



▶ AI in health care Opportunities and challenges

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Possible effect of AI on quantity of health care employment: Minimal risk compared with other sectors

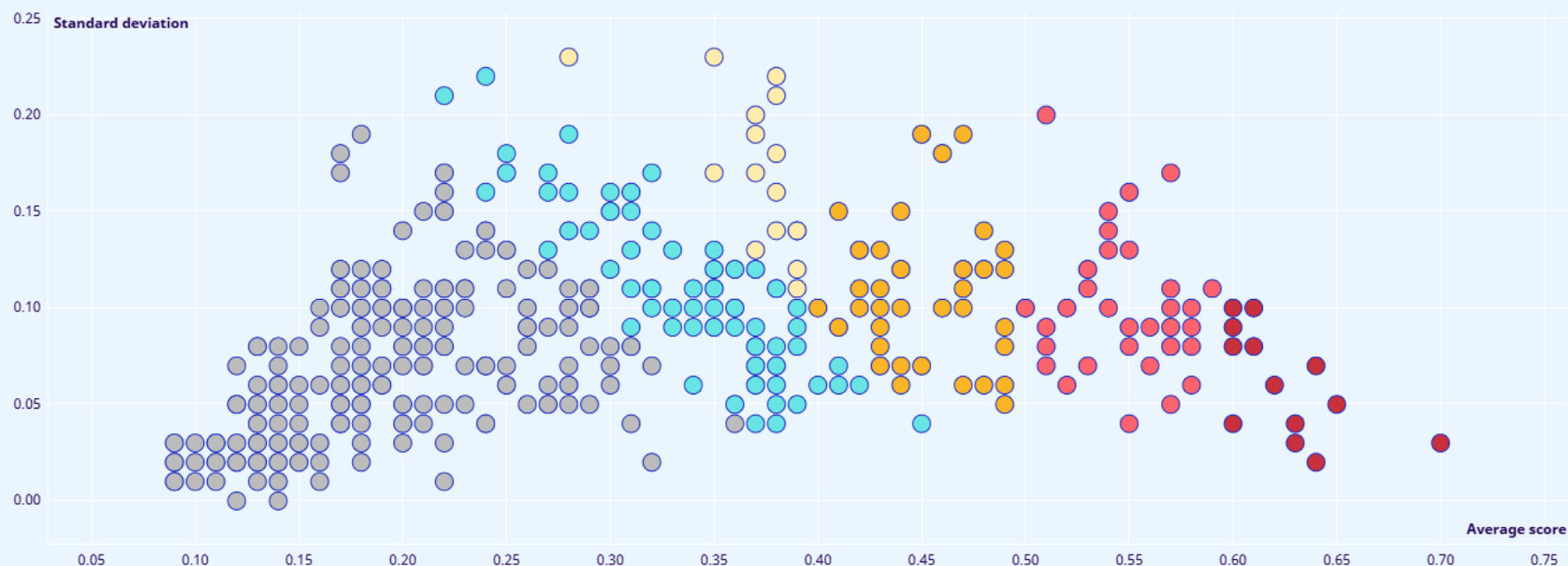
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► Jobs' level of exposure to artificial intelligence

Select an occupational group to filter the results.

[Agriculture, forestry and fisheries](#)
[Clerks](#)
[Craft workers](#)
[Elementary occupations](#)
[Managers](#)
[Plant and machine operators](#)
[Professionals](#)
[Services and sales](#)
[Technicians](#)

- Highest exposure, low task variability (gradient 4)
- Significant exposure, high task variability (gradient 3)
- Moderate exposure, mixed task variability (gradient 2)
- Low exposure, high task variability (gradient 1)
- Minimal Exposure
- Not Exposed

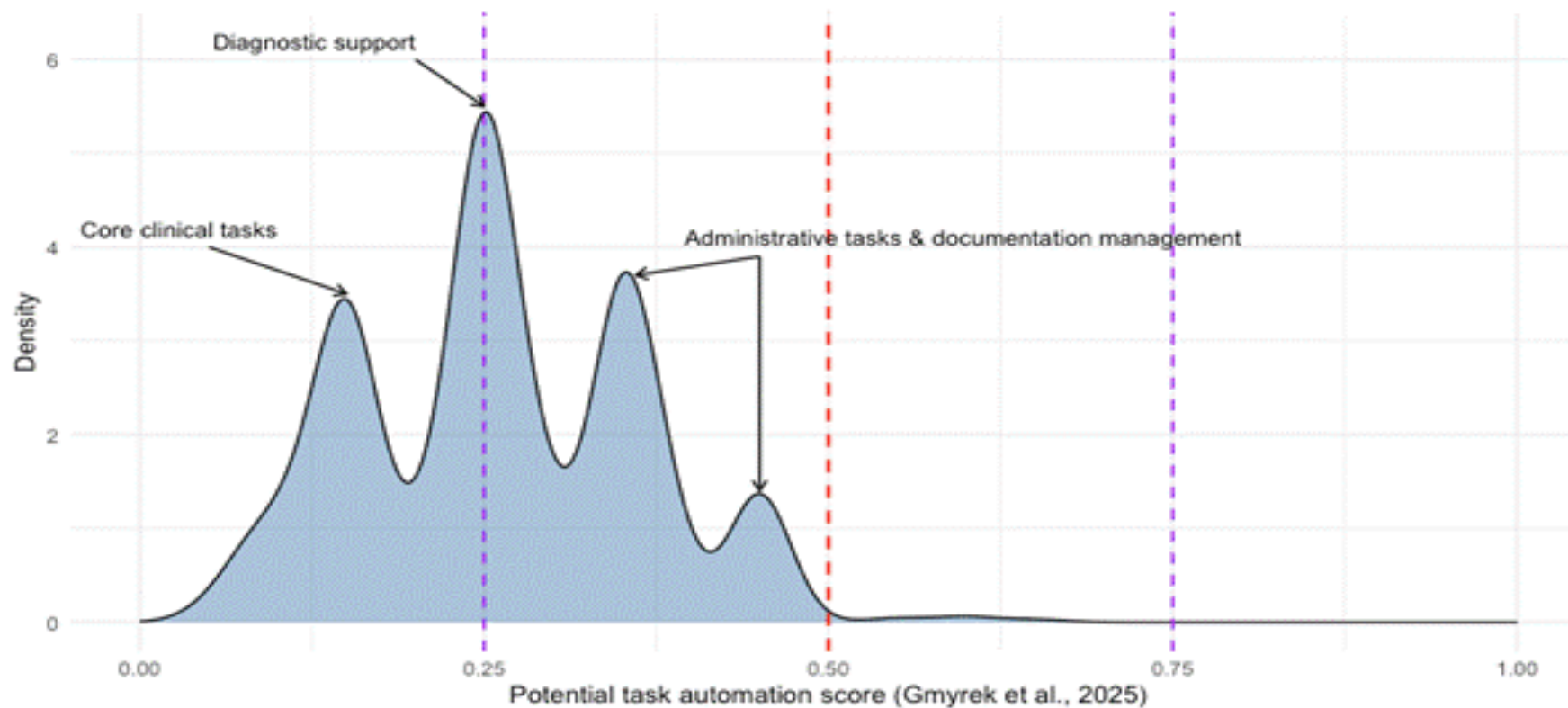


Standard deviation represents the dispersion of task-level automation scores within an occupation. **Average score** represents the mean automation score for all tasks within an occupation.

Source: [ILO Working paper 140](#) • [Get the data](#) • [Embed](#) • [Download image](#)

Jobs are a bundle of tasks: Some health care tasks more amenable to automation than others

Distribution of Potential Task Automation Scores in 6-Digit Medical Occupations in Poland



► **Potential work transformation: Managing the process to get the best possible outcome**

- ✓ Health care professionals are relatively immune to the risks of job displacement from AI, given the wide range of tasks that require human engagement.
- ✓ At the same time, we know that across the world there are shortages of healthcare professionals, with the WHO estimating a shortfall of roughly 30 million workers by 2030.
 - high patient-to-provider ratios
 - Uneven distribution of medical expertise
- ✓ Strong interest and investment in digital technologies and AI applications for health care

➔ **Now is the time shape the outcomes**

- ➔ All stakeholders have a role to play

RCT study of effect of LLM on physicians' clinical reasoning: Indonesia, Kenya and the Netherlands

► Does a General-Purpose Large Language Model Improve Physicians' Clinical Reasoning?

Evidence and considerations for policy from a randomized trial in Indonesia, Kenya and the Netherlands

Authors / Nicholas Rounding, Janine Berg, Luthfi Saiful Arif, Jochen Cals, Diederik De Boer, Eefje De Bont, Sander Dijkman, Ardi Findyartini, Didier Fouarge, Marie-Christine Fregin, Pawel Gmyrek, Nadia Grevlana, Ralph Leljenaar, Soraiya Manji, Anastacia Mbithi, Norah Obungu, Arierta Pujitresnani, Roselyter Rianza, Diantha Soemantri, Sairabanu Mohamed Rashid Sokwalla, Sanne Steens, Lucia Velasco, Ardy Wildan, Prasandhya Astagiri Yusuf, Mark Levels

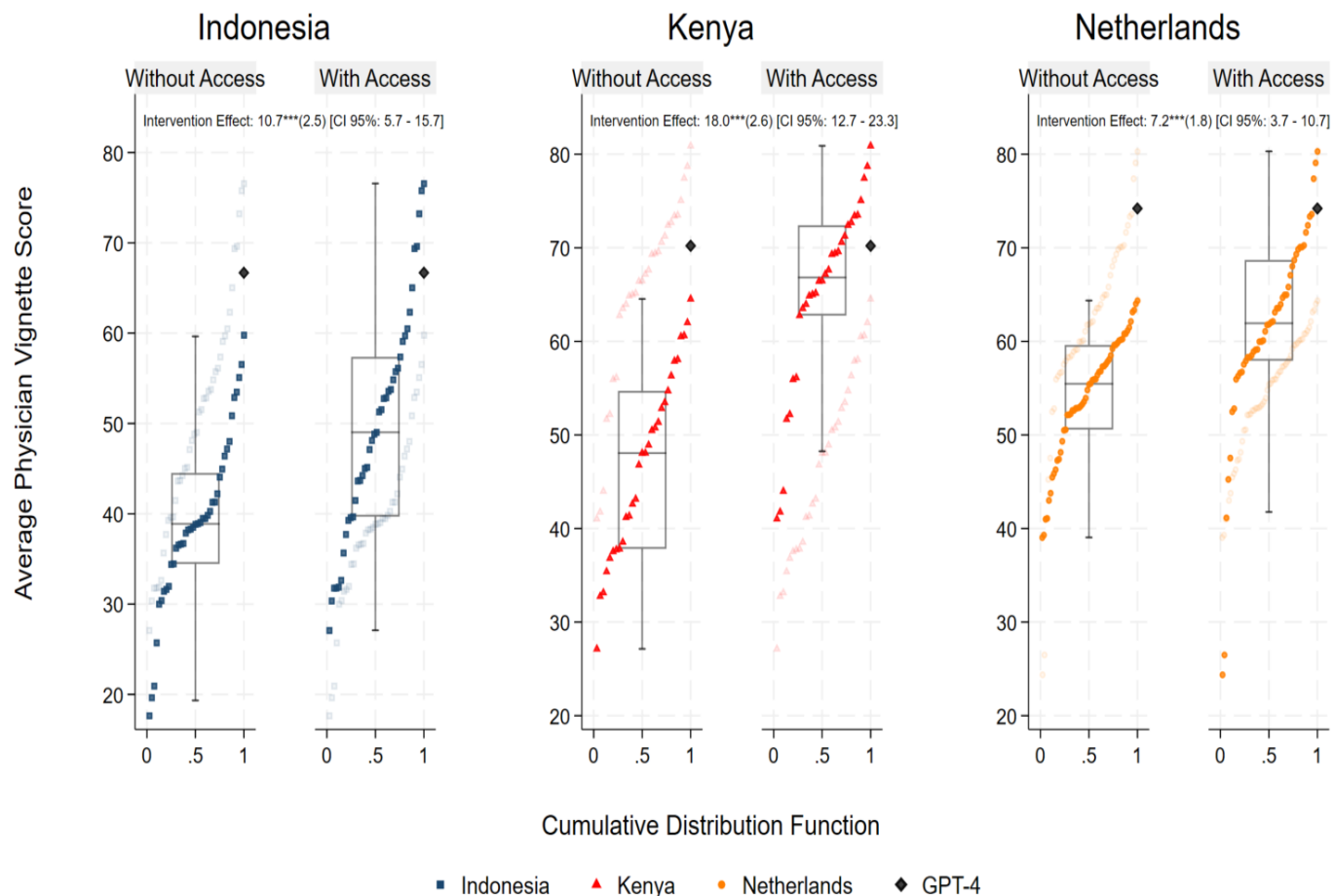


The design of the RCT

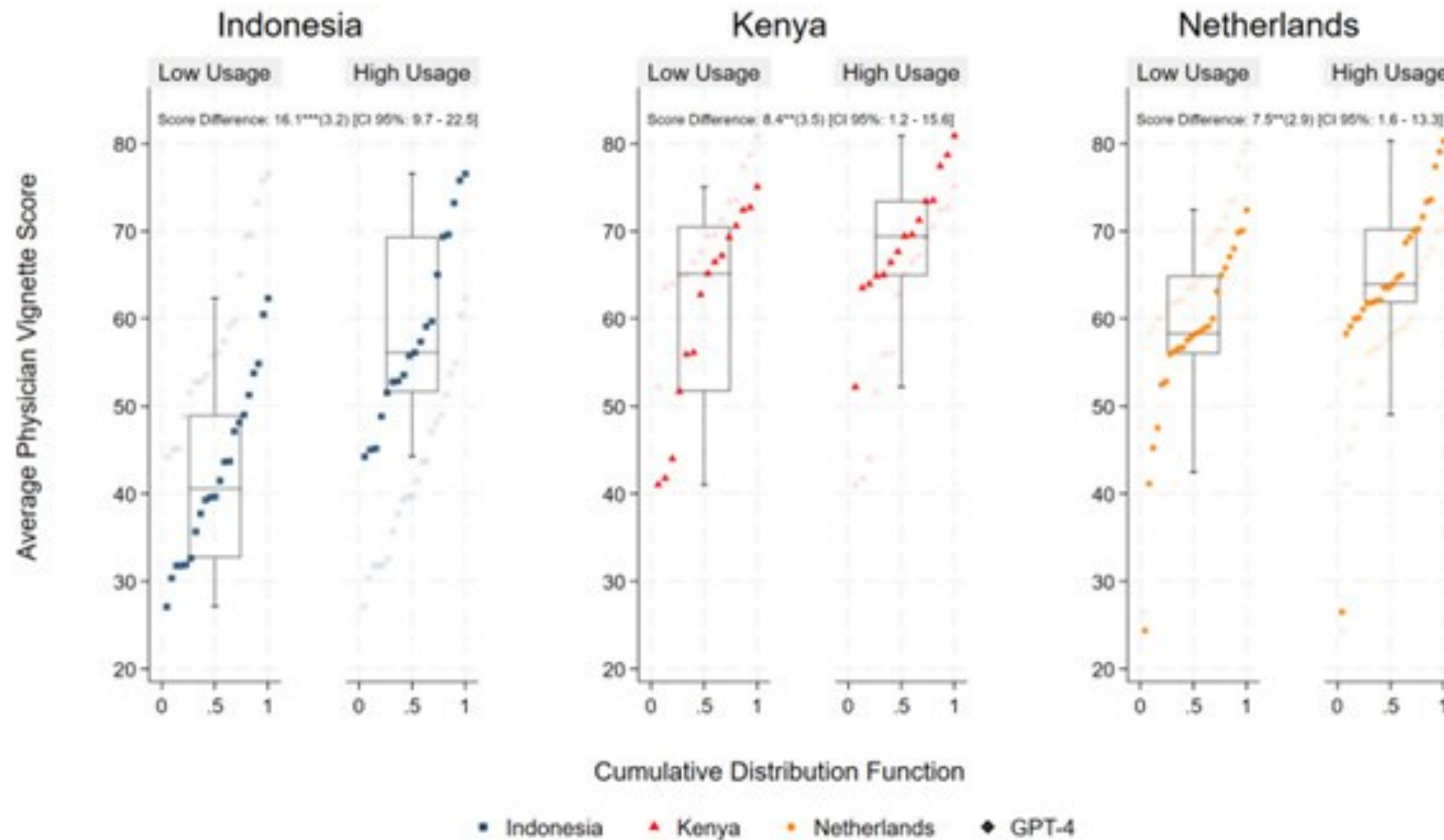
► Table 1: Baseline Characteristics

	Indonesia		Kenya		Netherlands	
	Intervention	Control	Intervention	Control	Intervention	Control
Career Stage						
Attending	0 (0%)	0 (0%)	0 (0%)	0 (0%)	8 (16%)	9 (16%)
Resident	41 (100%)	40 (100%)	30 (100%)	30 (100%)	42 (84%)	49 (84%)
Specialty						
Internal/Family	41 (100%)	40 (100%)	18 (60%)	9 (30%)	50 (100%)	58 (100%)
Other	41 (100%)	40 (100%)	30 (100%)	30 (100%)	50 (100%)	58 (100%)
Years Since Start of Medical Education						
Mean (SD)	12.9 (3)	13 (3.5)	11.8 (3)	11.8 (3.9)	14.6 (8.8)	13.3 (8)
Median(IQR)	13 (12-15)	13 (11.5-14)	11 (10-13)	11 (9-13)	11 (9-15)	11 (9-13)

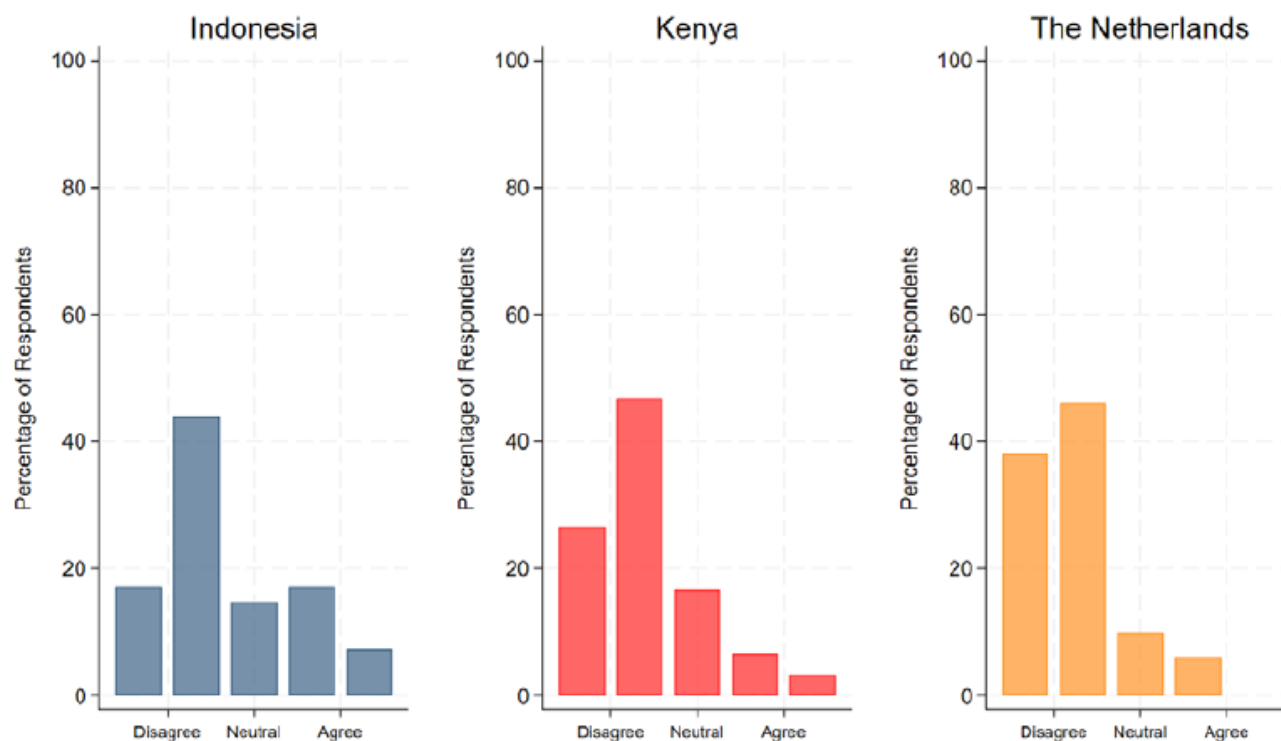
Performance results of physicians with LLM access compared with those without LLM access: Indonesia, Kenya and the Netherlands



Physician performance with LLM depending on degree of usage



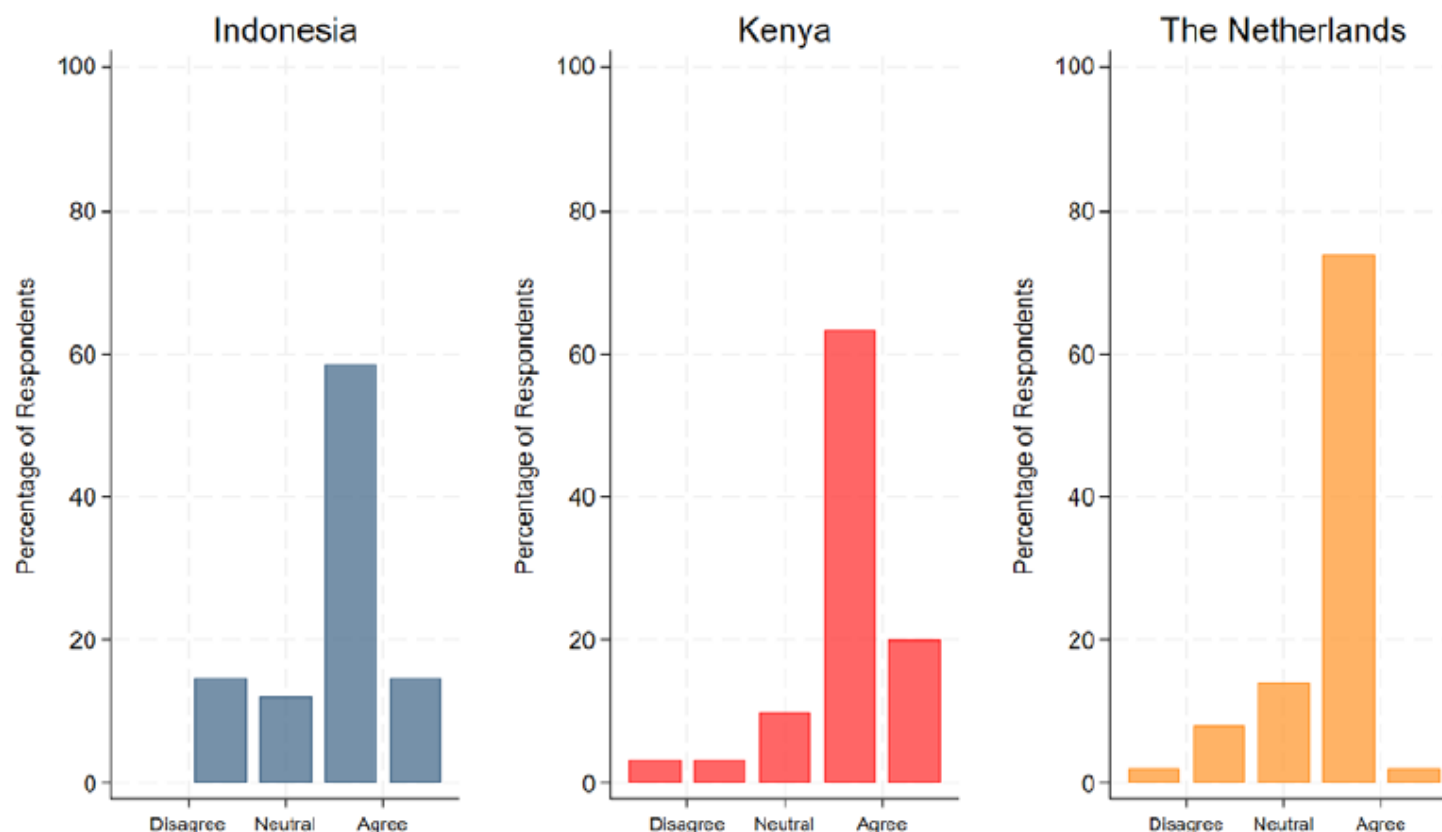
Few physicians are worried about being replaced



Response to “My occupation is at risk of being replaced by Generative AI”

“It gave me more differentials than I had in mind. I had maybe two, but the AI suggested five or six, and most of them were actually clinically reasonable.”

► Many feel it has the potential to make them more productive



Response to “Generative AI will make workers in my occupation more productive”

► But some concerns...

Loss of credibility: *“A lot of patients expect you to be all knowing and have all the information. And when they see you referring, it's like you lose your credibility as a doctor... if we outrightly say that we are using AI, then the patient asks you, then what's your purpose? Can't I just sit at home and put all my information, and the AI tells me what to do?”* (doctor, Kenya)

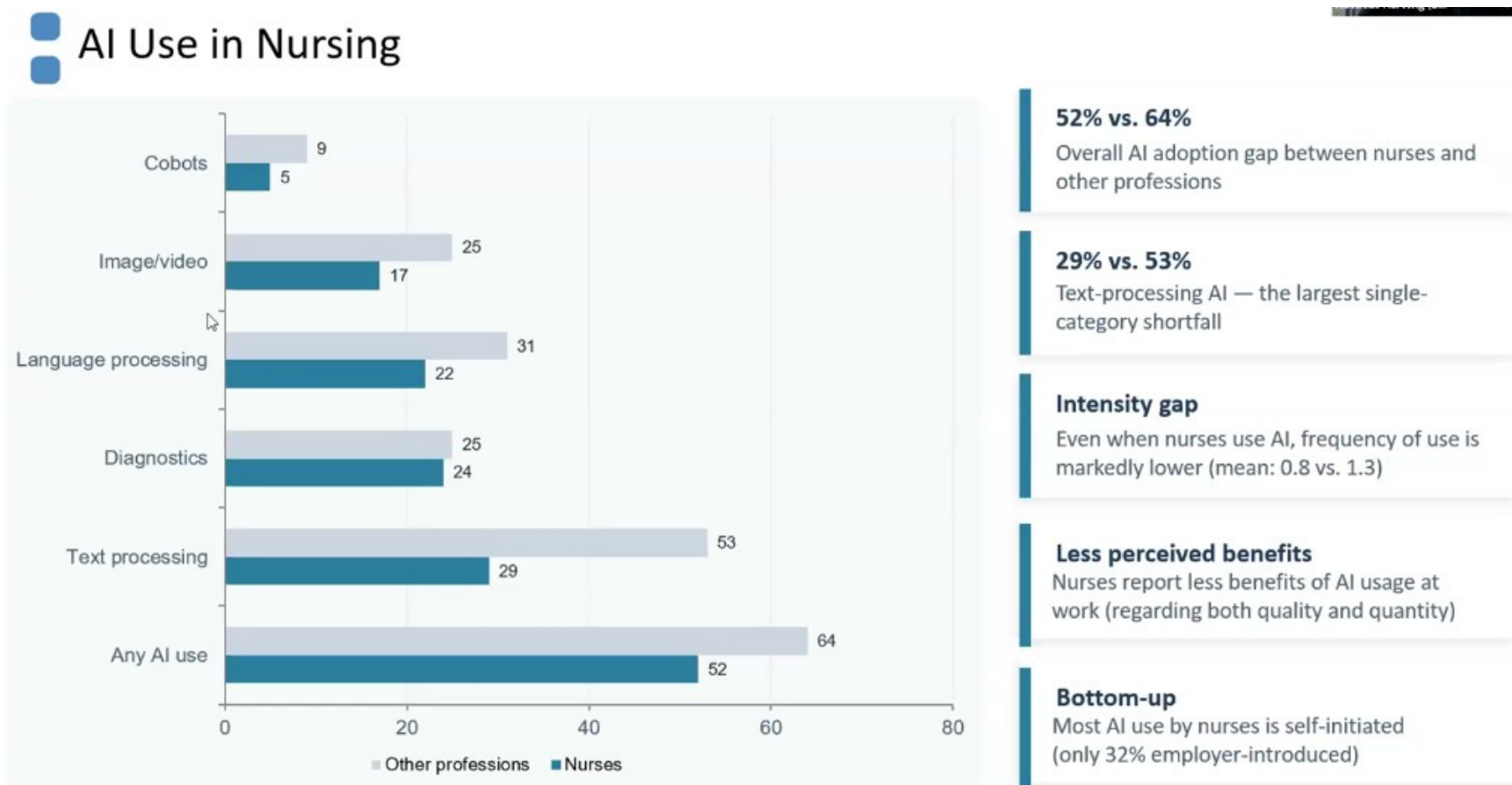
Hallucinations: *“Yes, it's quite helpful. But around 20% of the responses don't seem accurate, and when we cross-check manually, the answers often don't match.”* (doctor, Indonesia)

Automation Bias: *“It made me lazy; at some point I stopped thinking and just followed the prompts. That was a bit worrying”* (doctor, Kenya)

► AI and Nursing

Case studies from Germany, India and S. Korea

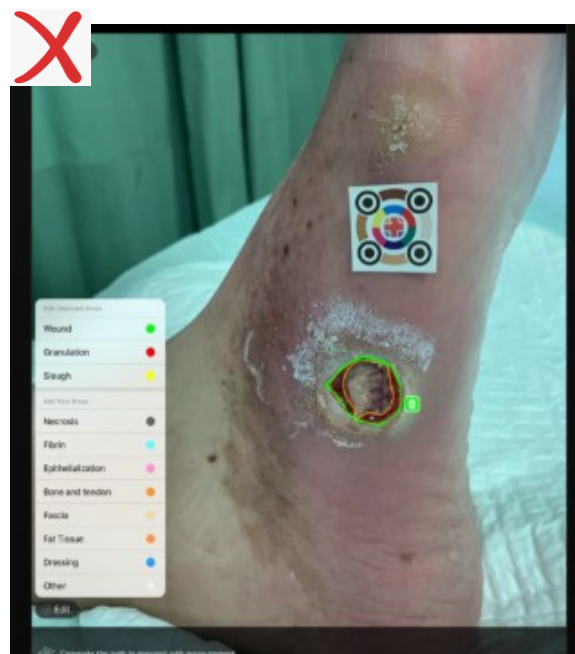
German study (quantitative)



South Korea case study



Digitally managed supply cart:
Product designed
collaboratively that worked for
all parties



Wound assessment: Not accurate;
not possible to take good photos in
low light; Nurses did not trust the
device and stopped using it



Nurses' repeated requests
were ignored

India case study: what worked well

DIGITAL COMMUNICATION & AI DOCUMENTATION — SPEED & COORDINATION

Digital tools reduced documentation time and improved coordination.

"It's easy to make nursing care plans on GPTs or Nursemagic". It's 2 hours of work in a few minutes.

"The instant blue tick on whatsapp enables us to seek help from our supervisors sooner than later."

AI for documentation

Some nurses used AI Tools such as GPTs and NurseMagic for clinical queries and drug information. AI technologies are adjunct to, not replacements for, the nurse's knowledge and skill.

What nurses found useful	
EHRs	Faster retrieval of patient history and lab results
Remote monitoring (Dozee and other tools)	Track multiple patients during understaffed night shifts
WhatsApp	Case notes, duty rosters, handover communication
AI documentation	Care plans, drug queries, clinical summaries
Digital vital signs	Electronic BP monitors, pulse oximeters valued for accuracy and speed

India case study: what worked less well

REMOTE MONITORING & EHRs — WHEN THE SAME TOOLS CREATE NEW PROBLEMS

Dozee: false alarms

False alarms where a bed has both a mother and child, or where patients with femur fractures or immobilised limbs triggered inaccurate movement-related alerts.

“A nursing educator described how the tool keeps alerting even when there is no patient on the bed.” — Kerala

Infrastructure: erratic rains in Kerala disrupt WiFi, causing system lags and forcing reversion to paper. Cost of separate tablets per nurse an unresolved barrier.

EHRs: doctors' work falls on nurses

Doctors were unwilling to enter electronic records themselves — nurses were further tasked with inputting records doctors were supposed to enter, doubling their work.

*“Doctors mostly use the tools since they are trained — nurses only use it for limited tasks like entering vital signs.”
— Nurse, Kerala government hospital*

“The server wasn't working... so we had heavy work.” A recent outage forced staff to revert to paper documentation. — Nurse, Kerala

India case study: unexpected outcomes

The machine helps. So you get more patients.

“Earlier I had six patients, now they give eight, saying the machine will help — but those two extra patients are still my responsibility beyond just vitals.”

— Nurse, large private hospital, Kerala

Efficiency gains from digital tools are frequently absorbed by management as higher patient loads rather than translating into reduced pressure on nurses.

India case study: Recommendations

POLICY RECOMMENDATIONS

What needs to change.

- 01 Training in local languages**
Mandatory, hands-on, ward-relevant training. Curricula updated for AI literacy. Faculty trained to evaluate tools critically.
- 02 Worker voice in technology decisions**
Nurses consulted before any system is deployed. Unions to expand agendas to include digital governance.
- 03 Equitable digital infrastructure**
State-led rollout reaching PHCs and smaller institutions. Kerala's e-Health model as reference.
- 04 Reinvest efficiency gains**
Explicit policies ensuring productivity gains from AI reduce workload; not simply raise patient loads.
- 05 AI designed with nurses**
Equal stakeholders; not passive end-users of vendor-driven systems.

► Policy considerations from ILO research

- Not a panacea – need to weigh opportunity costs
- Need to invest in structured AI competency development for health workers using LLMs, and managers deploying it
 - Safeguards against automation bias and hallucinations
- Need for local adaptation, clinical validation and bias assessment before routine deployment
- ***Workers need to be involved in design and governance***



Thank you!

 ilo.org/aiobservatory