Tabba Heart Institute

volume 07

PHARMA CONNECT

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CLINICAL PHARMACIST

Table of Content

1.Instant IV compatibility at your fingertips,

THI launches AI-assisted drug checker

Shaikh Hussam Lateef
Cheif of Pharmacy Services, Tabba Heart Institute

Intravenous medication errors remain a leading cause of preventable patient harm globally, and incompatible drug-fluid combinations are among the most silent contributors. A physical incompatibility, precipitation, color change, or phase separation, may pass unnoticed in a busy clinical setting, reaching the patient with potentially serious consequences. Recognizing this risk, the Department of Pharmacy Services at Tabba Heart Institute (THI) has developed an innovative solution entirely in-house, powered by artificial intelligence tools.

The **THI IV Drug Compatibility Checker** is a fully offline, single-file web application that gives nurses, pharmacists, and physicians instant access to compatibility data for injectable medications and intravenous fluids. The tool was designed and built by the THI Pharmacy team using AI-assisted development, translating a structured evidence base into a fast, searchable clinical reference that requires no internet connection, no login, and no installation.

Application Overview: Search Interface

200+ Injectable Drugs	4 Compatibility Checks	Offline No Internet Required

Key Features at a Glance

Feature	Description
Drug Search	Instant autocomplete search across 200+ injectable medications with quick-filter categories (antibiotics, cardiac, anticoagulants, sedatives, vasopressors)
Compatible Solutions	Lists all documented compatible IV fluids (NaCl 0.9%, Gluc 5%, Hartmann's, Ringer's, Gluc-NaCl) for each drug
Y-Site Compatibility	Shows drugs safe for co-administration via Y-connector — with concentration and rate verification prompts
Incompatibility Alerts	Flags all documented drug-drug and drug-fluid incompatibilities with color-coded warning display
Flush Recommendations	Specifies the appropriate flush solution for each injectable agent
Two-Drug Checker	Instant autocomplete search across 200+ injectable medications with quick-filter categories (antibiotics, cardiac, anticoagulants, sedatives, vasopressors)
Offline Operation	Runs as a single HTML file — no internet, no login, no installation required on any device
Evidence Source	Data sourced from the Injectable Drugs Guide (Pharmaceutical Press / Royal Pharmaceutical Society, 2011)

2. Reviewed Article from National Database:

Safety profile of linezolid in the elderly

Submitted by:
Areeba Nayab
Clinical Pharmacist

I reviewed a recent pharmacovigilance study evaluating the safety profile of Linezolid in elderly patients aged ≥60 years. The study analyzed spontaneous adverse drug reaction (ADR) reports from the Russian National Pharmacovigilance Database collected between 2019–2024. The primary aim was to identify the most common toxicities associated with linezolid in older adults, a population particularly vulnerable due to age-related physiological changes, multiple comorbidities, and impaired renal function.

A total of 177 reports involving elderly patients were analyzed, representing 19.9% of all linezolid-related reports. Hematological toxicities emerged as the most significant safety concern. The most frequently reported adverse drug reactions were thrombocytopenia (7.9%), anemia (7.2%), nausea (4.3%), diarrhea (3.6%), vomiting (3.6%), and leukopenia (3.6%). Among all system-organ classes, blood and lymphatic system disorders accounted for 24.4% of ADRs, followed by gastrointestinal disorders (17.6%).

The study highlighted that thrombocytopenia was the leading adverse event and was commonly associated with prolonged therapy. The average onset of hematological toxicity was approximately 50 days, while gastrointestinal effects occurred earlier, usually within 7–10 days. Researchers suggested that elevated plasma concentrations of linezolid in elderly individuals, especially those with renal or hepatic impairment, may increase the risk of toxicity.

Importantly, the paper emphasized that linezolid-induced myelosuppression is likely related to mitochondrial dysfunction and impaired protein synthesis in hematopoietic cells. Overall, the study strongly recommends regular complete blood count monitoring, assessment of renal and hepatic function, and therapeutic drug monitoring to minimize severe toxicity and ensure safer individualized use of linezolid in elderly patients.

Reference:
Butranova O, Koval V, Zyryanov S, Asetskaya I, Terekhina E, Polivanov V, Gorbacheva A. Safety profile of linezolid in the elderly: National database analysis. International Journal of Risk & Safety in Medicine. 2025 Aug 23:09246479251401400.

3.Latest Update from UpToDate

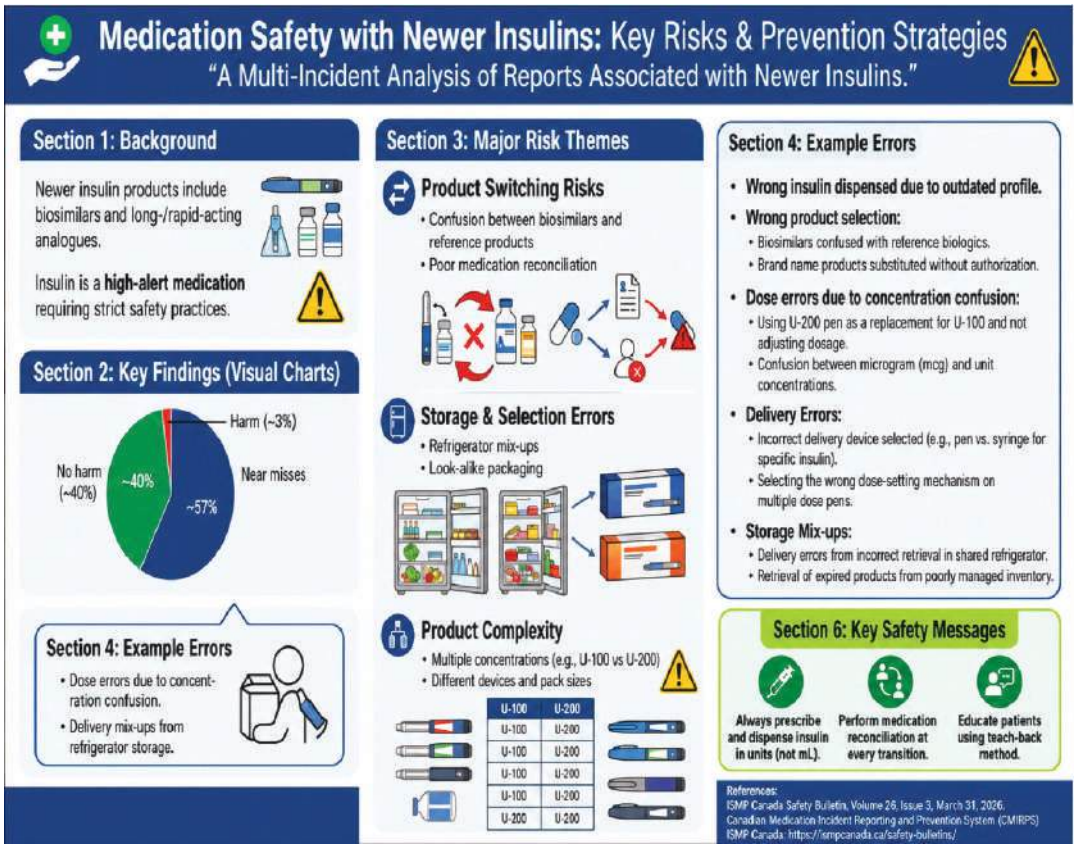
Fish oil supplements for patients on maintenance dialysis (November 2025)

Patients on dialysis are at high risk of cardiovascular (CV) morbidity and mortality. In a trial in which over 1200 patients on maintenance hemodialysis were randomly assigned to either high-dose fish oil supplementation or placebo, the rate of serious CV events (ie, CV death, nonfatal myocardial infarction, nonfatal stroke, and peripheral vascular disease leading to amputation) was lower in the fish oil group during 3.5 years of follow-up (0.31 versus 0.61 per 1000 patient-days). The benefit in patients without a history of CV disease (approximately two-thirds of the study population) was similar to that in patients with such a history. However, fish oil did not lead to a statistically significant reduction in all-cause mortality. Based on these data, we now suggest fish oil supplements for patients on maintenance dialysis.

Reference: https://pubmed.ncbi.nlm.nih.gov/41201837/\

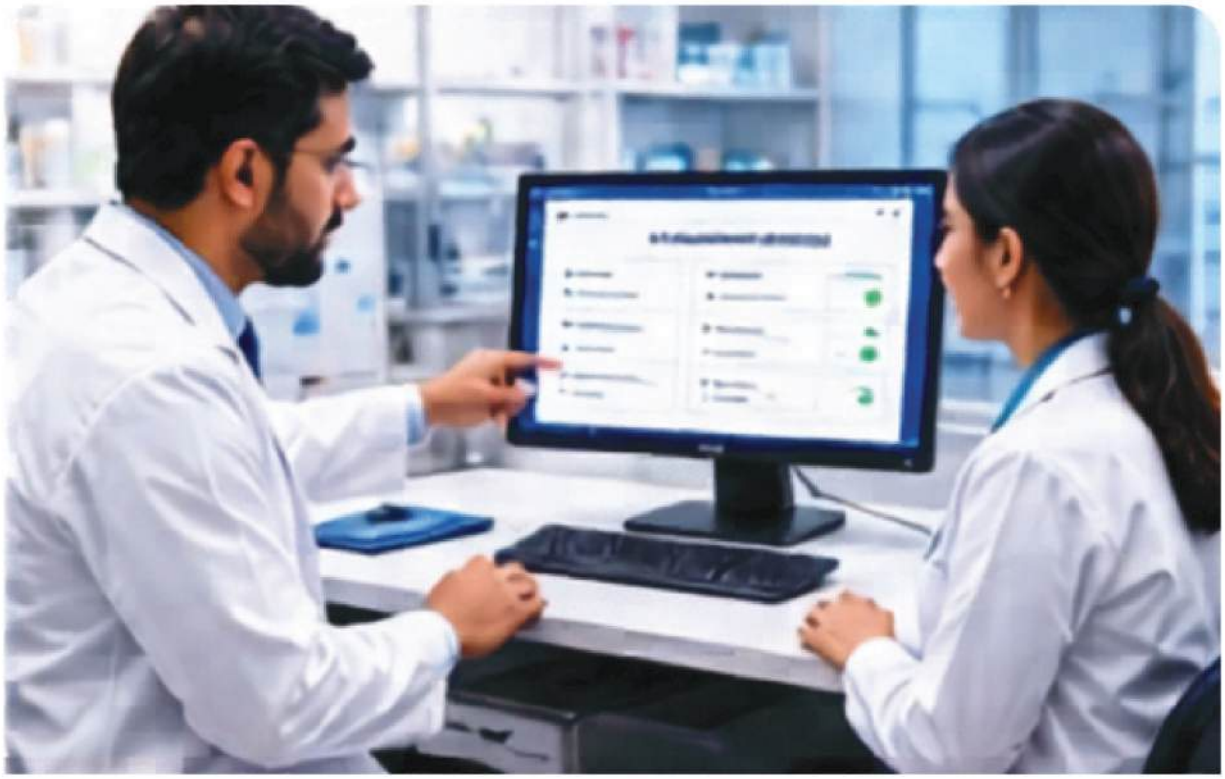
4. Medication Safety with newer Insulins

Shared by Palwashay Iqbal Supervisor Inpatient Pharmacy



5. Hidden Risks in Prescribing: Clinically Significant Drug–Drug Interactions You Should Not Miss

Submitted by: **Dr. Nehal Nadir**
Clinical Pharmacist



1. Voriconazole + Amlodipine
Co-administration of Voriconazole with Amlodipine increases amlodipine exposure via CYP3A4 inhibition, leading to peripheral edema, hypotension, flushing, and dizziness. Dose adjustment or close monitoring is recommended.

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2. Fluconazole + Clopidogrel
Fluconazole inhibits CYP2C19, reducing activation of Clopidogrel, resulting in reduced antiplatelet effect and increased thrombotic risk. Alternative therapy should be considered when possible.

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3. Amiodarone + Voriconazole (Category X)
The combination of Amiodarone and voriconazole significantly increases the risk of QT prolongation and torsades de pointes, and is generally considered contraindicated (Category X).

- **UpToDate. Drug interactions: azoles and cardiovascular agents, 2026.**
- **Lexicomp Drug Interactions Database, 2026.**
- **Micromedex (IBM). Drug-Reax System, 2026.**

6. A New Era of Thrombolysis: Key Updates from the 2026-AHA/ASA Acute Ischemic Stroke Guidelines

Submitted by:
Dr. Ayesha Mehdi Mohammad
In-patient Pharmacy preceptor

Disabling vs. Non-Disabling Stroke: A Critical Clinical Distinction

The 2026 AHA/ASA Guidelines for the Early Management of Acute Ischemic Stroke (AIS) introduce a clinically pivotal distinction between disabling and non-disabling stroke deficits, directly informing IV thrombolysis (IVT) eligibility. Deficits considered clearly disabling include complete hemianopsia (≥2 on NIHSS "vision"), severe aphasia (≥2 on NIHSS "best language"), severe hemi-inattention or extinction to >1 modality (≥2 on "extinction"), and any weakness limiting sustained effort against gravity (≥2 on NIHSS "motor"). Conversely, non-disabling deficits — including isolated mild aphasia, isolated facial droop, hemisensory loss, mild hemimotor loss, and mild hemiataxia with preserved ambulation — do not meet the threshold for IVT candidacy under current recommendations.

IV Thrombolysis: Guideline Recommendations at a Glance

Notably, tenecteplase received FDA approval on March 3, 2025, becoming only the second approved thrombolytic for AIS following alteplase's 1996 approval.

Recommendation (1A): In adult AIS patients presenting within 4.5 hours of symptom onset or last known well and eligible for IVT, tenecteplase 0.25 mg/kg (max 25 mg) or alteplase 0.9 mg/kg (max 90 mg) is recommended to improve functional outcomes.

• Thrombolytics in Disabling Stroke

Recommendation (1A): In adult AIS patients with disabling deficits, regardless of NIHSS score, and eligible for IVT, faster treatment improves functional outcomes.

• Thrombolytics in Non-Disabling Stroke

Recommendation (3: No Benefit B-R): In eligible adults with mild non-disabling AIS deficits within 4.5 hours, IVT is not recommended, as it has not demonstrated superiority over dual antiplatelet therapy (DAPT).

This is reinforced by the ARAMIS trial, in which DAPT (clopidogrel + aspirin) achieved a 93.8% excellent functional outcome rate at 90 days vs. 91.4% with alteplase — demonstrating non-inferiority.

• Extended Time Windows for IVT

Recommendation (2a B-R): Patients with unknown onset AIS, DWI lesion <1/3 MCA territory, no FLAIR signal change, within 4.5 hours of symptom recognition — IVT can be beneficial.

Recommendation (2a B-R): Patients with salvageable ischemic penumbra on perfusion imaging, awake within 9 hours from sleep midpoint or 4.5–9 hours from last known well — IVT may be reasonable.

Recommendation (2b B-R): IS due to LVO with salvageable penumbra, within 4.5–24 hours, unable to receive EVT — IVT by thrombolysis-experienced clinicians may be beneficial.

• DOACs: A Relative — Not Absolute — Contraindication

In patients with disabling AIS and recent DOAC exposure (<48 hours), the safety of IVT is unknown; however, emerging observational data suggest IVT may be considered after through benefit-risk analysis incorporating DOAC timing, renal function, stroke severity, and availability of reversal agents.

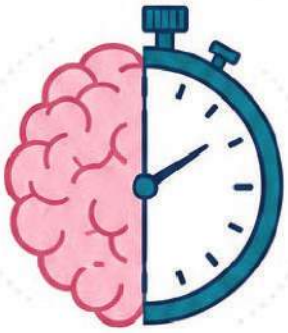
Thrombolytics in Pediatric AIS

Recommendation (2b C-LD): In pediatric patients aged 28 days to 18 years with confirmed AIS presenting within 4.5 hours with disabling deficits, IVT with alteplase may be considered as it is safe, though efficacy remains uncertain.

Anticoagulation FORUM

- **NNT** for IV thrombolysis to achieve one additional patient with excellent functional outcome (mRS 0–1) is time-dependent
  - **~8** within 3 h after stroke onset
  - **14** from 3–4.5 h
- Each **30-minute** reduction in onset-to-needle time increases the probability of achieving mRS 0–1 by **1.8%**

TIME IS BRAIN...



EVERY SECOND COUNTS

Prabhakaran S, et al. *Stroke*. 2008 Jan;39. | Hilllama NA, et al. *Lancet*. 2024;403:2020-2036. | Dingh N, et al. *Stroke*. 2023;54:e267–e276.

SAPT VS DAPT

Antiplatelet Therapy Decision Pathway

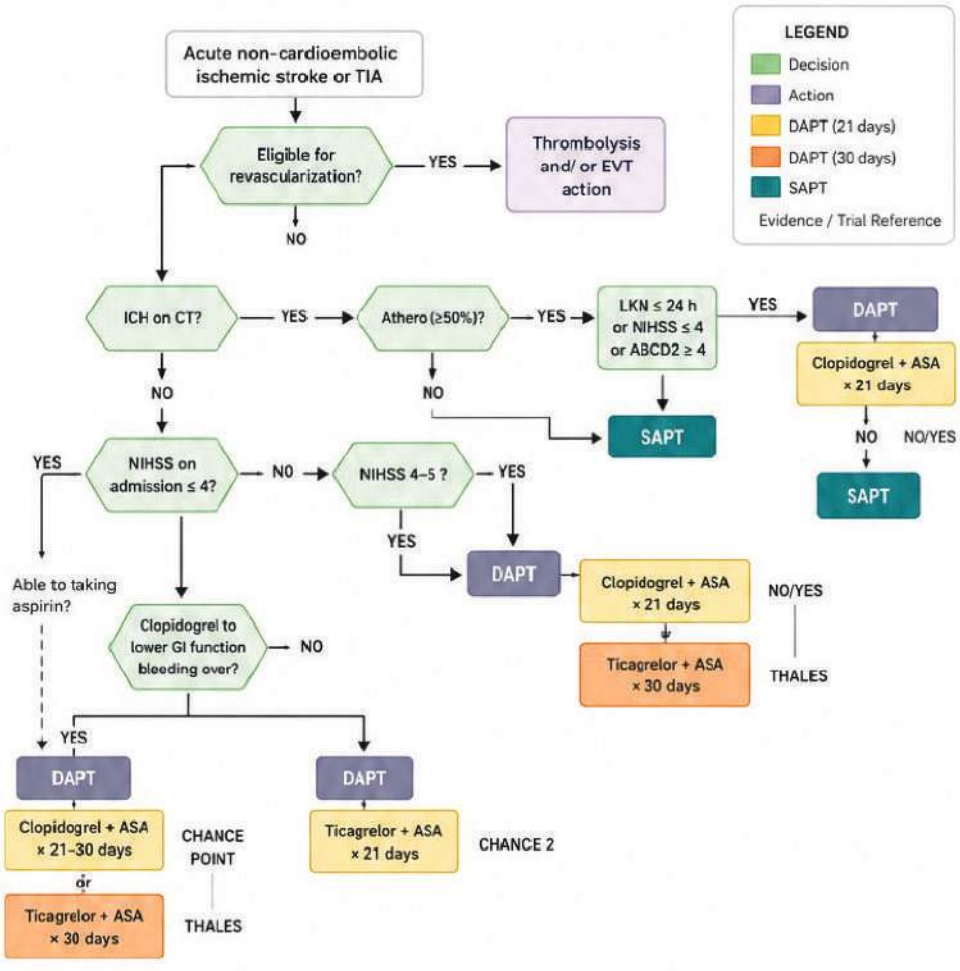
GOAL

Prevent early recurrent stroke while minimizing bleeding risk.

ABBREVIATIONS

SAPT: Single Antiplatelet Therapy

DAPT: Dual Antiplatelet Therapy



Anticoagulation FORUM

TIME IS BRAIN. EVERY SECOND COUNTS.

Reference:
https://www.ahajournals.org/doi/epub/10.1161/STR.0000000000000513

7. Renal Protection Beyond Glycemic Control: SGLT2 Inhibitors in CKD

Submitted by: **Ghazal Agha Majeed**
Inpatient Pharmacist

SGLT2 inhibitors (SGLT2i) have transformed chronic kidney disease (CKD) management by slowing progression, reducing cardiovascular events, and lowering end-stage kidney disease risk, often independent of glycemic control.

Mechanism of Action: SGLT2i block sodium-glucose cotransporter-2 in the proximal tubule, inducing glucosuria and natriuresis. This restores tubuloglomerular feedback, constricts the afferent arteriole, reduces intraglomerular hypertension and hyperfiltration, and decreases tubular workload, inflammation, hypoxia, and fibrosis. Additional benefits include modest blood pressure and weight reduction.

For decades only RASi was used with proven CKD outcomes but recently KDIGO 2024 strongly recommends SGLT2i (Class 1A) for most patients with CKD and albuminuria or heart failure. Initiation of SGLT2i should not be delayed for RASi up-titration. The combination is safe, with no excessive hyperkalemia risk (unlike dual RAS blockade) and potential mitigation of RASi-related adverse effects.

When to Initiate Therapy: KDIGO 2024 recommends SGLT2i for patients with type 2 diabetes and CKD (eGFR ≥20 mL/min/1.73 m²). In non-diabetic CKD, initiate with eGFR 20–45 mL/min/1.73 m² plus albuminuria or heart failure. A transient eGFR reduction is expected and usually not a reason for discontinuation. Therapy continues until dialysis or transplantation if tolerated.

Dapagliflozin vs Empagliflozin:
Both agents show comparable cardiorenal benefits with no clear superiority in head-to-head analyses. Dapagliflozin (DAPA-CKD) is effective from eGFR 25 mL/min/1.73 m²; empagliflozin (EMPA-KIDNEY) from 20 mL/min/1.73 m². Choice depends on availability, dosing, and patient factors.
Candidate Patients: Adults with CKD at risk of progression (albuminuria uACR ≥200 mg/g, heart failure, or cardiovascular disease), with or without diabetes, on background renin-angiotensin system inhibition when tolerated.

Contraindications and Discontinuation: Avoid initiation in eGFR <20 mL/min/1.73 m² (though continuation often appropriate), dialysis, polycystic kidney disease, or recent immunosuppressive therapy for kidney disease. Discontinue during acute illness with dehydration risk, prolonged fasting, surgery, or confirmed diabetic ketoacidosis. Caution with recurrent genital infections or volume depletion.

References
1. Padda IS, Mahtani AU, Parmar M. Sodium-Glucose Transport 2 (SGLT2) Inhibitors. In: StatPearls. Treasure Island (FL): StatPearls Publishing; 2025.
2. American Diabetes Association Professional Practice Committee. 11. Chronic Kidney Disease and Risk Management: Standards of Care in Diabetes—2026. Diabetes Care. 2026;49(Suppl 1):S246-S265.
3. Madero M, et al. SGLT2 Inhibitor Use in Chronic Kidney Disease. Kidney Med. 2024;6(10):100000.
4. KDIGO 2024 Clinical Practice Guideline for the Evaluation and Management of Chronic Kidney Disease. Kidney Int. 2024;105(4S):S1-S332.
5. Heerspink HJL, et al. Dapagliflozin in Patients with Chronic Kidney Disease. N Engl J Med. 2020;383(15):1436-1446.
6. The EMPA-KIDNEY Collaborative Group. Empagliflozin in Patients with Chronic Kidney Disease. N Engl J Med. 2023;388(2):117-127.

8. Polypharmacy in the Elderly: A Growing Clinical Concern

Submitted by:
Shadab Sabir
Outreach Pharmacist

Polypharmacy, commonly defined as the concurrent use of multiple medications, has emerged as a significant and escalating concern in geriatric healthcare. As global populations age and the prevalence of chronic, multimorbid conditions increases, older adults are more frequently prescribed complex medication regimens. While often clinically justified, polypharmacy raises the risk of adverse drug reactions, drug–drug interactions, medication non-adherence, cognitive impairment, hospitalizations, and overall functional decline.

Age-related changes in pharmacokinetics and pharmacodynamics such as reduced renal clearance and heightened drug sensitivity further amplify these risks. Certain drug classes particularly benzodiazepines, anticholinergics, and sedative-hypnotics are consistently linked with poor outcomes in older adults.

Addressing polypharmacy is essential to improving medication safety and optimizing health outcomes in the aging population. This article calls for heightened clinical awareness and systematic intervention to ensure rational pharmacotherapy in older adults.

Structured medication review is therefore essential. Tools such as Beers Criteria and STOPP/START guidelines support identification of potentially inappropriate medications. Deprescribing, when applied judiciously, has been shown to improve safety and quality of life.

Treatment decisions should prioritize functional status and patient-centered goals rather than strict disease-specific targets.

1. REVIEW medications at every encounter
2. IDENTIFY high-risk drugs (Beers Criteria)
3. SIMPLIFY regimens where possible
4. DEPRESCRIBE when benefit < risk

Reference:
American Geriatrics Society Beers Criteria, 2023 O'Mahony D et al., Age and Ageing, 2018 Maher RL et al., Expert Opin Drug Saf, 2014

9. Comparison of Fundamental Frequency in Postmenopausal Women Who Are Treated with Hormone Replacement Therapy vs Those Who Are Not

Submitted by:
Sana Khalid
Ambulatory Care Pharmacist

This study aimed to explore the effects of hormone replacement therapy (HRT) on the voice, particularly the speaking fundamental frequency (F0), in postmenopausal women. Menopause results in decreased estrogen levels, which impact the vocal folds, leading to issues such as hoarseness, lower pitch, and vocal fatigue. Given that HRT is commonly used to alleviate menopause-related symptoms, researchers sought to determine if it could also help maintain or improve vocal quality, a factor often overlooked in clinical practice. A systematic review and meta-analysis were performed, incorporating 11 relevant studies. The meta-analysis included data from 5 high-quality case-control studies, involving 154 HRT users and 154 non-users. The primary focus was on F0 (voice pitch), with additional analyses on jitter and shimmer (indicators of voice stability). A subgroup analysis based on body mass index (BMI) compared normal versus overweight women. HRT users exhibited a significantly higher F0 (average 185.9 Hz) compared to non-users (average 174.6 Hz), showing a difference of 11.85 Hz. Women with a normal BMI demonstrated the most significant improvement in F0. No notable effect of HRT was observed in overweight women, potentially due to the natural production of estrogen in fatty tissue.

Reference:
https://jamanetwork.com/journals/jamaotolaryngology/fullarticle/2769499

10. Evaluating the Cardioprotective Effects of Intermittent Fasting on High-Density Lipoprotein Cholesterol

Submitted by:
Muhammed Uzair
Ambulatory Care Pharmacist

Studies have shown that low levels of High-Density Lipoprotein Cholesterol (HDL-C) can be as dangerous for coronary health. HDL-C reverses cholesterol transport and reduces the atherosclerotic burden. HDL-C also has anti-inflammatory, antithrombotic, and vasodilatory properties. Intermittent fasting (IF), type of energy restricted feeding protocol, can be adopted as a life style modification for a balanced lipid profile and a better coronary health status.

A 6-week clinical trial was carried out to evaluate the effects of Intermittent Fasting (IF) on lipid profile and HDL cholesterol. Forty participants were enrolled, with 20 assigned to a control group and 20 to an IF intervention group. The intervention group practiced daytime fasting for approximately 12 hours, three times weekly, while the control group maintained their usual diet. Improvements were observed overall in lipid profile, with HDL levels showing particularly significant improvement. These findings suggest that intermittent fasting may positively influence cardiovascular health by improving lipid parameters and increasing low HDL levels, a common cardiovascular risk factor. The study highlights Intermittent Fasting as a practical lifestyle intervention that may aid in the prevention and management of cardiovascular diseases.

Reference:

1. Nagao, M., Nakajima, H., Toh, R., Hirata, K.-I., Ishida, T., 2018. Cardioprotective Effects of High-Density Lipoprotein Beyond its Anti-Atherogenic Action. Journal of Atherosclerosis and Thrombosis 25, 985–993.. https://doi.org/10.5551/jat.rv17025

2. Ahmed N, Farooq J, Siddiqi HS, Meo SA, Kulsoom B, Laghari AH, Jamshed H and Pasha F (2021) Impact of Intermittent Fasting on Lipid Profile–A Quasi-Randomized Clinical Trial. Front. Nutr. 7:596787. doi: 10.3389/fnut.2020.596787

11. Patient and pharmacist Conversation and Intervention

Submitted by:
Alisha Zia Khan
Trainee Pharmacist 2026

* Assalamualaikum. I am from the pharmacy department and I'm here for the patient's counselling regarding the medicines and their proper use.

* Wa Alaikum Assalam.

* These medicines have been prescribed according to the patient's condition. It is important to give them on time and exactly as advised.

* I have a question.

* Yes sir, please ask.

* Firstly, tell me where are you from?

I am from the pharmacy department.

* Please make sure the medicines are given regularly and the full course is completed. If you notice any unusual symptoms, do inform the healthcare team immediately.

(After completing the counselling, the pharmacist politely addressed the attendant again.)

* Then it is useless to ask you the question. You must be unaware of it.

* Sir, may I know what question you wanted to ask?

* The patient has cough, so which medicine is best for her?

* The syrup dispensed for the patient is *Acefyl Syrup*. It helps in reducing cough, throat irritation, and allergy-related symptoms. It also helps loosen mucus from the chest, making it easier for the patient to breathe and cough out phlegm comfortably.

In addition, *Atem* has been prescribed for nebulization. This medicine helps open the airways and reduces mucus in the breathing passages. As a result, the patient feels relief in coughing, chest tightness, and difficulty in breathing.

* It is completely alright, sir. Our duty is to guide patients and their families properly. Please feel free to ask any questions whenever needed.

* I understand now. Thank you so much. And I'm sorry for my behaviour earlier.

12. IMPACT OF GENETIC VARIATION ON DRUG RESPONSE: A PHARMACOGENOMICS AND PERSONALIZED MEDICINE APPROACH

Submitted by: **Imaan Amir Trainee Pharmacist 2026**

Personalized medicine marks a transformative shift from conventional "one-size-fits-all" treatment toward a more individualized approach to healthcare. By integrating a patient's genetic profile, lifestyle, and environmental influences, it enables clinicians to optimize therapeutic strategies and improve overall disease management. Central to this approach is pharmacogenomics, which examines how genetic variations influence drug response, affecting drug metabolism, transport, and target interactions.

Genetic variability plays a critical role in determining both pharmacokinetics and pharmacodynamics, leading to differences in drug efficacy and safety among individuals. Genetic polymorphisms, including single nucleotide changes, insertions, deletions, and copy number variations, significantly influence enzyme activity and receptor function. These variations can result in altered drug metabolism, modified drug targets, and changes in drug transport, ultimately impacting treatment outcomes.

Pharmacogenes are essential in guiding precision therapy by predicting patient-specific responses to medications. Their clinical application allows for more accurate drug selection, dose optimization, and prevention of adverse drug reactions. This reduces reliance on trial-and-error prescribing and enhances therapeutic efficacy. Additionally, pharmacogenomics has driven the development of targeted therapies, particularly in chronic and complex diseases, improving long-term disease control and patient outcomes.

Despite its potential, several challenges limit widespread implementation, including high costs, limited clinical guidelines, ethical concerns, and underrepresentation of diverse populations in research. Delays in testing and variability in laboratory standards further complicate integration into routine practice.

Looking ahead, advancements in genomic technologies, artificial intelligence, and global research initiatives are expected to expand the scope of pharmacogenomics. With improved accessibility, stronger regulatory frameworks, and increased patient awareness, personalized medicine is poised to become a cornerstone of modern healthcare.

Role Of Pharmacogenomics On Personalized Medicine

Gene	Drug(s)	Impact of Genetic Variation	Clinical Action
CYP2D6	Codeine, Tramadol	PM may not activate codeine: UMs risk toxicity	Use alternatives or adjust dose
CYP2C19	Clopidogrel	PM have reduced efficacy	Use prasugrel or ticagrelor
CYP2C9/ VKORC1	Warfarin	Increased bleeding risk	Initiate at reduced dose
TPMT	Azathioprine, 6-MP	Risk of bone marrow suppression	Reduce dose or choose alternative
DYPD	5-FU, Capecitabine	Risk of life threatening toxicity	Avoid or reduce dose

Reference:
•Ahire SM, Pawar PS, Sonawane VN, Jadhav SP. Personalized Medicine and Pharmacogenomics: Impact of Genetic variation on Drug Response and Individualized Therapy-A Review. Asian Journal of Pharmacy and Technology. 2026 Jan 27;16(1):91-8

13. ABSTRACT ACKNOWLEDGMENT OF YEAR 2026 (1ST QUARTER) FOR POSTER PRESENTATION

01 ISTH 2026 POSTER ACCEPTANCE:

To Monitor Time in Therapeutic Range and Identify Adverse Effects of INR Point-of-Care Testing Device Over One Year

(Submitted by Areeba)

ISTH 2026 Adstract Accepted for Poster Presentation

Shareable via email

Dear Areeba Tayyib,

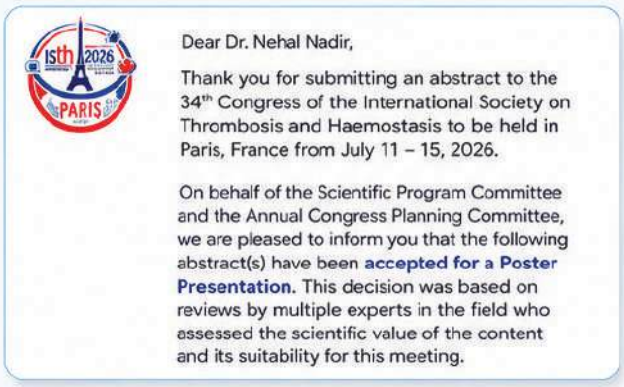
Thank you for submitting an abstract to the 34th Congress of the International Society on Thrombosis and Haemostasis to be held in Paris, France from July 11 – 15, 2026.

On behalf of the Scientific Program Committee and the Annual Congress Planning Committee, we are pleased to inform you that the following abstract(s) have been accepted for a Poster Presentation. This decision was based on reviews by multiple experts in the field who assessed the scientific value of the content and its suitability for this meeting.

02 DRUG UTILIZATION REVIEW OF APIXABAN:

Experience from a Cardiac Care Facility in Karachi, Pakistan

(Submitted by: Nehal Nadir)



Dear Dr. Nehal Nadir,

Thank you for submitting an abstract to the 34th Congress of the International Society on Thrombosis and Haemostasis to be held in Paris, France from July 11 – 15, 2026.

On behalf of the Scientific Program Committee and the Annual Congress Planning Committee, we are pleased to inform you that the following abstract(s) have been **accepted for a Poster Presentation**. This decision was based on reviews by multiple experts in the field who assessed the scientific value of the content and its suitability for this meeting.

03 FIP 2026 POSTER ACCEPTANCE:

Iron Deficiency in Heart Failure – Clinical Outcomes

(Submitted by Nehal Nadir)

82nd FIP World Congress of Pharmacy and Pharmaceutical Sciences

ABSTRACTS

Dear Dr. Nehal Nadir,

Thank you for having submitted the above abstract for the 82nd FIP World Congress of Pharmacy and Pharmaceutical Sciences 2026, to be held in **Montreal**, Canada from 29 August to 2 September 2026.

On behalf of the Congress Programme Development Group, it is our great pleasure to inform you that the above submission **has been accepted for poster presentation**.

Abstract(s) accepted as poster

Title	Iron Deficiency in Heart Failure: Clinical Outcomes and Ferro-Cardiomyopathy Linkage in a Tertiary Care Cardiac Facility: A Real-World Retrospective Analysis
Paper Number	12345
Paper Status	Abstract – Accepted for Poster
Theme	50 - Pharmacy practice research
Presenting Author	Dr. Nehal Nadir

14. PHOTO GALLERY

PHARMACY GOT 2ND PRIZE IN QI PROJECT 2025

SUCCESSFULLY CONDUCTED WORLD IMMUNIZATION WEEK SYMPOSIUM

NATIONAL TRAINING PROGRAM
DETECT, REPORT AND PREVENT
THE ROLE OF ADR & ADE TRACKING