ACADEMIC PUBLICATION SET

VIEN GUT MODEL

Integrated Outpatient Care for Complex Chronic Multimorbidity

Part B — Operational Model

Vien Gut Model — Academic Publication Set

DOCUMENT B.1
THE FIRST CONSULTATION

Activating the integrated operational system — Routing to the Clinical Conductor, Multidisciplinary team and Safety referral valve

Vien Gut Model — Academic Publication Set
First systematic compilation — March 2026
Ho Chi Minh City, Vietnam

AUTHOR & ACADEMIC LEAD

Nguyễn Đình Quang
Independent medical researcher | Founder of Viện Gút | Principal architect of the HOW — DATA-to-operate / operational layer

---

HOW AND DATA-TO-OPERATE DESIGN TEAM — VIỆN GÚT

Nguyễn Đình Quang Huy HOW — DATA-to-operate design contributor | Operational management, transfer organization — Vien Gut Model
Huỳnh Phước Đại, **Nguyễn Sơn** Patient-facing language editing | Communication data management, deployment and transfer support — Vien Gut Model

---

ACADEMIC SUPPORT & WHAT (GUIDELINE) BENCHMARKING — INTERNATIONAL EXPERT GROUP

Thomas Bardin, **Pascal Richette** Co-authors of the EULAR Recommendations — together with experts in cardiology, nephrology, hepatology, diabetes, imaging, and biostatistics at Université Paris Cité, France and Sorbonne Université. WHAT transfer from gout and comorbidity treatment guidelines, international WHAT benchmarking; HOW design support — Vien Gut Model.

DATA GOVERNANCE TEAM — VIỆN GÚT

Trương Ánh Dương, **Huỳnh Hồng Đức** Data governance, transfer support — Vien Gut Model
Lê Việt Anh Data governance — Viện Gút

TREATING PHYSICIANS + MULTIDISCIPLINARY TEAM AT VIỆN GÚT POLYCLINIC

Clinical HOW deployment: Risk stratification, window of opportunity, longitudinal monitoring, risk control, polypharmacy management, safety referral valve activation — Vien Gut Model.

RESEARCH SITE

Franco-Vietnamese Center for Research on Gout and Chronic Diseases, Viện Gút Polyclinic, 13A Hồng Hạ Street, Tân Sơn Hòa Ward, Ho Chi Minh City, Vietnam.

EXECUTIVE SUMMARY FOR EXPERT REVIEWERS

EXECUTIVE SUMMARY FOR EXPERT REVIEWERS

DOCUMENT B.1

THE FIRST CONSULTATION

Activating the integrated operational system – Routing to the Clinical Conductor Multidisciplinary team and Safety referral valve

Nguyễn Đình Quang • Vien Gut Model – March 2026

---

1. Problem statement

The core treatment targets of the Vien Gut Model – crystal-free status in complicated gout (Target 1), delaying dialysis (Target 2), reducing cardiovascular decompensation (Target 3), recompensating liver cirrhosis (Target 4) – can only be meaningfully pursued when the patient is approached through the WHAT–HOW–DATA-to-operate treatment framework. This thinking aligns with the NICE philosophy on multimorbidity: not mechanically stacking single-disease guidelines, but optimizing care, reducing treatment burden, and assigning a clear coordinator for each patient.

For this reason, these treatment targets must not be set after multiple fragmented visits, but must be initiated from the very first consultation. The first consultation must serve as the activation point for the entire integrated operational system – conducting a reasonably comprehensive examination and diagnosis, identifying the pathological spiral, and stratifying the patient by treatment safety level to select the appropriate management approach from the outset.

2. Ultimate objective: the integrated clinical picture

The first consultation must produce an integrated clinical picture of the entire patient – deep enough to determine: which is the primary disease and which comorbidities are dominant; which target organs have been damaged and to what extent; which disease–disease and disease–drug interactions are forming a pathological spiral; which real-life factors continue to worsen the condition (corticoid dependence, poor adherence, prior fragmented treatment). From this, the Clinical Conductor activates the integrated treatment plan, assigns the multidisciplinary team, and establishes the appropriate longitudinal monitoring rhythm.

WHAT (Guideline)	HOW (Viện Gút supplement)
Setting treatment targets for each single disease	Activating the integrated operational system from the very first consultation
Recommending periodic follow-up but not designing the operational mechanism	Establishing the integrated clinical picture across all four target organ axes
No guidance on multidisciplinary coordination in complex outpatient settings	T1–T4 stratification, Clinical Conductor assignment, individualized care plan

3. Three patient zones and the mechanism for opening specialized branches

The Vien Gut Model simultaneously addresses three zones: Zone 1 (within guideline coverage – direct application, HOW organizes standard-compliant execution), Zone 2 (borderline – multimorbidity, polypharmacy, HOW must resolve conflicts), Zone 3 (beyond guideline coverage but still meeting outpatient criteria – HOW must be strongest). Note: "beyond guideline coverage" does not mean "outside the standard of care" – it means stronger HOW is needed to maintain the safety margin.

The first consultation is a clinically oriented comprehensive examination. The 4 verification axes (gout, kidney, heart, liver) form an outcome measurement framework – not 4 mandatory investigation packages. An axis is only activated for in-depth assessment when the patient has a clear clinical indication. Tier 1 (invariant):

detecting vital factors, building the complete picture, T1–T4 stratification. Tier 2: opening specialized branches along an axis when clinical indicators warrant.

4. Five ordering principles and the minimum paraclinical core

Five ordering principles during the first consultation:

Principle	Content
1	Not all patients should be examined the same way – specialized orders must follow the disease, symptoms, and risk profile of each individual patient.
2	All specialized paraclinical orders must adhere to updated guidelines: gout follows ACR/EULAR, kidney follows KDIGO, heart follows ESC, liver follows EASL/AASLD.
3	The minimum paraclinical core is a system safety core, not a four-axis comprehensive examination core.
4	Each test must come with a clear management branch: who is responsible, response threshold, and next management step.
5	Neither over-ordering (increasing cost and burden) nor under-ordering (missing target organ damage).

The minimum paraclinical core comprises three tiers:

Tier	Content
General safety core (mandatory for all patients)	CBC, Creatinine/Urea/eGFR, Electrolytes (Na^+ K^+ Cl^- HCO_3^-), Urinalysis, AST/ALT/Bilirubin/Albumin, Blood pressure measurement, Complete medication review, Glucocorticoid exposure screening
Risk-based add-ons	Glucose/HbA1c (suspected diabetes), PT/INR (suspected severe liver disease), Uric acid (gout history), ECG (cardiovascular risk, CKD), Proteinuria/Albuminuria (abnormal eGFR)
Opening specialized branches when an axis is activated	Joint ultrasound/DECT (gout axis), Renal ultrasound (kidney axis), TTE + Chest X-ray (heart axis), Abdominal ultrasound + Elastography (liver axis), Endocrine tests (only when clinically suspected)

The paraclinical core is compatible with NICE (reducing fragmented care) and KDIGO 2024 (eGFR + albuminuria as the two core axes for renal risk assessment). Expansion principle: uric acid does not automatically trigger the in-depth gout axis; ECG does not automatically trigger echocardiography – activation occurs only when an axis is triggered by the disease, typical symptoms, or major abnormalities on the screening tier. This approach both adheres to guidelines and avoids both over-ordering and under-ordering.

5. T1–T4 stratification and the Clinical Conductor

From the integrated clinical picture, the Clinical Conductor stratifies risk into T1–T4: T1 (stable, guideline coverage sufficient), T2 (complex, enhanced HOW required), T3 (high risk, full HOW + safety valve on standby), T4 (critical, immediate referral assessment needed). Stratification determines: follow-up frequency, monitoring intensity, MDT mobilization level, and safety valve status.

The Clinical Conductor does more than aggregate results or sign orders. From the very first consultation, this person must answer: which disease takes treatment priority, which pathological spiral must be untangled first, whether any guideline conflicts need immediate resolution, and whether treatment intensity falls within the

safety margin. The entire workflow converges at the Clinical Conductor to shift from "knowing a lot of data" to "making an integrated clinical decision."

The roles of HOW and DATA-to-operate during the first consultation are critically important. HOW establishes the workflow: who examines first, who follows, what route information takes, who makes the final decision. DATA-to-operate ensures that all data collected during the first consultation has clear action thresholds: if a test result crosses a threshold, the system must know who receives the information, within what timeframe, and which response scenario to follow. Without this layer, data remains mere numbers in the record – never becoming clinical action.

6. Multidisciplinary team and safety referral valve

The MDT during the first consultation must operate as a clearly assigned sensor–response chain:

Role within MDT	Sensor–response role
Imaging physician	Transforming imaging into a longitudinal structure–function monitoring tool
Laboratory staff	Transforming test results into a radar for detecting break points and threshold-drift trends
Clinical pharmacist	Polypharmacy safety checkpoint, drug interaction screening, and medication guidance
Nurses / monitoring staff	Deploying checklists, detecting red flags, coordinating follow-up/referral
Visual Medicine staff	Standardizing before–after photo–video; reinforcing trust and adherence
Data/ops unit	Trend dashboard, break-point alerts, decision log/audit trail support

It is precisely this sensor–response chain that makes HOW operationally viable in practice. Each MDT member does not work in isolation but operates within a bidirectional information flow: from the field up to the Clinical Conductor, and from the Clinical Conductor down to the executing positions.

The safety referral valve must be established from the very first consultation – not built only when the patient decompensates. If stratification shows the patient at T3–T4, the safety valve must be on standby immediately: activation pathway clear, data handover protocol ready, and post-inpatient reintegration protocol prepared. This is not a failure of outpatient care but a condition that enables integrated outpatient care to retain patients who still have a window of opportunity.

The safety valve mechanism includes: Clinical Conductor confirms the referral decision and prioritizes vital organ protection; nurses organize emergency triage; laboratory and imaging prioritize returning critical data; clinical pharmacist reviews medications and related risks; outpatient care unit prepares post-inpatient reintegration; data/ops completes the decision log and data handover package. On the cardiac axis, the 2021 chest pain guideline requires a standardized pathway for rapid identification of life-threatening situations; on the hepatic and renal axes, guidelines emphasize early decompensation detection to escalate the response in a timely manner.

7. Patient education and adherence assessment

From the very first consultation, the system must assess the patient’s participation capacity and begin building the sufficient conditions: minimum operational knowledge, self-awareness, ability to follow the follow-up rhythm, and acceptance of the safety valve. Patient education is not a supplementary activity but a mandatory component of HOW – because in complex multimorbidity, the interval between follow-up visits is a "shared responsibility zone" between the model and the patient.

Treatment adherence assessment is not a moral check but an operational check: is the patient taking medications correctly, completing tests on schedule, and reporting early when abnormalities arise? When adherence gaps are detected, the system responds by intensifying education and contact frequency – not by

passing judgment. The real-world environment is not ideal: patients may be fatigued, discouraged, resource-limited, or following word-of-mouth advice from outside the model. HOW must be designed to operate in that non-ideal environment.

8. Clinical illustration – DTH Case

The first consultation at Viện Gút (04/01/2021) identified F4 liver cirrhosis Child–Pugh B7 with decompensation caused by alcoholic liver disease (ALD): GGT 397.1 U/L (>7× threshold), AST/ALT >2, HBsAg negative, Anti-HCV negative. Not one of the 5 prior facilities – over many years – had diagnosed ALD, initiated alcohol cessation intervention, or provided structured nutritional counseling. Correctly identifying the cause from the very first visit opened the entire intervention chain: complete alcohol cessation, structured nutrition, phase-based Fibroscan monitoring. Results after 4 years: GGT 397.1→87.1 U/L, Fibroscan 23→11 kPa (F4→F3), grade III splenomegaly completely resolved.

9. Comparison with the fragmented care model

International evidence (NICE NG56, Hughes 2013, Muth 2019, JA-CHRODIS, Jiang 2023) confirms: the fragmented model – where each specialty manages a single disease without integrated coordination – causes excessive treatment burden, unresolved target conflicts, increased emergency visits, increased diagnostic test utilization, and higher overall healthcare costs.

During the first consultation in the fragmented model, the receiving specialist typically only records symptoms within their own specialty, orders tests according to single-disease guidelines, and schedules a follow-up – without an integrated picture, without multi-axis stratification, without a Clinical Conductor maintaining the full overview. Concrete consequences from the DTH case: across 5 healthcare facilities over 20 years, four life-saving interventions were consistently missed – secondary adrenal insufficiency, ALD diagnosis, hyperkalemia, and integrated polypharmacy management. This was not individual error but an architectural limitation.

The Vien Gut Model designs the first consultation as the activation point for the entire system – because this is the only opportunity to establish the correct foundation for the entire long-term treatment journey. When this foundation is not established from the start, all subsequent treatment efforts are built on unstable ground – and patients pay the price through missed windows of opportunity, unresolved pathological spirals, and preventable multi-organ decompensation.

Level of evidence: Level IV – proof-of-concept. Full data: DTH Case Report v5.4 CARE (Viện Gút, 2026).

Full document: B.1 – The First Consultation (16 sections, 17 pages).

References

International guidelines – WHAT layer

[1] NICE. Multimorbidity: clinical assessment and management (NG56). NICE, 2016 (updated 2023).

[2] KDIGO. 2024 Clinical Practice Guideline for the Evaluation and Management of CKD. Kidney Int. 2024;105(4S):S117–S314.

[3] FitzGerald JD, et al. 2020 ACR Guideline for the Management of Gout. Arthritis Care Res. 2020;72(6):744–760.

[4] Pascart T, et al. 2023 EULAR recommendations for imaging in crystal-induced arthropathies. Ann Rheum Dis. 2023;82(4):476–492.

[5] Heidenreich PA, et al. 2022 AHA/ACC/HFSA Guideline for Heart Failure. J Am Coll Cardiol. 2022;79(17):e263–e421.

[6] Gulati M, et al. 2021 AHA/ACC Guideline for Evaluation and Diagnosis of Chest Pain. J Am Coll Cardiol. 2021;78(22):e187–e285.

[7] Kwo PY, Cohen SM, Lim JK. ACG Clinical Guideline: Evaluation of Abnormal Liver Chemistries. Am J Gastroenterol. 2017;112(1):18–35.

[8] EASL. Clinical Practice Guidelines for decompensated cirrhosis. J Hepatol. 2018;69(2):406–460.

[9] Dinsen S, et al. Clinical Practice Guideline on Glucocorticoid-Induced Adrenal Insufficiency. J Clin Endocrinol Metab. 2024.

International evidence – Limitations of the fragmented model

[10] Hughes LD, et al. Guidelines for people not for diseases. Age Ageing. 2013;42(1):62–69.

[11] Muth C, et al. Evidence supporting clinical management of multimorbidity and polypharmacy. J Intern Med. 2019;285(3):272–288.

[12] Onder G, et al.; JA-CHRODIS. Multimorbidity care model. Health Policy. 2015;119(12):1–6.

[13] Jiang S, et al. Fragmented care and chronic illness patient outcomes. J Nurs Manag. 2023;2023:3707960.