

# WebRTC Telemedicine Pre-Flight Checklist

Fifteen checks before the first sprint — TURN budget, hostile networks, the compliance boundary, recording, topology. Run it against your architecture, then against every vendor pitch. Engineering guidance, not legal advice.

## 1 · TURN & THE NETWORK BUDGET

- TURN deployed with your own credentials — no tutorial or public relay endpoints in any build
- Relay assumption set (5–20% baseline; more on hospital estates) and GB/month forecast in the cost model
- Relay regions placed near patient populations; per-GB price per region known

## 2 · HOSTILE NETWORKS

- Fallback ladder implemented and tested: direct UDP → TURN/UDP → TURN/TCP → TURN/TLS on 443
- Pre-call tech check runs in the waiting room, while the patient can still switch networks
- Pilot tested on hospital Wi-Fi, cellular CGNAT, and rural broadband — not only office networks

## 3 · COMPLIANCE BOUNDARY — \$164.312 · \$164.308(b)

- Every server in the media path (TURN, SFU, recording storage) BAA-covered or self-hosted
- Access control, audit logging, authentication designed around the call — encryption alone is not compliance
- No PHI in signaling payloads, room URLs, or logs

## 4 · THE RECORDING DECISION

- Record-or-not decided in week one — it selects topology, vendors, and the consent flow
- If recording: server-side path, encrypted at rest, access-controlled, retention schedule written
- E2EE ambitions checked against recording — the two conflict; choose deliberately

## 5 · TOPOLOGY & SCALE

- SFU planned for any session that can exceed two participants (interpreter, caregiver, supervisor)
- 1:1 calls: P2P vs via-SFU decided with eyes open (telemetry and recording point vs server cost)
- Reconnection, audio-only fallback, and PSTN dial-in specified for failing networks

## THE FIVE QUESTIONS THAT EXPOSE A VENDOR

What share of your sessions relays through TURN? · Will you sign a BAA covering TURN and recording storage? · What happens on a network that blocks UDP? · Where is the recording encrypted, and who holds the keys? · What changes when a third participant joins?