

Supplementary material

Preliminary report: list of procedures performed by nurses on “India” ambulances and their volume (year 2022)

| Procedure | n |
|---|-------|
| Electrocardiogram | 9,529 |
| Peripheral venous access | 5,507 |
| Injection/infusion of drugs and fluids | 3,951 |
| Capillary blood glucose measurement | 2,839 |
| Other procedure | 1,598 |
| Oxygen administration | 612 |
| Bag-valve-mask ventilation | 325 |
| Closed chest external cardiac massage (CPR) | 191 |
| Basic cardiopulmonary resuscitation (CPR) | 76 |
| Intraosseous infusion of drugs and fluids | 71 |
| Aerosolized drug administration | 61 |
| Airway obstruction removal | 55 |
| Endotracheal tube insertion | 53 |
| External hemorrhage control | 39 |
| Intraosseous access | 34 |
| Semi-automatic defibrillation | 33 |
| Continuous positive airway pressure (CPAP) | 32 |
| Central venous access | 25 |
| Open pneumothorax management | 20 |
| Orotracheal tube insertion (or other supraglottic or subglottic device) | 18 |
| Orotracheal tube insertion | 15 |
| Laryngeal tube or mask insertion (or other supraglottic device) | 14 |
| Chest drainage | 1 |
| Electrical therapies (cardioversion) | 1 |
| Cricothyroidotomy | 0 |
| Pneumothorax decompression | 0 |
| Extraglottic device insertion | 0 |
| Nasotracheal or nasopharyngeal tube insertion | 0 |

Scores obtained from individual intervention proposals on agreement, importance, and feasibility

| ID and Proposed Intervention | Criterion | SD | Mean | Consensus |
|--|------------------|-----------|-------------|------------------|
| Section 1: Human resource management | | | | |
| Subcategory: Recruitment and selection of staff | | | | |
| 1. Consider physical limitations | Agreement | 0.84 | 4.64 | YES |
| | Importance | 0.76 | 4.57 | NO |
| | Feasibility | 0.96 | 4.00 | YES |
| 2. Structure selection criteria: work experience, training, education | Agreement | 0.73 | 4.29 | NO |
| | Importance | / | / | / |
| | Feasibility | / | / | / |
| Subcategory: Rotation and staff management | | | | |
| 3. Standardize nurse-led ambulance ratio throughout the entire territory | Agreement | 0.76 | 4.50 | YES |
| | Importance | 0.94 | 4.57 | NO |
| | Feasibility | 0.99 | 3.71 | NO |
| 4. Rotate “India” nurses among high- and low-call volume stations | Agreement | 0.83 | 4.07 | NO |
| | Importance | / | / | / |
| | Feasibility | / | / | / |
| 5. Rotate nurses among “India” ambulances and medical cars | Agreement | 0.74 | 4.36 | NO |
| | Importance | / | / | / |
| | Feasibility | / | / | / |
| 6. Rotate nurses between ED and EMS | Agreement | 1.54 | 2.93 | NO |
| | Importance | / | / | / |
| | Feasibility | / | / | / |
| 7. Clearly separate professional domains of EMS stations and dispatch team | Agreement | 1.34 | 2.36 | NO |
| | Importance | / | / | / |
| | Feasibility | / | / | / |
| 8. Rotate nurses among ED, EMS and ICU, especially near low-call volume stations | Agreement | 1.61 | 3.14 | NO |
| | Importance | / | / | / |
| | Feasibility | / | / | / |
| Section 2: Staff training | | | | |

| Subcategory: Training courses | | | | |
|--|-------------|------|------|-----|
| 9. Acquisition of adequate training supports (high-fidelity mannequins and remote audio-video systems) | Agreement | 0.36 | 4.86 | YES |
| | Importance | 0.36 | 4.86 | YES |
| | Feasibility | 1.11 | 4.00 | YES |
| 10. Prioritize high-fidelity simulation courses | Agreement | 0.94 | 4.50 | YES |
| | Importance | 0.47 | 4.71 | YES |
| | Feasibility | 0.74 | 4.36 | YES |
| 11. Train staff on the use of technological tools and related innovations through continuous digital education | Agreement | 0.85 | 4.57 | YES |
| | Importance | 0.85 | 4.50 | NO |
| | Feasibility | 0.97 | 3.79 | NO |
| 12. Implement semi-annual training-evaluation events with staff evaluation on technical skills | Agreement | 0.76 | 4.57 | YES |
| | Importance | 0.47 | 4.71 | YES |
| | Feasibility | 1.12 | 3.79 | NO |
| 13. Implement periodic retraining for hard skills (high-fidelity simulations, task training), soft skills (team building, teamwork, team leadership, effective communication and relationship, stress management, conflict management and emotion management) and on-the-job training (airway management, NIV, delivery room, ED shock room) | Agreement | 0.36 | 4.86 | YES |
| | Importance | 0.51 | 4.57 | NO |
| | Feasibility | 0.73 | 4.07 | YES |
| 14. Implement joint simulations with fire service, police, EMS volunteers | Agreement | 0.63 | 4.64 | YES |
| | Importance | 0.76 | 4.50 | NO |
| | Feasibility | 1.01 | 3.64 | NO |
| 15. Increase the number of specific emergency courses, implementing training steps with specific simulations | Agreement | 1.33 | 4.29 | NO |
| | Importance | / | / | / |
| | Feasibility | / | / | / |
| 16. Program courses on Non-Technical Skills | Agreement | 0.65 | 4.57 | YES |
| | Importance | 0.61 | 4.71 | YES |
| | Feasibility | 0.65 | 4.57 | YES |
| 17. Monitor staff training paths and related training course deadlines | Agreement | 0.58 | 4.79 | YES |
| | Importance | 0.61 | 4.71 | YES |
| | Feasibility | 1.20 | 4.29 | YES |
| 18. Share planning with the training office | Agreement | 0.63 | 4.64 | YES |

| | | | | |
|---|-------------|------|------|-----|
| | Importance | 0.85 | 4.43 | NO |
| | Feasibility | 0.83 | 4.29 | YES |
| Subcategory: Training path | | | | |
| 19. Align course content across various training programs and centralize training efforts to ensure consistent emergency management practices | Agreement | 0.50 | 4.64 | YES |
| | Importance | 0.50 | 4.64 | NO |
| | Feasibility | 1.19 | 3.79 | NO |
| 20. Closely monitor staff participation in training and refreshers, with periodic rescheduling as needed | Agreement | 1.01 | 4.36 | NO |
| | Importance | / | / | / |
| | Feasibility | / | / | / |
| 21. Create an Individual Operational Dossier documenting shift activations and performances, with regular evaluations and feedback | Agreement | 1.33 | 3.71 | NO |
| | Importance | / | / | / |
| | Feasibility | / | / | / |
| 22. Establish data collection to identify individual training needs and develop personalized training plans | Agreement | 0.95 | 4.14 | NO |
| | Importance | / | / | / |
| | Feasibility | / | / | / |
| 23. Implement validated competency assessments, cross-referenced with formal training evaluations | Agreement | 1.35 | 4.14 | NO |
| | Importance | / | / | / |
| | Feasibility | / | / | / |
| 24. Conduct impact assessments to evaluate the effectiveness of training on professional behavior | Agreement | 0.92 | 4.07 | NO |
| | Importance | / | / | / |
| | Feasibility | / | / | / |
| 25. Standardize the training path and increase the number of courses to ensure the operational readiness of “India” nursing staff. | Agreement | 1.07 | 3.93 | NO |
| | Importance | / | / | / |
| | Feasibility | / | / | / |
| Subcategory: Clinical Risk Management, case analysis and research | | | | |
| 26. Increase the culture of Clinical Risk Management by learning from errors, sharing experiences, and identifying training needs | Agreement | 0.43 | 4.79 | YES |
| | Importance | 0.36 | 4.86 | YES |
| | Feasibility | 1.17 | 3.86 | NO |
| 27. Promote research to develop new guidelines and best practices | Agreement | 0.61 | 4.71 | YES |
| | Importance | 0.27 | 4.93 | YES |
| | Feasibility | 1.05 | 3.79 | NO |
| | Agreement | 0.84 | 4.64 | YES |
| | Importance | 0.85 | 4.57 | NO |

| | | | | |
|--|-------------|------|------|-----|
| 28. Establish regular meetings with “India” nurses for clinical case discussions and peer comparisons on territorial intervention management | Feasibility | 1.03 | 4.14 | YES |
| 29. Set up monthly recognized study hours for individual learning | Agreement | 1.27 | 4.07 | NO |
| | Importance | / | / | / |
| | Feasibility | / | / | / |
| 30. Introduce an annual award for two nurses with the best performance, offering training stages in another region or country for systemic comparison | Agreement | 1.50 | 2.64 | NO |
| | Importance | / | / | / |
| | Feasibility | / | / | / |
| 31. Schedule at least six annual MMRs with literature analysis for each clinical case | Agreement | 1.35 | 4.14 | NO |
| | Importance | / | / | / |
| | Feasibility | / | / | / |
| Section 3: Measurement and data collection methods | | | | |
| 32. Increase training on the use of technological tools for accurate form completion | Agreement | 0.94 | 4.43 | NO |
| | Importance | / | / | / |
| | Feasibility | / | / | / |
| 33. Create more representative data clusters for the analyzed indicators | Agreement | 0.99 | 4.29 | NO |
| | Importance | / | / | / |
| | Feasibility | / | / | / |
| 34. Establish documentation review groups, holding periodic meetings to analyze completed forms, share best practices, and assign reference standards | Agreement | 0.83 | 4.29 | NO |
| | Importance | / | / | / |
| | Feasibility | / | / | / |
| 35. Create data collection systems for detecting adverse events | Agreement | 0.43 | 4.79 | YES |
| | Importance | 0.43 | 4.79 | YES |
| | Feasibility | 1.03 | 4.14 | YES |
| 36. Extract data annually and schedule informational meetings | Agreement | 0.76 | 4.57 | YES |
| | Importance | 0.94 | 4.57 | NO |
| | Feasibility | 1.17 | 3.86 | NO |
| 37. Ensure software communication across all Regional Health Service facilities to maintain continuity between hospital and territory, preventing data loss or duplication | Agreement | 0.27 | 4.93 | YES |
| | Importance | 0.00 | 5.00 | YES |
| | Feasibility | 1.58 | 2.79 | NO |
| | Agreement | 1.21 | 4.07 | NO |

| | | | | |
|--|-------------|------|------|-----|
| 38. Monitor nurses performance on active clinical pathways | Importance | / | / | / |
| | Feasibility | / | / | / |
| 39. Enhance and align technological resources, such as tablets for computerized and integrated records, to automate service entries and reduce human error | Agreement | 0.27 | 4.93 | YES |
| | Importance | 0.76 | 4.50 | NO |
| | Feasibility | 1.08 | 3.64 | NO |
| 40. Reduce the number of performance items in clinical documentarion | Agreement | 0.94 | 4.43 | NO |
| | Importance | / | / | / |
| | Feasibility | / | / | / |
| Section 4: Technologies and equipment | | | | |
| 41. Involve staff nurses in procurement processes for materials and equipment | Agreement | 0.63 | 4.64 | YES |
| | Importance | 1.14 | 4.29 | NO |
| | Feasibility | 1.46 | 3.14 | NO |
| 42. Equip staff with manuals from scientific societies or educational materials validated by the ED/EMS quality commission | Agreement | 1.09 | 4.57 | YES |
| | Importance | 1.15 | 4.36 | NO |
| | Feasibility | 1.07 | 3.93 | YES |
| 43. Ensure all “India” ambulances have portable webcams connected to the EMS dispatch center | Agreement | 1.17 | 3.86 | NO |
| | Importance | / | / | / |
| | Feasibility | / | / | / |
| 44. Equip all “India” ambulances with ultrasound machines. | Agreement | 1.33 | 3.93 | NO |
| | Importance | / | / | / |
| | Feasibility | / | / | / |
| 45. Equip all “India” ambulances with a handheld brain scanner | Agreement | 1.53 | 3.21 | NO |
| | Importance | / | / | / |
| | Feasibility | / | / | / |
| 46. Implement integrated nursing record in tablets | Agreement | 1.76 | 3.79 | NO |
| | Importance | / | / | / |
| | Feasibility | / | / | / |
| 47. Improve target geolocation systems | Agreement | 0.58 | 4.79 | YES |
| | Importance | 0.00 | 5.00 | YES |
| | Feasibility | 1.21 | 4.07 | YES |
| 48. Standardize equipment across all ambulance stations, establishing a unified checklist for backpacks and drugs at the corporate level | Agreement | 0.74 | 4.64 | YES |
| | Importance | 0.58 | 4.79 | YES |
| | Feasibility | 1.07 | 4.07 | YES |

| Section 5: Work environments | | | | |
|--|-------------|------|------|-----|
| 49. Promote a sense of belonging to a cohesive community, embracing diversity while being open to the entire professional family, through proper goal assignment and clear results communication | Agreement | 0.43 | 4.79 | YES |
| | Importance | 0.27 | 4.93 | YES |
| | Feasibility | 1.15 | 3.36 | NO |
| 50. Provide adequate and comfortable spaces, with healthy rooms where crews can wait for calls | Agreement | 0.58 | 4.79 | YES |
| | Importance | 0.63 | 4.64 | NO |
| | Feasibility | 1.28 | 3.64 | NO |
| 51. Provide libraries and study areas with access to major medical databases | Agreement | 0.47 | 4.71 | YES |
| | Importance | 0.43 | 4.79 | YES |
| | Feasibility | 0.86 | 4.14 | YES |
| 52. Ensure direct health agency management of workspaces where they belong to volunteer associations, adhering to well-established parameters | Agreement | 0.85 | 4.43 | NO |
| | Importance | / | / | / |
| | Feasibility | / | / | / |
| 53. Encourage pre- and post-intervention discussions among healthcare workers | Agreement | 0.27 | 4.93 | YES |
| | Importance | 0.27 | 4.93 | YES |
| | Feasibility | 0.76 | 4.57 | YES |