Providing labour analgesia with limited resources

Susilo Chandra, MD

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Indonesia

City

Village

>17.000 islands

Childbirth is a meaningful milestone, but meaning does not justify suffering.

Pain relief is not merely about comfort. It is fundamental to dignity, respect, and a positive childbirth experience. The central question has shifted from "Can we provide analgesia?" to "How do we make humane childbirth available to every woman?"

The Gold Standard

Epidurals are highly flexible and effective, but demand 24-hour dedicated anesthesiologists, continuous fetal monitoring, and costly consumables.

The Available Standard

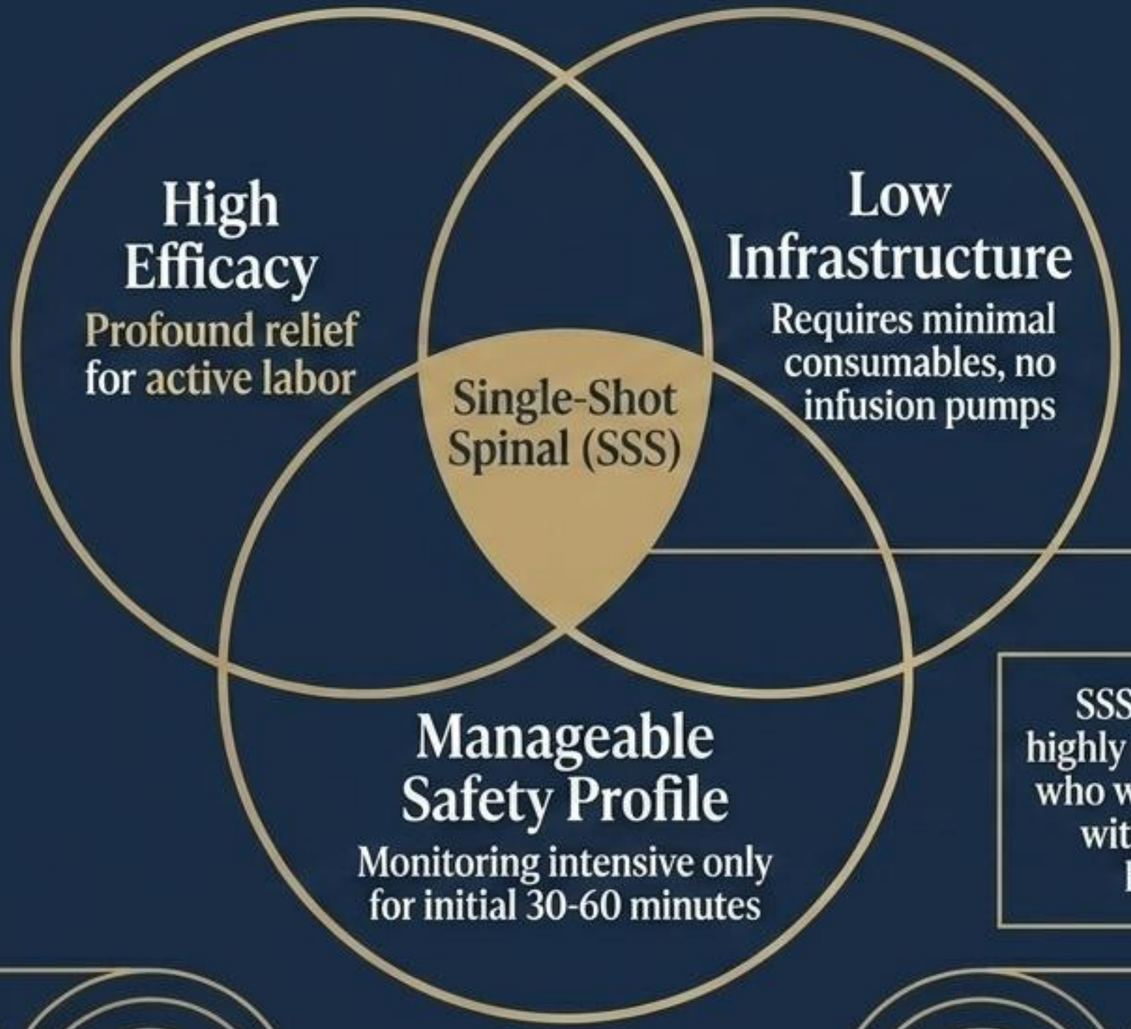
In environments like early-2000s Indonesia, resource and manpower limits meant the choice was rarely "Epidural vs. Spinal."

The reality was **Spinal/Epidural vs. Nothing**.

The Analgesia Ensemble

	Analgesic Efficacy	Consumable Cost	Monitoring Burden	Staffing Requirement
Epidural Analgesia	✓ High Efficacy	✗ High Cost	✗ High Monitoring	✗ 24-hour Anesthesiologist
Remifentanil PCA	✓ High Efficacy	✗ High Cost (Pumps)	✗ Continuous SpO2	✗ 1:1 Midwife Ratio
Single-Shot Spinal (SSS)	✓ High Efficacy	✓ Low Cost (Basic needle/drugs)	⚠ Moderate (first 30-60 mins)	✓ Task-shareable

The Pragmatic Soloist



SSS bridges the gap, providing highly effective analgesia for women who would otherwise receive none, without overwhelming fragile hospital infrastructures.

Our Indonesian Study in 2008

We studied single-shot spinal labor analgesia

It was a simple technique using medications that were available

Our goal was simple:

Can we provide effective pain relief to woman who otherwise would receive none?

Kuczkowski KM, Chandra S. *J Anesth*. 2008;22:55–58

PURPOSE

Assess maternal satisfaction with single-dose spinal analgesia for labor pain in Indonesian women.

STUDY DESIGN

- 62 laboring women (single pregnancy, term)
- 45 primigravidas, 17 multigravidas
- Age 15–29 years
- Single-dose spinal: bupivacaine 2.5 mg + morphine 0.25 mg + clonidine 45 µg
- Outcomes: maternal satisfaction, pain relief duration, side effects

KEY RESULTS

50 **patients (81%)** very satisfied

7 **patients (11%)** satisfied

49 **patients (79%)** would choose this technique in the future

CONCLUSION

Single-dose spinal analgesia with bupivacaine, morphine, and clonidine provides **effective labor pain control with very high maternal satisfaction.**

- Cost-effective and recommended for routine use in Indonesia and other developing countries.

J Anesth. 2008;22(1):55-8. Epub 2008 Feb 27

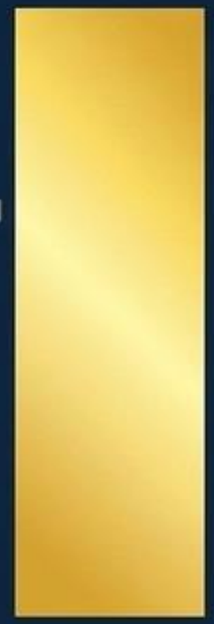
Maternal Satisfaction With Single-Dose Spinal Analgesia for Labor Pain in Indonesia: a Landmark Study.

Kuczkowski KM, Chandra S.
Department of Anesthesiology, UCSD Medical Center, San Diego, CA 92103-8770, USA.
Department of Anesthesiology and Intensive Care, University of Indonesia, Jakarta, Indonesia

Composing the Block

Preserving the rhythm of labor while silencing the pain.

The Ambulation Scale



87.7%
maintained completely normal ambulation

12.3%
experienced a mild effect

0%
experienced severe loss of mobility

Ghana Study Data
(332 Parturients)

98.8% reported mild to no pain post-injection.

Regimen Used: Low-dose Bupivacaine (2.5mg) + Fentanyl (25mcg) + Morphine (0.2mg)

The Tiered System of Care

Apex Tier
(Tier 3: Advanced Capacity)

Epidural Analgesia / Remifentanil PCA
Reserved for facilities with 24/7 dedicated staffing, continuous monitoring, and secure supply chains.

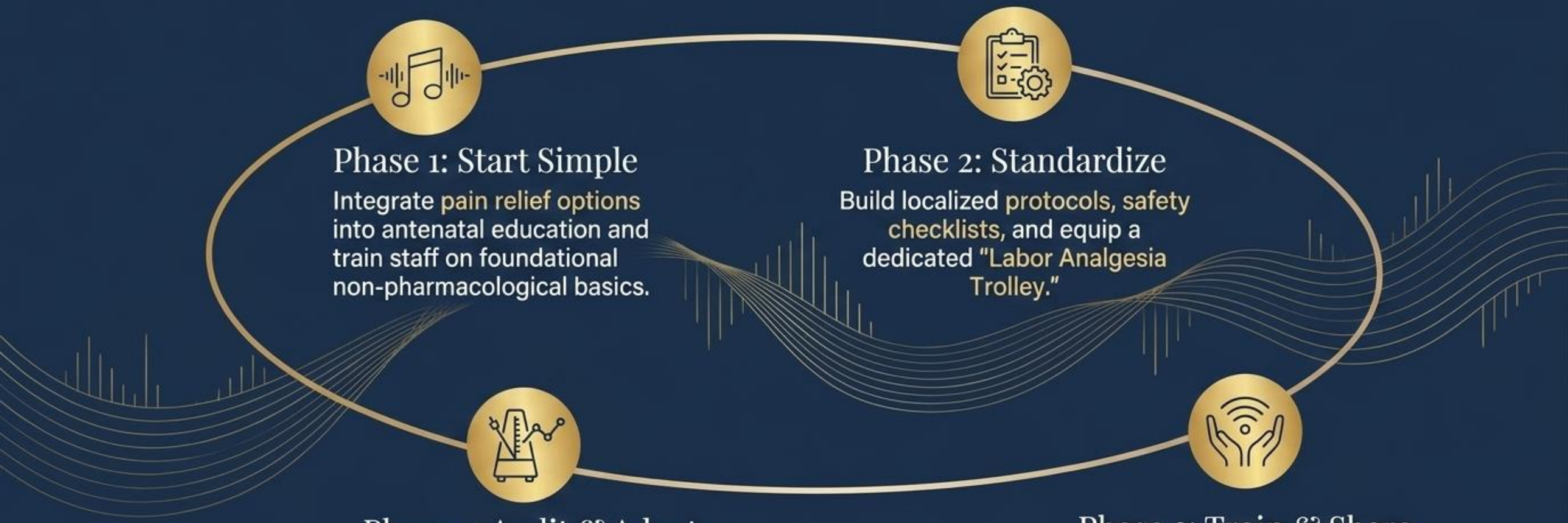
Middle Tier
(Tier 2: The Core Standard)

Single-Shot Spinal (SSS) / Systemic Opioids
High efficacy, low consumable cost, requires basic monitoring. The pragmatic engine of LMIC analgesia.

Base Tier
(Tier 1: Foundational)

Non-Pharmacological Support
Continuous 1:1 support, water immersion, sterile water injections. Requires minimal equipment; culturally acceptable.

The Implementation Rhythm



Phase 1: Start Simple

Integrate pain relief options into antenatal education and train staff on foundational non-pharmacological basics.

Phase 2: Standardize

Build localized protocols, safety checklists, and equip a dedicated "Labor Analgesia Trolley."

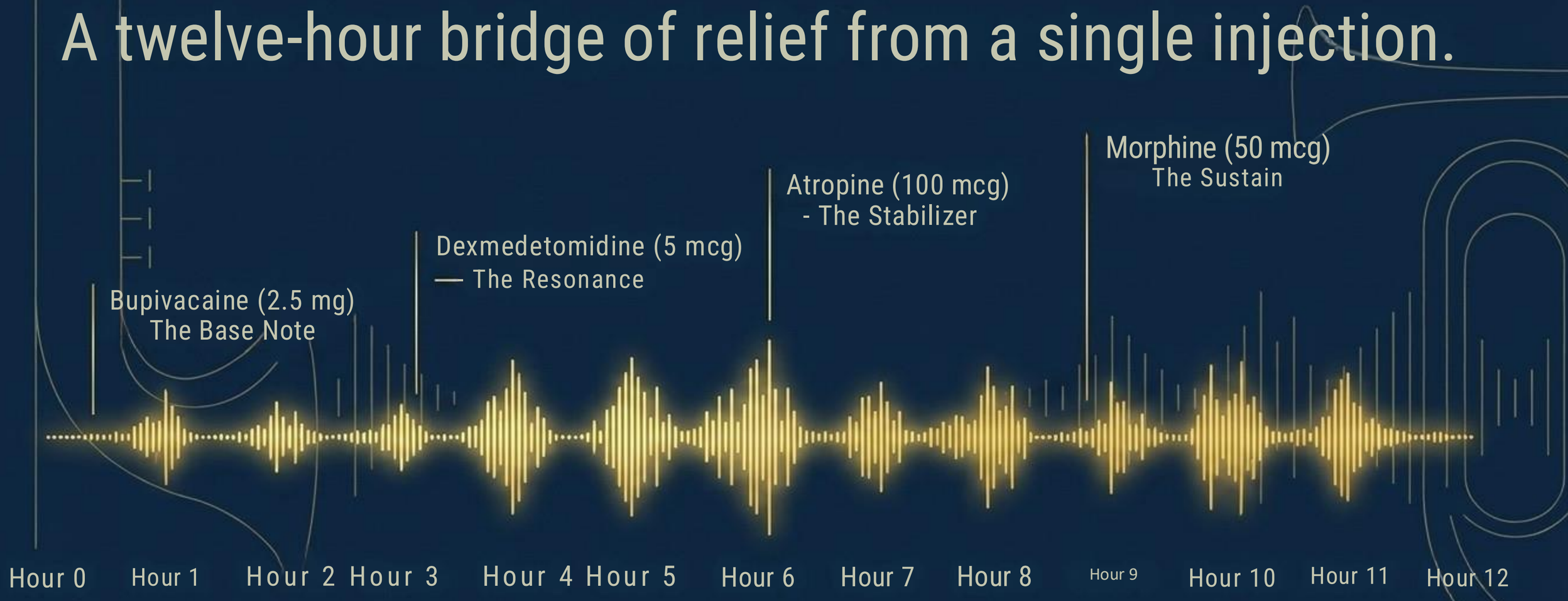
Phase 3: Train & Share

Conduct hands-on, step-by-step SSS protocol training for local providers and midwives to enable safe task sharing.

Phase 4: Audit & Adapt

Track basic process metrics (pain scores, maternal satisfaction, ambulation) to adapt the program to local rhythms.

A twelve-hour bridge of relief from a single injection.



This specific synergistic blend extends targeted analgesia for >12 hours, covering both the latent and active phases of labor without requiring catheter infusions.

Collaboration becomes important

Working together with obstetricians

Twenty years ago, we asked:
Can we provide labor analgesia at all?

Today, we ask: How can we improve it?

Tomorrow, we must ask: How do we make humane childbirth available to every woman, regardless of where she lives?

Pain during childbirth may be natural.
But ignoring it should never be.

Thank you.