Governance Brief No. 3

Board Considerations Before Adopting LLM-Based Clinical Tools

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Prepared by

J A Epperson, MBA
Healthcare Compliance & Governance Advisor

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Transcription Accuracy, Accent Variance, and Clinical Documentation Risk

Purpose

This brief outlines governance considerations related to speech-to-text transcription accuracy in AI-assisted clinical documentation workflows.

As LLM-based tools are integrated into exam room encounters, speech recognition systems increasingly serve as the first layer of documentation capture. Transcription accuracy directly affects clinical records, downstream AI analysis, and ultimately patient care.

Boards should understand the operational and liability implications of transcription variance before implementation.

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1. The Speech-to-Text Dependency Layer

Many AI-assisted documentation systems operate in the following sequence:

Patient encounter
↓
Audio capture
↓
Speech-to-text transcription
↓
LLM analysis and summarization
↓
Clinical note generation

If the transcription layer contains inaccuracies, all downstream processing inherits those errors.

Governance must address this first layer explicitly.

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2. Accent and Communication Variance

Healthcare environments include:

- Diverse clinician backgrounds
- Diverse patient populations
- Varied speech cadence and pronunciation

• Multilingual exchanges
• Rapid clinical dialogue

Speech recognition systems are trained on datasets that may not fully represent every communication style encountered in practice.

Even minor transcription shifts can alter meaning in clinical documentation.

For example:

Medication dosage clarification
Symptom duration
Negation ("no chest pain" vs. "chest pain")
Family history qualifiers

Boards do not need technical mastery of speech models.

They do need assurance that performance variance has been evaluated within their own environment.

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3. Validation Within the Organization

Management should provide:

• Transcription accuracy rates under real clinical conditions
• Testing across diverse clinician voices
• Testing across patient communication styles
• Error rate thresholds requiring intervention
• Monitoring for systemic bias or performance drift

Vendor validation alone is insufficient.

Local validation protects institutional defensibility.

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4. Clinical Note Integrity

Boards should confirm that policies require:

• Clinician review of AI-generated notes prior to signature
• Clear responsibility for verifying transcription accuracy
• Training for clinicians on common transcription error patterns

• Escalation pathways when recurring errors are detected

Speech recognition errors can be subtle.

Verification standards must be explicit.

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5. Liability Exposure Considerations

In litigation, documentation accuracy is central.

If a transcription error materially alters a clinical record, the organization must demonstrate:

• Reasonable validation prior to implementation
• Active review protocols
• Monitoring for known error categories
• Defined responsibility for correction

Absent these controls, exposure increases.

Technology-assisted documentation does not reduce record integrity obligations.

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6. Workforce Sensitivity and Culture

AI performance variance should be addressed as a system issue, not a personnel issue.

Governance should avoid:

• Framing transcription discrepancies as individual clinician performance failures
• Using automated error detection for punitive oversight without validation
• Implementing technology that disproportionately affects certain communication styles

Oversight must remain structural and objective.

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7. Strategic Framing

Speech recognition and LLM documentation tools may:

• Reduce clerical burden
• Improve note consistency
• Enhance compliance tracking
• Support real-time summarization

These benefits are meaningful.

However, transcription accuracy is foundational.

Boards that require validation and monitoring of this layer reduce risk before it becomes visible in adverse outcomes.

Closing Observation

In AI-assisted documentation workflows, speech-to-text accuracy is not a technical detail.

It is a governance variable.

If transcription errors cascade into clinical reasoning or record integrity, the exposure is organizational.

Effective oversight recognizes that small input variances can produce material downstream consequences.

Validation at the first layer protects every layer above it.

Boards evaluating AI-enabled clinical tools may benefit from an independent governance perspective prior to deployment.

A structured external review often surfaces gaps that are easy to miss during implementation planning.