and rural retention bundles. Globally, prioritizing nursing is a **high-return health and economic strategy**.

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