Tech Offer:

NASOGASTRIC ASPIRATION AND FEEDING TRAINING SYSTEM

Bioscience & Healthcare

Technology Overview

This invention (Patent Application No. 10202501546S) introduces a specialised nasogastric (NG) feeding circuit integrated into a mechanical, non-electronic adult patient simulator. It addresses limitations in current NG training setups by enabling realistic simulation of pre-feeding assessments and enteral nutrition administration. Learners can independently aspirate an acidic solution to verify NG tube placement and subsequently administer nutrition through the same tube, replicating clinical workflows. The system enhances training fidelity, reduces maintenance needs, and supports scenario-based learning for nursing education.

Technology Features & Specifications

- NG Aspiration and Feeding Circuit: Integrated into a mechanical, non-electronic adult simulator to replicate clinical NG feeding workflows.
- Leak-Proof Modular Design: Uses check valves and joints to control fluid flow, ensuring reliable operation and easy reset between learners.
- Scenario-Based Learning: Supports flexible training setups for critical thinking and hands-on practice.

Benefits

- **Realistic Training:** Simulates full NG feeding workflow, including tube placement verification
- **Low Maintenance**: External reservoirs reduce internal leaks and cleaning needs
- **Efficient Setup**: Quick reset between learners supports high-volume training
- **Enhanced Learning**: Enables independent practice, scenario-based learning and critical thinking

TRL Level

TRL 7 – System prototype demonstration in operational environment

Figure 1: The newly developed Nasogastric Aspiration And Feeding Training System is usable on both full manikin (Left) and half torso (right)

Potential Applications

- Nursing and medical education institutions
- Healthcare simulation labs
- Skills assessment centres for care providers and educators

Ideal Collaboration Partners: Nursing schools, healthcare simulation labs, Nursing homes, training centres and medical device manufacturers.

Market Opportunities

Singapore trains over 3,000 nurses and care providers annually, with NG feeding being a core skill. The invention meets the growing demand for high-fidelity, low-maintenance training tools. Its realistic simulation and modular design offer a competitive edge in the healthcare education market.

Originating School

School of Health Sciences

Possible Collaboration Mode

- ✓ Licensing

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