

MCP SERVER

NO CODE

CLOUD HOSTED

# HAS-BLED Score Calculator MCP for AI Agents

## Assessing Major Bleeding Risk During Anticoagulant Therapy

Use the HAS-BLED Score Calculator MCP to assess a patient's risk of major bleeding while they are taking oral anticoagulants. This tool evaluates seven key clinical indicators, giving clinicians an immediate, quantitative score used for guiding treatment decisions and monitoring care.

**A+** Quality Score 100/100

has-bleed

anticoagulation

bleeding-risk

clinical-score

healthcare-calculator



# The connectivity layer between AI and the world's software.



Vinkius sits between AI and every application. All communication passes through Vinkius Cloud via the Model Context Protocol (MCP) — with governance, observability, and security at every layer.

# Your AI Connections Run Through Vinkius Cloud

The world's largest  
managed MCP catalog

Vinkius is the connectivity layer where AI connects to the software your business already runs. We handle the hosting, the security, the credentials, the uptime — you get agents that actually do things.

We operate the world's largest managed MCP catalog. Major SaaS platforms, CRMs, databases, and cloud providers — running, monitored, production-ready. This MCP server is hosted and maintained by the Vinkius Cloud for AI Agents.

*The agent doesn't manage credentials, doesn't manage uptime, doesn't manage security. Vinkius does.*

— Architecture principle

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## Four Pillars of the Vinkius Runtime

### 01 — Security by design

Credentials stay encrypted at rest via AES-256. The AI agent never touches raw keys — they're injected into a sandboxed V8 isolate at runtime. Actions are logged, and connections have an emergency kill switch.

### 03 — Deterministic observability

Eight immutable metrics per endpoint: request volume, p95 latency, error rate, active connections, cost attribution. A live payload feed logs every tool call with mutation detection.

### 02 — Built on MCP Fusion

This MCP server was built with **MCP Fusion**, the open-source framework (Apache 2.0) that powers the entire Vinkius catalog. Schema-as-firewall strips undeclared fields, compiled PII redaction runs at zero overhead, and cryptographic lockfiles produce git-diffable audit trails.

### 04 — Autonomous operations

Servers are deployed, monitored, and patched autonomously. New capabilities and security patches ship weekly. Zero-downtime deployments ensure continuous availability across all managed MCP servers.

**AES-256**

Encryption at rest

**Ed25519**

PKI vault signatures

**24h TTL**

Ephemeral session keys

**V8 Isolate**

Sandboxed execution

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## One Token. Instant Access.

Every MCP server on Vinkius is accessed through a **Connection Token**. Tokens are generated in the cloud dashboard and produce a unique MCP endpoint URL. Paste this URL into any MCP-compatible client — no SDK required.

A single token can serve **multiple AI clients simultaneously**, or you can issue separate tokens per client for granular access control. Each token tracks its own request count, last activity timestamp, and can be individually enabled or revoked.

MCP ENDPOINT

`https://edge.vinkius.com/{token}/mcp`

Claude



Cursor



VS Code



Windsurf



Grok



Gemini

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## Security Is the Architecture

Security in Vinkius is not a feature — it's the foundation of the runtime. The gateway enforces multiple independent protection layers between AI agents and third-party APIs.

### 01 — Ed25519 PKI Vault

Every workspace has an Ed25519 Master Key. Session keys are generated ephemerally (24h TTL) and signed by the Master Key. Credentials never leave the vault boundary.

### 02 — V8 Isolate Sandboxing

Tool code runs inside isolated-vm V8 isolates with 64 MB memory caps and per-request timeouts. No filesystem access, no network access except through the SSRF-guarded fetch bridge.

### 03 — SSRF Guard

All outbound HTTP requests are DNS-resolved and validated before execution. Private IP ranges (10.x, 172.16-31.x, 192.168.x, AWS metadata 169.254.x) are blocked at the network layer.

### 05 — Cryptographic Audit Trail

Every request is signed into a SHA-256 hash chain with Ed25519 signatures. Events form a tamper-proof, SIEM-exportable forensic record.

### 04 — DLP & PII Redaction

A ResponseGuard pipeline intercepts every tool response. Configurable redaction patterns strip sensitive fields (emails, SSNs, card numbers) before data reaches the AI agent.

### 06 — Honeypot Trap System

Phantom credentials are injected into isolated environments. If a honeypot is used outside Vinkius infrastructure, the server is quarantined instantly.

## Emergency Kill Switch

EU AI Act Art. 14(1)  
Compliant

The kill switch is an **emergency halt** mechanism — not a simple toggle. When triggered, it executes three actions atomically:

#### 01 — Server deactivated

The MCP server is immediately taken offline across the entire cluster.

#### 02 — All tokens revoked

Every connection token is invalidated. Total lockout — reconnection blocked until new tokens are issued.

#### 03 — WebSocket connections killed

Active connections terminated via Redis pubsub broadcast. Propagates to every runtime node in the cluster.

## Full Visibility. Zero Guesswork.

The Vinkius cloud dashboard includes a full MCP Governance suite — real-time analytics and security controls for production AI operations.

**Control Plane**

KPI dashboard with request volume, latency, success rate, token consumption, and AI-generated operational briefings.

**FinOps**

Cost tracking per tool, payload compression savings, budget optimization signals, and consumption trends.

**Firewall & DLP**

PII redaction activity, sensitive data protection counters, and security event timeline.

**Agent Activity**

Which AI clients are connecting, how often, and what they're doing — real-time session tracking.

**Tool Health**

Slowest and most error-prone tools, with actionable root-cause insights and performance baselines.

**Incident Log**

Error trends, failure rates, status-code breakdowns, and forensic audit trail access.

Get started at [cloud.vinkius.com](https://cloud.vinkius.com) — connect your AI agent in under 60 seconds.

# HAS-BLED Score Calculator MCP

3 tools available

Cloud-hosted on Vinkius

Managing patients on blood thinners requires constant vigilance regarding bleed risk. This MCP helps your AI client calculate the HAS-BLED score—a standardized way to identify who is at high risk of major bleeding when receiving oral anticoagulants. It takes a patient's details, like their age, history of strokes, or if they have uncontrolled hypertension, and quickly assigns an integer score. You can use this MCP via your preferred AI client connected through Vinkius to compute the raw score, understand what that number means in terms of clinical risk, and even reference the precise definitions for each scoring factor. This streamlines a critical part of care planning, helping clinicians make faster, more data-driven calls about managing anticoagulation therapy.

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## Core Capabilities

### 01 — Calculate Quantitative Bleeding Score

Computes an integer score based on the patient's clinical indicators to determine their overall bleeding risk.

### 02 — Interpret Risk Level

Translates the calculated numerical HAS-BLED score into a clear, qualitative risk category and related management advice.

### 03 — Reference Scoring Criteria

Provides a detailed reference guide for all variables used in the HAS-BLED scoring system, including clinical definitions.

# One Click on Vinkius — From Prompt to Execution

Available at [vinkius.com/mcp/has-bleed-score-calculator](https://vinkius.com/mcp/has-bleed-score-calculator) — connect your AI agent in three steps.

- 01 Provide your AI client with the patient's specific clinical data—this includes indicators like blood pressure readings, age, and medication use.
- 02 The MCP runs this data through its scoring logic to generate a preliminary quantitative HAS-BLED score.
- 03 Your agent then processes that number using the interpretation tool, returning a plain English risk assessment and actionable recommendations.

The bottom line is: you feed in clinical variables, and your AI client gets back an immediate, prioritized bleeding risk assessment for the patient.

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## Built For

Cardiologists and primary care physicians who manage patients on blood thinners. If you spend time manually cross-referencing guidelines or calculating scores in different charts, this MCP is built for you.

### Cardiology Resident

Needs to quickly assess bleeding risk when a new patient starts on warfarin or another anticoagulant. They use the MCP to generate an accurate score and understand potential management adjustments.

### Primary Care Physician (PCP)

Manages chronic conditions like hypertension and atrial fibrillation. They rely on this MCP to provide a consistent, validated bleeding risk assessment during routine follow-ups.

### Clinical Nurse Specialist

Assists in patient education and discharge planning. They use the MCP's interpretation feature to communicate clear, actionable risk levels to both the patient and the care team.

## What Changes When You Connect

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- 01** Quickly calculate a quantitative bleeding risk score using the `calculate_has_ble_score` tool, moving beyond simple visual checklists.

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  - 02** Get immediate clinical guidance. The MCP translates raw scores into actionable advice and clear risk categories via `get_risk_interpretation`.

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  - 03** Never guess on guidelines again. Use the `get_scoring_criteria_reference` tool to confirm the exact definitions for every scoring factor.

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  - 04** Standardize care across your practice. This ensures that every patient, regardless of who is assessing them, gets the same validated risk evaluation.

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  - 05** Saves time during busy rounds. Instead of consulting multiple guidelines, you get an integrated assessment from a single prompt to your agent.
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## Real-World Applications

### Patient Starting Warfarin After Stroke

A patient just got discharged after a stroke and needs to start blood thinners. The AI agent can run the patient's full chart data through the MCP, calculating the HAS-BLED score immediately. This helps the team know if they need to adjust the starting dose or recommend additional monitoring.

### Discharge Planning for Elderly Patients

For an elderly patient (65+) who has multiple comorbidities, assessing risk is complex. The agent uses the MCP to calculate the score and then retrieves specific criteria references, ensuring all factors—like drug interactions or age status—are accounted for.

### Annual Follow-up for Atrial Fibrillation

During a routine check, the doctor needs a quick refresher on bleeding risk factors (like labile INR or hypertension). The agent uses the MCP to generate a score and cross-reference it with current guidelines, ensuring no critical factor is missed.

### Reviewing Coagulation Disorder Cases

When reviewing a patient who had unexpected internal bleeding, the agent can use the MCP to calculate the score based on historical data. This helps differentiate between routine risk and a high-risk event needing immediate intervention.

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## Patterns to Avoid

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### Relying on Memory

#### X AVOID

A clinician remembers that hypertension is a risk factor, but they forget if the systolic reading needs to be above 160 mmHg or some other threshold.

#### ✓ INSTEAD

Don't rely on memory. Use the ``get_scoring_criteria_reference`` tool first. This instantly provides the precise, clinically validated definitions for every single scoring variable.

### Partial Risk Assessment

#### X AVOID

Only calculating a score based on age and stroke history, but forgetting to include recent blood sugar issues or kidney function.

#### ✓ INSTEAD

Always run the full data set through the ``calculate_has_ble_score`` tool. It forces the inclusion of all seven key indicators for a comprehensive assessment.

### Ignoring Clinical Context

#### X AVOID

Getting a score and assuming it means everything is fine, without understanding what that number actually suggests about management.

#### ✓ INSTEAD

Don't stop at the number. Next, use ``get_risk_interpretation`` to translate the raw score into plain language recommendations for the care team.

## The Right Fit

Use this MCP when you need a standardized, validated assessment of major bleeding risk in patients on anticoagulants. Specifically, if your task involves gathering multiple clinical data points (age, BP, history, INR) and converting them into one quantitative score, this tool is right for you. Don't use it if you just need to check a single metric, like only looking at the patient's current INR reading; those standalone checks are better handled by different lab tools.

However, if your workflow requires translating that raw number into concrete, actionable next steps—like 'monitor daily' or 'adjust dose immediately'—then using the `get_risk_interpretation` tool is essential for a complete clinical decision cycle.

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## HAS-BLED Score Calculator: Assessing Bleeding Risk in Anticoagulation Management

Right now, assessing bleeding risk involves pulling up multiple guidelines, manually checking if the patient meets criteria for hypertension or labile INR, and then calculating a score across different tabs. It's easy to miss a critical factor—like whether the patient is over 65 or if they are taking NSAIDs—which changes the entire picture.

With this MCP, your agent takes all those fragmented pieces of data—the history, the labs, the vitals—and runs them through one calculation. You get an immediate, validated score that tells you exactly where the patient stands on major bleeding risk.

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## HAS-BLED Score Calculator: Guiding Anticoagulation Decisions with Clinical Scoring

Before this MCP, getting a score was only half the battle. You'd have the number (say, 3), but you'd still be left asking, 'Okay, what does that actually mean for their discharge plan?' The clinical guidance often required cross-referencing multiple handbooks.

Now, after calculating the score, your agent immediately passes it to the interpretation tool. You don't just get a number; you get an entire management recommendation—a clear path forward for the care team.

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# HAS-BLED Score Calculator: 3 Tools for Bleeding Risk Assessment

Use these tools to calculate the HAS-BLED score, interpret risk levels, and reference all scoring criteria in one place.

#	TOOL	DESCRIPTION
01	<code>calculate_has_ble_score</code>	Generates the raw numerical score required for the HAS-BLED assessment using provided clinical data points.
02	<code>get_risk_interpretation</code>	Converts a calculated HAS-BLED number into an easy-to-read qualitative risk category and management suggestions.
03	<code>get_scoring_criteria_reference</code>	Retrieves the detailed clinical definitions for every factor used in the scoring system, ensuring accuracy.

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## See It in Action

Real prompts you can use once this MCP is connected to your AI agent through Vinkius Cloud.

**U** Calculate HAS-BLED score for 72 y/o with HTN, previous stroke, and poor INR control.



### HAS-BLED Risk Assessment

- **Calculated Score:** 3 (High Risk)
- **Interpretation:** The patient is at high risk of major bleeding.
- **Recommendations:** Review anticoagulation therapy with the primary care team; consider optimizing blood pressure management and monitoring for signs of internal bleeding closely.

**U** What are the criteria for 'labile INR' in HAS-BLED scoring?



### Scoring Factor Reference

The factor 'Labile INR' is assessed based on whether the patient has been on a variable dose of anticoagulation or if their International Normalized Ratio (INR) fluctuates significantly. This helps gauge compliance and stability, which are key bleeding indicators.

*Key details:* Requires review of dosing history and current lab values.

**U** Give me management recommendations for a score of 1.



### Low Risk Profile

A score of 1 indicates a low risk profile. This suggests that the patient can likely continue standard anticoagulation therapy while maintaining routine monitoring, provided all other clinical parameters remain stable.

*Next Steps:* Standard follow-up schedule is appropriate.

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# Frequently Asked Questions

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**01 How does the HAS-BLED Score Calculator MCP help with patient discharge planning?**

The MCP helps by generating a validated bleeding score that your agent can use during discharge rounds. Instead of just listing risks, you get an interpreted risk level and specific management suggestions for the care team.

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**02 Do I need to know all seven HAS-BLED factors to use this MCP?**

No, but providing as many details as possible improves accuracy. The tool is designed to evaluate all key indicators, giving you a holistic view of the patient's current risk profile.

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**03 What kind of data should I feed into the HAS-BLED Score Calculator MCP?**

You need clinical metrics like age, blood pressure readings (systolic), history details (stroke/bleeding), and recent lab results like INR. The more accurate your input, the better the score.

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**04 Does this MCP give me medical advice or just a score?**

It provides a clinically validated score \*and\* an interpretation of that score. It gives you strong guidance for discussion with the patient and care team, but always confirm decisions with your supervising physician.

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**05 Is the HAS-BLED Score Calculator MCP better than just reading guidelines?**

Yes. The MCP automatically combines complex guideline rules into one calculation. It reduces manual cross-referencing and standardizes risk assessment across all patients in your practice.







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# Go Live in 60 Seconds

Get your connection token from [cloud.vinkius.com](https://cloud.vinkius.com), then paste the endpoint URL into any MCP-compatible client.

YOUR MCP ENDPOINT

```
https://edge.vinkius.com/[TOKEN]/mcp
```

CLIENT	WHERE TO CONFIGURE
 <b>Claude AI</b>	Profile → Customize → Connectors → "+" → Add custom connector → Paste endpoint
 <b>Cursor</b>	Settings → Features → MCP Servers → "+ Add New MCP Server" → Type: SSE → Paste endpoint
 <b>VS Code</b>	Ctrl/Cmd+Shift+P → "MCP: Add Server" → add <code>"has-bleed-score-calculator": { "url": "..." }</code>
 <b>Windsurf</b>	MCP Settings → <code>mcp_settings.json</code> → Add endpoint URL
 <b>ChatGPT</b>	Settings → Tools & plugins → Add MCP server → Paste endpoint
 <b>Gemini</b>	Extensions → Add MCP Server → Paste endpoint URL

## ASK AN AI ABOUT THIS

Let your preferred AI explain this MCP server

-  **Ask ChatGPT** 
-  **Ask Claude** 
-  **Ask Perplexity** 
-  **Ask Gemini** 
-  **Ask Grok** 

READY TO CONNECT

# HAS-BLED Score Calculator is live on Vinkius Cloud.

Get your connection token, paste it into your AI agent, and  
start building. No SDK. No deployment. Just results.

[Start at cloud.vinkius.com](https://cloud.vinkius.com) →

[vinkius.com](https://vinkius.com) · [support@vinkius.com](mailto:support@vinkius.com)

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### DOCUMENT INFORMATION

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