



## Task 1 – High-Risk Medicine Audit & Error Detection

### In Task 1,

- I designed a daily audit process to proactively identify errors involving high-risk medicines in a clinic pharmacy.
- I standardized medicine names using normalization and mapped multiple name variants to a single canonical medicine to prevent billing and inventory mismatches.
- High-risk medicines were prioritized based on their potential for name, quantity, and strength-related errors.
- A daily checklist was used to manually audit a sample of transactions to validate prescription accuracy and detect anomalies.
- Stock movements were reconciled against expected closing balances using tolerance thresholds to flag material deviations.
- Identified issues were logged, tracked for recurrence, and escalated to doctors only when the risk or financial impact was significant.

Made By : Pradyuman Gupta

## High-Risk Medicines Master – Daily Audit Control



Made By : Pradyuman Gupta

**Purpose:**

This sheet maintains the master list of medicines with higher risk of billing, naming, or inventory errors. It defines canonical medicine names, risk levels, and tolerance thresholds used in daily audits and reconciliations. This sheet acts as a control reference and is updated only when new risks or medicines are identified.

Date	Medicine ID	Canonical Name ( Official Name )	Normalized Key	Risk Level	Unit	Why High Risk	Tolerance	Active
01-Jan-2026	M001	Dolo 650	dolo650	Very High	Tablet	Name + Quantity + Inventory	2.00	YES
02-Jan-2026	M002	Azithromycin 500	azithromycin500	High	Strip	Name + Quantity + Strength	2.00	YES
03-Jan-2026	M003	Pantoprazole 40	pantoprazole40	Medium	Tablet	Brand + Quantity + Strength	3.00	YES
04-Jan-2026	M004	Cetirizine 10	cetirizine10	Medium	Tablet	Name + Quantity + Inventory	3.00	YES
05-Jan-2026	M005	Dolo 650 mg	dolo650mg	LOW	Strip	Name + Quantity + Inventory	2.00	YES

**NOTE :** Only medicines marked as Active are included in daily reconciliation and audit checks.  
Tolerance thresholds are defined based on historical error patterns and clinical risk.

## Medicine Name Variants & Normalization Log

**Purpose:**

This sheet captures all observed variations in medicine names entered during billing or sales.  
It standardizes multiple spellings, abbreviations, and brand variations into a single canonical medicine name.  
This helps prevent billing errors, duplicate inventory records, and reconciliation mismatches over time.



Made By : Pradyuman Gupta

Entered Name	Normalized Key	Canonical Name (Official Name)	Reason (Spelling / Abbrev / Dosage / Case)	First Seen Date	Seen Before?	Action Taken
DOLO KIND	dolokind	UNMAPPED	Case variation	01-Jan-2026	NO	Needs Review
DOLO 650	dolo650	Dolo 650	Case variation	02-Jan-2026	NO	Mapped
Dolo-650mg	dolo650mg	Dolo 650 mg	Spelling	03-Jan-2026	NO	Normalized
AZITHRO 500	azithro500	UNMAPPED	Abbreviation	04-Jan-2026	NO	Mapped

**NOTE :** New variants marked as UNMAPPED are reviewed daily and mapped before inclusion in reconciliation and audit checks.

## Sales Transactions – Normalized & Mapped View

**Purpose:**

This sheet captures daily sales transactions and standardizes entered medicine names using normalization and canonicalization. It identifies unmapped or incorrect medicine entries and prepares clean, validated data for daily audit and reconciliation. This sheet acts as the primary input for name-variant detection and risk review.



Made By : Pradyuman Gupta

Date	Bill No	Entered Name	Normalized Key	Canonical Name ( Official Name )	Mapping Status	Invoice No	Sold Qty
01-Jan-2026	B001	DOLO 600	dolo600	UNMAPPED	ERROR	INV101	6
02-Jan-2026	B002	DOLO 650	dolo650	Dolo 650	OK	INV102	4
03-Jan-2026	B003	AZITHRO 500	azithro500	UNMAPPED	ERROR	INV103	5
04-Jan-2026	B004	CETIRIZINE 10	cetirizine10	Cetirizine 10	OK	INV104	4
05-Jan-2026	B005	DOLO SIX FIVE ZERC	dolosixfivezero	UNMAPPED	ERROR	INV105	3
06-Jan-2026	B006						

**Daily Sales Audit Checklist – High-Risk Medicines**

*Purpose:*

This checklist is used for daily manual audit of selected sales transactions, with a focus on high-risk medicines. It validates prescription accuracy, medicine name correctness, and quantity reasonableness. Identified issues are logged for corrective action and escalation when required.



Made By : Pradyuman Gupta

Date	Bill No	Canonical Name ( Official Name )	Sold Qty	Prescription Match?	Name Correct?	Issue Type	Corrected?	Remarks
01-Jan-2026	B001	UNMAPPED	6	NO	NO	Abbreviation	NO	Variant not mapped
02-Jan-2026	B002	Dolo 650	4	YES	YES	None	YES	-
03-Jan-2026	B003	UNMAPPED	5	NO	NO	Spelling	NO	Variant not mapped
04-Jan-2026	B004	Cetirizine 10	4	YES	YES	None	YES	-

**Note:**

*A minimum of 3–5 transactions involving high-risk medicines are audited daily. Any unresolved issues are logged in the Error Log for pattern analysis.*

## Daily Inventory Reconciliation – High-Risk Medicines

Purpose:

This sheet performs daily reconciliation of inventory for high-risk medicines by comparing system-calculated expected closing stock with actual physical closing stock. Any variance beyond defined tolerance levels is automatically flagged for review and investigation.



Made By : Pradyuman Gupta

Date	Canonical Name ( Official Name )	Opening Stock	Purchased	Sold	#	Expected Closing	Actual Closing	Difference	Tolerance	Status (OK / REVIEW)
04-Jan-2026	Dolo 650	15	5	10		10	6	-4	2	REVIEW
04-Jan-2026	Azithromycin 500	20	0	5		15	15	0	2	OK
04-Jan-2026	Cetirizine 10	30	0	3		27	27	0	3	OK

### Error Log – Confirmed Issues & Root Cause Tracking

Purpose:

This sheet records confirmed errors identified through daily audits and reconciliations.  
It captures error type, source, impact, and corrective actions to support root-cause analysis and prevent recurrence.  
Only material or repeated issues are logged in this sheet.



Made By : Pradyuman Gupta

Date	Medicine - Canonical Name ( Official Name )	Error_Type (Name / Qty / Pattern)	Source	Description	Bill No	Impact	Action Taken?	Repeated?	Status
04-Jan-2026	Dolo 650	Name	Sales	DOLO KIND entered	B002	Medium	Added variant mapping	YES	Closed
04-Jan-2026	Dolo 650	Qty	Inventory	Stock mismatch	-	Very High	Physical count done	NO	Open
04-Jan-2026	Azithromycin 500	Pattern	Billing	Same variant recurring	B004	High	Staff instructed	YES	Closed

## Doctor Escalations – High-Risk Medicine Issues

**Purpose:**

This sheet records issues related to high-risk medicines that require escalation to a doctor due to potential clinical risk, repeated errors, or material inventory discrepancies. It ensures timely communication, documented resolution, and accountability for patient safety.



Made By : Pradyuman Gupta

Date	Medicine - Canonical Name ( Official Name )	Issue Summary	Financial Impact	Doctor Notified?	Resolution	Status
01-Jan-2026	Azithromycin 500	Stock shortfall beyond tolerance	1200	Yes	Physical recount	Closed
02-Jan-2026	Dolo 650	Repeated incorrect variants billed	500	Yes	Staff retrained	Closed
03-Jan-2026	Cetirizine 10	Unusual high daily sale quantity	700	No	Under review	Open