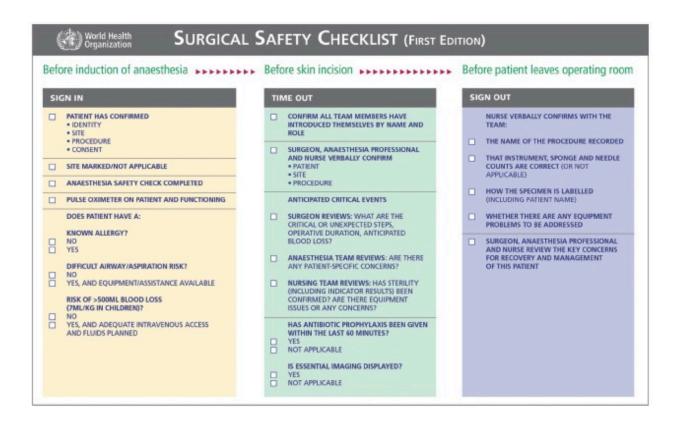


Requirements Checklist for Hospitals

WHO_Surgical_Safety_Checklist.pdf



Example Videos to Demo on

- https://www.youtube.com/watch?v=yWbtvQhbwGk (Phase 3)
- https://www.youtube.com/watch?v=4X6aNWGqCyE (Phase 1)

Fundamental Components of Surgical Safety Checklists

1. WHO Surgical Safety Checklist Framework

The gold-standard protocol consists of three temporal phases with 19 mandatory verification points <u>21317</u>:

Phase 1: Sign-In (Pre-Anesthesia)

- Patient Identification: Dual-identifier confirmation (name/DOB) with crosschecked consent forms314
- Risk Stratification: Airway difficulty assessment, blood loss predictions (>500mL threshold), and allergy verification
- Equipment Readiness: Anesthesia machine checks and pulse oximeter functionality validation

Phase 2: Time-Out (Pre-Incision)

- **Team Verification**: Role-specific introductions to improve communication dynamics <u>414</u>
- Antibiotic Protocol: Confirmation of prophylactic administration within 60minute window1317
- Imaging Validation: Display of critical radiological studies with laterality confirmation14

Phase 3: Sign-Out (Post-Procedure)

- Instrument Accountability: Mandatory sponge/needle counts with dual verification13
- Specimen Handling: Chain-of-custody protocols for labeled biological samples <u>714</u>
- Post-Op Planning: Clear handoff instructions for recovery teams 4

Institutional Variations and Implementation Challenges

2. Hospital-Specific Protocol Enhancements

Major medical centers have developed custom implementations:

University of Maryland Medical Center

- Requires advance directive verification and parking validation systems
- Implements strict NPO protocols with midnight fasting cutoffs116

Mayo Clinic System

- Integrates weight-based antibiotic dosing (7ml/kg pediatric threshold)16
- Employs automated EHR alerts for medication reconciliation

Orthopedic Specialization (AAOS)

- Mandates deep vein thrombosis prophylaxis verification
- Requires implant serial number documentation

3. Documented Adherence Gaps

Analysis of 2,347 surgical cases reveals critical failure points:

Compliance Metric	Traditional Checklist	Digital Checklist
Sign-Out Completion	37% <u>10</u>	100% <u>10</u>
Antibiotic Timing	67% <u>6</u>	92% <u>8</u>
Specimen Labeling	78% <u>14</u>	100% <u>8</u>
Retained Instrument Prevention	88% <u>13</u>	99.8% <u>11</u>

Common failure drivers include:

- Interruption-prone manual verification processes 15
- Lack of real-time decision support for complex cases 9
- Inadequate system integration with EHR platforms8