



PHARMAC VIGILANCE

Medication Safety

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What is Pharmacovigilance?

Pharmacovigilance

The science and activities relating to the detection, assessment, understanding, and prevention of adverse drug events or any other drug-related problem.

https://www.who.int/medicines/areas/quality_safety/safety_efficacy/pharmvigi/en/

The process and science of monitoring the safety of medicines and taking action to reduce the risks and increase the benefits of medicines.

https://ec.europa.eu/health/human-use/pharmacovigilance_en

IHS Pharmacovigilance Program

IHS National Pharmacy and
Therapeutics Committee

IHS Pharmacovigilance

IHS Pharmacovigilance Program Goals

Mission: to oversee medication safety within the Indian Health System (IHS). The pharmacovigilance program provides clinicians with knowledge, tools, and resources to reduce the risks associated with medication therapy in an effort to promote safe and rational use.

Vision: to prevent adverse medication events from occurring and to use medications appropriately to achieve optimal health outcomes.

Why is the IHS Pharmacovigilance
Program Part of the NPTC?

ASHP Guidelines: P&T Committee

The P&T committee should participate in performance improvement activities... initiate, direct, and review the results of medication-use evaluation programs to optimize medication use and monitor outcomes of formulary decisions... take actions to prevent, monitor, and evaluate adverse drug reactions and medication errors.

<https://www.ashp.org/-/media/assets/policy-guidelines/docs/guidelines/gdl-pharmacy-therapeutics-committee-formulary-system.ashx>

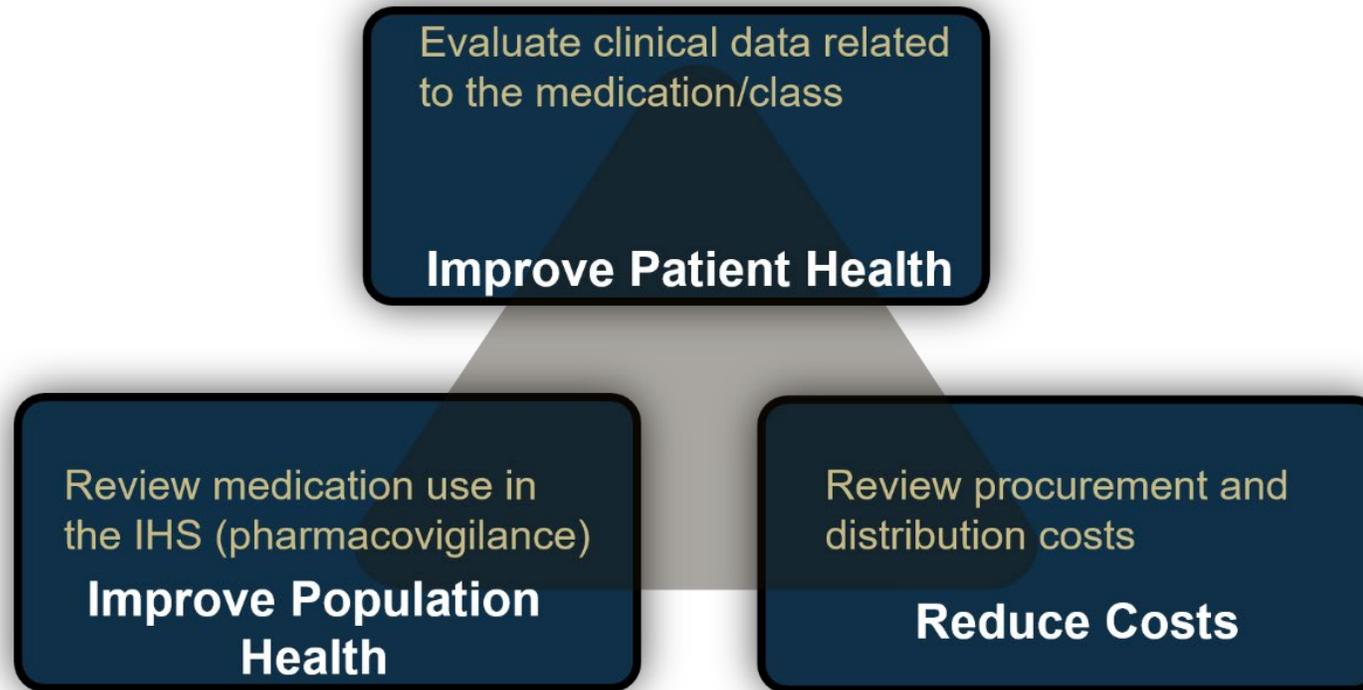
NPTC Formulary Review Process

Evaluate clinical data related
to the medication/class
Efficacy, Safety, Clinical pearls, Experience

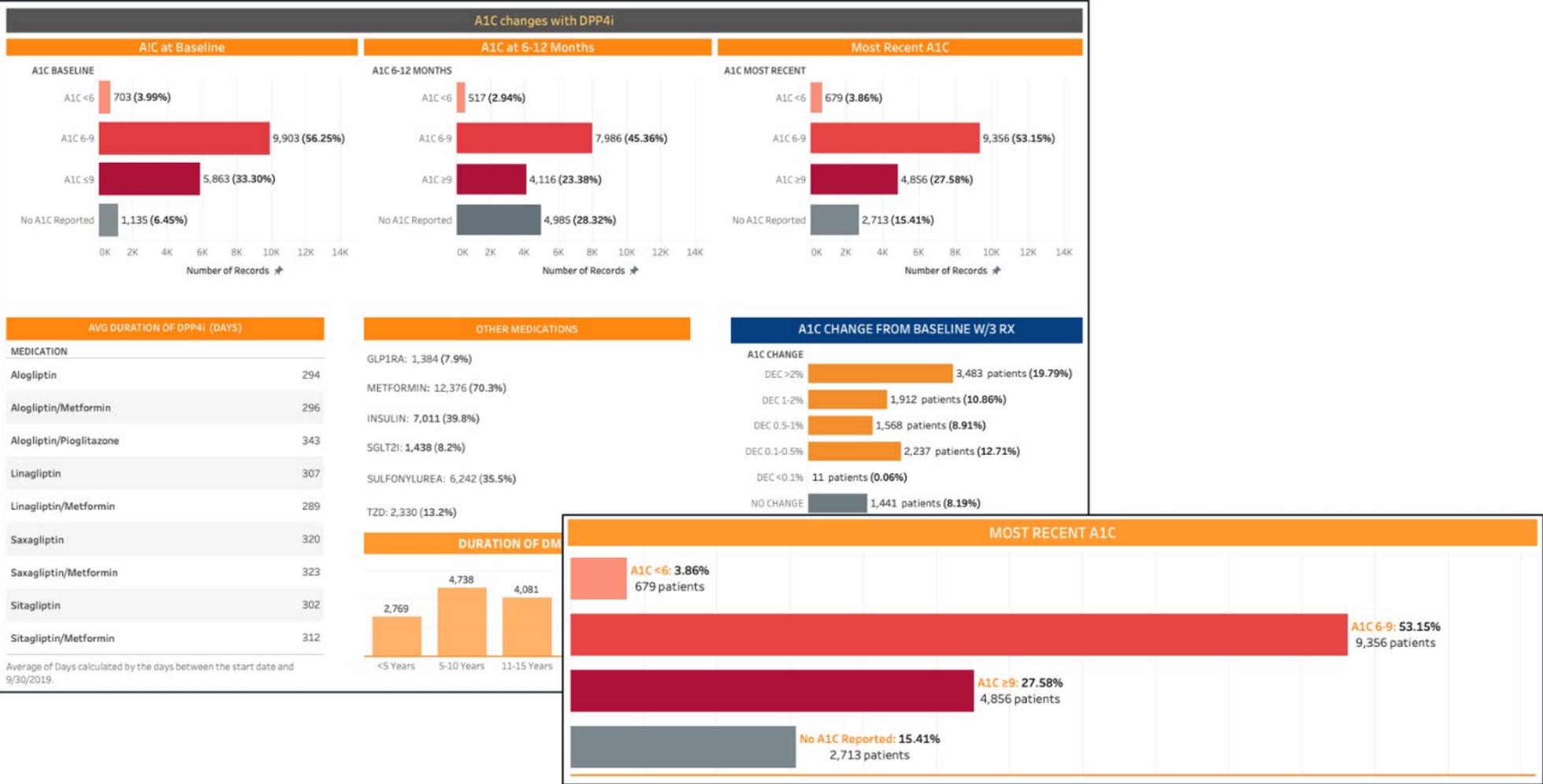
Review medication use in
the IHS (pharmacovigilance)

Review procurement and
distribution costs

NPTC Formulary Review Process Goals

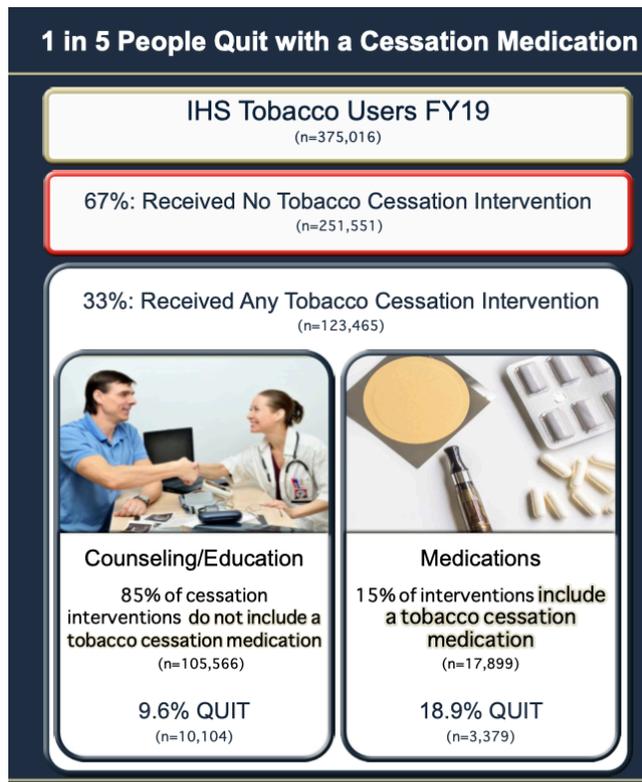


Example Report



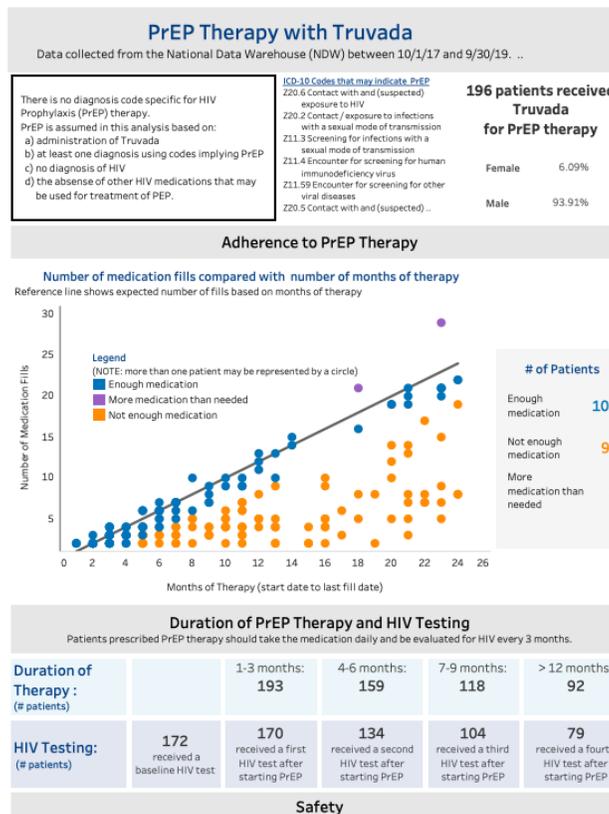
Recent Examples

Efficacy



~1 in 10 Tobacco Users quit with counseling/education
~1 in 5 Tobacco Users quit with a cessation medication

Utilization



Adverse Drug Events reported to the FDA MedWatch program were low in frequency. Kidney disease was evaluated in IHS patients. No AEs are observed for patients receiving Truvada for PrEP. One patient received Truvada despite baseline CrCl < 60mL/min; however, this patient is no longer receiving the medication.

Formulary Impact



January 2020

Direct Oral Anticoagulants (DOAC)

Background: Apixaban was added to the National Core Formulary in November 2017. At that time, data from clinical trials indicated that DOACs were equivalent in efficacy for reducing strokes and thromboemboli, however apixaban was associated with statistically fewer serious adverse drug events (bleeding) than other DOACs.

This Formulary Impact Analysis was conducted to answer three questions:

QUESTION 1: Was there an increase in the use of DOACs compared to warfarin after adding apixaban to the National Core Formulary?

FINDINGS: Although direct causation cannot be determined, an increase in DOAC purchases and a decrease in warfarin purchases occurred in the time period following the addition of apixaban. The benefits of this change are that DOACs are safer alternatives to warfarin in most patients and require less monitoring.

QUESTION 2: Did the addition of apixaban to the National Core Formulary affect the procurement of individual DOACs?

FINDINGS: IHS data show low use of dabigatran, consistent use of rivaroxaban over time, and an increase in apixaban use overall. Plausible reasons include that patients previously on rivaroxaban were maintained on this therapy while new or DOAC-naïve patients requiring anticoagulants are being prescribed apixaban. Apixaban is prescribed approximately twice as often as rivaroxaban.

QUESTION 3: Did the addition of apixaban to the National Core Formulary improve patient safety?

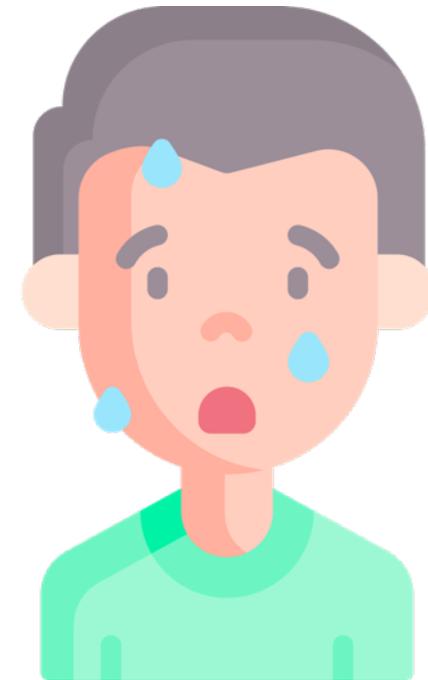
FINDINGS: A recently published meta-analysis* showed that the findings from 2017 are consistent today – all DOACs provide similar efficacy; however, major bleeding risks are lower with apixaban. IHS data supports these findings with an absolute reduction in major bleeding events of approximately 4% in patients prescribed apixaban compared to rivaroxaban.

* Douros A, Eljion KB, Duvald M, et al. Comparative Effectiveness and Safety of Direct Oral Anticoagulants in Patients with Atrial Fibrillation: A Systematic Review and Meta-Analysis of Observational Studies. Drug Safety (2019) 42:1135-1148.

What About Medication Safety and Adverse Drug Events?

Adverse Drug Event (ADE)

- An unwanted effect or harm that occurs after using a medication where the medication is suspected as the cause.
- An adverse event can result from a medication error but often occur with appropriate medication use.



Adverse Drug Event Statistics

- In inpatient settings, ADEs:
 - Account for an estimated 1 in 3 of all hospital adverse events
 - Affect about 2 million hospital stays each year
 - Prolong hospital stays by 1.7 to 4.6 days
- Each year, ADEs in outpatient settings account for:
 - Over 3.5 million physician office visits
 - An estimated 1 million emergency department visits
 - Approximately 125,000 hospital admissions

<https://health.gov/our-work/health-care-quality/adverse-drug-events>

Adverse Drug Events During Clinical Trials may be Different Than What Happens in Real Life

- Longer duration of therapy
- Different patient populations
 - Pregnant women
 - Children
 - Elderly
- People with other diseases
- People taking other medications
- Use in other conditions

Pharmacovigilance in Action



- Park-Davis submitted an application to the FDA for Troglitazone (Rezulin®) in 1996.

Pharmacovigilance in Action (2)

John Gueriguian, an officer with the FDA assigned to review the Troglitazone studies, did not recommend approval based on observations of increased risk of liver damage.

Pharmacovigilance in Action (3)

- Park-Davis complained to the FDA.
- John was removed from his post and Rezulin[®] was approved in 1997.

Pharmacovigilance in Action (4)

More than 430 reports of liver failure were traced to Rezulin[®] use by the NIH, who interpreted the risk of liver failure to be 1,200 times greater in patients taking Rezulin[®].

Pharmacovigilance in Action (5)

- Park-Davis was accused of covering up the risks.
- *“I believe that the company . . . deliberately omitted reports of liver toxicity and misrepresented serious adverse events experienced by patients in their clinical studies.” –Dr. Janet McGill*

Pharmacovigilance in Action (6)

Rezulin[®] was withdrawn from the market in 2000.

Post-marketing Withdrawal of 462 Medicinal Products Because of Adverse Drug Reactions: A Systematic Review of the World Literature

Medication	Reason for Withdrawal
Aprotinin (Trasylol)	Increased risk of death
Rimonabant (Acomplia)	Risk of severe depression and suicide
Drotrecogin alfa (Xigris)	Lack of efficacy (no survival benefit)
Propoxyphene (Darvocet/Darvon)	Increased risk of heart attacks and stroke
Pergolide (Permax)	Risk for heart valve damage
Rofecoxib (Vioxx), Valdecoxib (Bextra)	Risk of myocardial infarction and stroke
Cerivastatin (Baycol, Lipobay)	Risk of rhabdomyolysis and kidney failure
Fenfluramine/phentermine	Valvular heart disease
Sparfloxacin	QT prolongation and phototoxicity
Troglitazone (Rezulin)	Hepatotoxicity

The Role of Pharmacovigilance

Belongs to anyone and everyone
that provides patient care.



Reporting Adverse Drug Events (ADE)

Indian Health Manual Chapter 7, 3-7.14

- All adverse drug events will be reported to and reviewed by the SU P&T, quality assurance and/or medication safety committee(s).
 - This includes all allergic responses to drugs, any overextension of therapeutic effects or side effects, and any other unexpected response to a drug that results in actual or potential risk to the patient.
 - In addition, all serious, unusual, or previously unreported adverse effects will be reported directly to the FDA MedWatch program.
 - Adverse reactions to vaccines will be reported to the Vaccine Adverse Event Reporting System. A copy of each report will be filed in the pharmacy with a copy sent to the P&T Committee.

Reporting Adverse Events

Adverse Drug Event (ADE) MedWatch

The screenshot shows the MedWatch homepage. At the top is the FDA U.S. Food & Drug Administration logo and a search bar. Below the logo is a navigation menu with categories like Home, Food, Drugs, Medical Devices, etc. The main heading is "MedWatch Online Voluntary Reporting Form" with social media sharing options. A "Welcome" section explains that health professionals, consumers, and patients can report adverse events. Below this is a "Begin Online Report" section with three options: "Health Professional (FDA Form 3500)", "Consumer/Patient (FDA Form 3500B)", and "Continue an incomplete report". A note states: "Click here to continue filling out an incomplete report. You will need Report ID and Report Date. You will have 3 days to complete this report from the start date."

Adverse Vaccine Event (AVE) VAERS

The screenshot shows the VAERS "Report an Adverse Event - Patient Information" form. The top navigation bar includes "About VAERS", "Report an Adverse Event", "VAERS Data", "Resources", and "Submit Follow-Up Information". The form is divided into sections: "Completion Status" (with checkboxes for Patient, Reporter, Facility, Vaccine, and Additional Information) and "Report an Adverse Event - Patient Information". A note states: "Note: Fields marked with an * are essential and should be completed." The form contains several input fields: "Patient first name", "Patient last name", "Street address", "City", "State" (dropdown), "County", "Zip code", "Phone", "Email", "Date of birth" (with a calendar icon), "Sex" (radio buttons for Male, Female, Unknown), "Date of vaccination" (with a calendar icon), "Time" (dropdown for AM/PM), "Date adverse event started" (with a calendar icon), and "Time" (dropdown for AM/PM). There are also "Item 1" through "Item 5" labels for different sections of the form.

<https://www.ihs.gov/nptc/pharmacovigilance/>



Adverse Event Reporting

Adverse Drug Events

Adverse Drug Events (ADE) should be documented in the patient's medical record. If the ADE is serious or unexpected, it will be reported to the MedWatch reporting program or the Vaccine Adverse Event Reporting System (VAERS) as described in the [Indian Health Manual](#).

Documenting Common ADEs

Common adverse events are the anticipated but unwanted experiences that patients have after taking a medication. These adverse events can be documented in the patient's problem list as a purpose of visit. An Adverse Drug Event pick list has been created to easily find commonly reported adverse events. It is important that the name of the suspected medication be included in the purpose of visit narrative to associate the medication with the finding.

- [Documenting Common ADEs](#) [PDF - 224 KB]

Documenting Serious or Unexpected ADEs

Serious adverse drug events can be captured prominently in the patient's medical record using the Adverse Reaction Tracking System (ART).

- [Documenting Serious ADEs](#) [PDF - 202 KB]

Reporting Serious or Unexpected ADEs

Submit an **Adverse Drug Event** report for a medication with the MedWatch reporting program. There are three options for submitting a MedWatch report:

1. Complete the [Online Voluntary Reporting Form](#)  on the FDA website.
 2. Complete the [FDA 3500 form](#) [PDF] and mail or fax the form to the FDA per the instructions on the form.
 3. For sites using the RPMS EHR, you can install the [IHS Adverse Event EHR note template](#). This template will help craft your note and create a MedWatch submission at the same time. For sites not using RPMS EHR, a similar template can be developed.
- [Submitting ADEs to MedWatch with the RPMS EHR Template](#) [PDF - 134 KB]

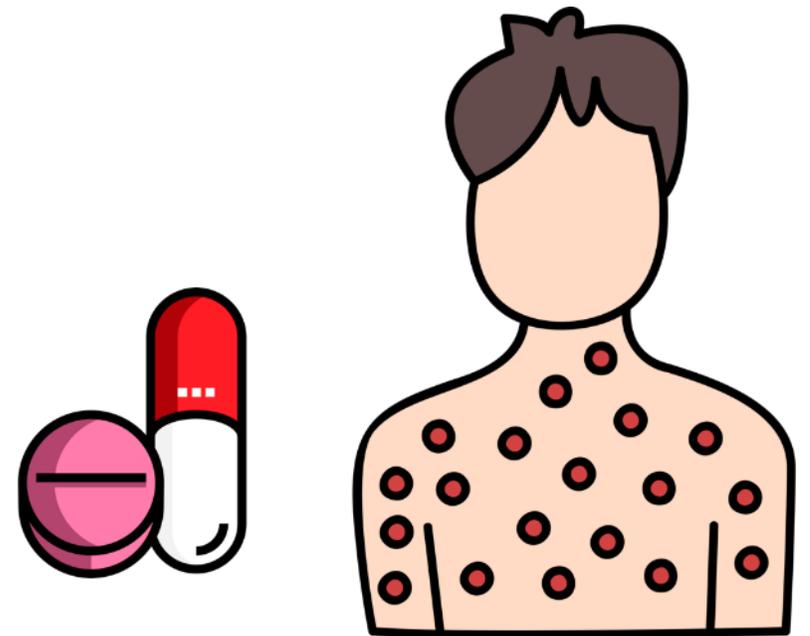
When using the online voluntary Reporting Form or the FDA 3500 form, it is essential that the words "**IHS**" or "**Indian Health Service**" appear on the form, ideally in the address of the "Reporter" section.

Submit an **Adverse Vaccine Event** report using the [VAERS online reporting tool](#) .

- [Reporting Adverse Vaccine Events handout](#) [PDF - 148 KB]
- [VAERS Reporting Presentation](#) [PDF - 3 MB]

It is essential that the words "**IHS**" or "**Indian Health Service**" appear on the form in item #26 (Immunization Project Report Number).

Adverse Drug Event Reporting



Submitting an Adverse Drug Event

Serious and unexpected ADEs must be reported to MedWatch

- **Serious Adverse Drug Events:** are those that result in death, require hospital admission or prolongation of existing hospital stay, result in persistent or significant disability/incapacity, or are life threatening.
- **Unexpected Adverse Drug Events:** are those that occur but are not found labeled in the package insert, pharmacologic references, or in the medical literature or that occur in a patient where the effect is unexpected.

If you are uncertain, submit it!

Submitting an Adverse Drug Event Options

Three options:

1. Submit via online form:
<https://www.accessdata.fda.gov/scripts/medwatch/index.cfm>.
2. Download the FDA 3500 form, complete, and mail/fax to MedWatch.
3. Document in the patient's medical record using the RPMS EHR adverse event template. Print and mail/fax to MedWatch.

MedWatch Options

MedWatch Voluntary Report

SHARE TWEET LINKEDIN PIN IT EMAIL PRINT

Report ID: MED832904 Report Date: 10/09/2019

PATIENT PROBLEM PRODUCT DEVICE CONCOMITANT REPORTER REVIEW

About Patient

Patient Identifier:

Please do NOT enter the Patient's Name or Social Security Number

Age or Date of Birth:

Age (specify unit of time for age) Unit OR Date of Birth (mm/dd/yyyy)

Gender:

- Female
- Male
- Intersex
- Transgender
- Prefer not to disclose

Weight and Unit:

Weight Unit

Ethnicity:

(Check one)

- Hispanic/Latino
- Not Hispanic/Latino

U.S. Department of Health and Human Services
Food and Drug Administration
MEDWATCH
FORM FDA 3500 (2/19)
The FDA Safety Information and Adverse Event Reporting Program

For VOLUNTARY reporting of adverse events, product problems and product use/medication errors

Form Approved: OMB No. 0910-0291, Expires: 11-30-2021
See PRA statement on reverse.

Page 1 of _

FDA USE ONLY
Triage unit
Incidence #
FDA Rec. Date

Note: For date prompts of 'dd-mm-yyyy' please use 2-digit day, 3-letter month abbreviation, and 4-digit year; for example, 01-Jul-2018.

A. PATIENT INFORMATION

1. Patient Identifier
2. Age (Year(s) Month(s) Week(s) Day(s))
3. Gender (Female Male Intersex Transgender Prefer not to disclose)
4. Weight (lb kg)
5. Ethnicity (Hispanic/Latino Not Hispanic/Latino)
6. Race (Asian American Indian or Alaska Native Black or African American White Native Hawaiian or Other Pacific Islander)

B. ADVERSE EVENT, PRODUCT PROBLEM

1. Type of Report (Adverse Event Product Problem)
2. Outcome Attributed to Adverse Event (Death Life-threatening Hospitalization Disability or Permanent Damage Other Serious or Important Medical Events Required Intervention to Prevent Permanent Impairment/Damage)
3. Date of Event Date of this Report
5. Describe Event, Problem or Product Use/Medication Error
6. Relevant Tests/Laboratory Data
7. Other Relevant History, Including Preexisting Medical Conditions

C. PRODUCT AVAILABILITY

1. Product Available for Evaluation? (Yes No Returned to Manufacturer)
2. Do you have a picture of the product? (Yes No)

D. SUSPECT PRODUCTS

2. Dose or Amount Frequency Route
3. Treatment Dates/Therapy Dates (Start/Stop or duration) Diagnosis for Use (Indication)
4. Expiration Date (dd-mm-yyyy)
5. Product Type (OTC Compounded Generic Biosimilar)
7. Event Abated After Use Stopped or Dose Reduced? (Yes No Doesn't apply)
8. Event Reappeared After Reintroduction? (Yes No Doesn't apply)

E. SUSPECT MEDICAL DEVICE

1. Brand Name
2. Common Device Name
3. Manufacturer Name, City and State
4. Model # Lot #
5. Operator of Device (Health Professional Patient/Consumer Other)
6a. If Implanted, Give Date (dd-mm-yyyy) 6b. If Explanted, Give Date (dd-mm-yyyy)
7a. Is this a single-use device that was reprocessed and reused on a patient? (Yes No)
7b. If Yes to Item 7a, Enter Name and Address of Reprocessor
8. Was this device serviced by a third party service? (Yes No Unknown)

F. OTHER (CONCOMITANT) MEDICAL PRODUCTS

1. Product names and therapy dates (Exclude treatment of event)

G. REPORTER (See confidentiality section on back)

1. Name and Address (Last Name First Name)

Template: MedWatch

***** FOR YOUR INFORMATION ONLY *****
Complete this form with as much information as possible.
At a minimum, you must submit a patient identifier, suspected medication(s), adverse event(s), and your contact information.
Print the note and send to the FDA by fax or mail.
The FDA fax number and address will print at the bottom of the note.

INDIAN HEALTH SERVICE (IHS) MedWatch Suspected Adverse Event Report

***** A. PATIENT INFORMATION *****

PATIENT NAME: [REDACTED] DATE OF BIRTH: [REDACTED]
CHART #: [REDACTED]
AGE and GENDER: 46 year old FEMALE
HEIGHT: 203.10 lb [92.21 kg] (Nov 17, 2003@14:40)
WEIGHT: 203.10 lb [92.21 kg] (Nov 17, 2003@14:40)
ETHNICITY: Not Hispanic/Latino
RACE: American Indian/Alaska Native

***** B. ADVERSE EVENT *****

TYPE: Adverse event Product use error Product problem
 Problem with different manufacturer of same medication

OUTCOME OF EVENT: Death Life threatening Disability or permanent damage
 Hospitalization (initial or prolonged)
 Other serious (important to medical events)
 Congenital abnormality/Birth defect

DATE OF EVENT: [REDACTED] DATE OF REPORT: OCT 09, 2019

DESCRIPTION OF EVENT OR PROBLEM:
[REDACTED]

IMPORTANT: Document IHS

- Place **IHS** at the top of the form or in the Reporter Section (Section G).
- Federal, Tribal, and Urban programs are all encouraged to put **IHS** into this field to help better evaluate adverse events experienced in our patient population.

Reset Form

U.S. Department of Health and Human Services
Food and Drug Administration

MEDWATCH **IHS**

FORM FDA 3500 (2/19)
The FDA Safety Information and
Adverse Event Reporting Program

For VOLUNTARY
adverse events, pro
and product use/m

Page 1

G. REPORTER (See confidentiality section on back)

Name and Address

Last Name: First Name:

Address:

City: State/Province/Region:

ZIP/Postal Code: Country:

Phone #: Email:

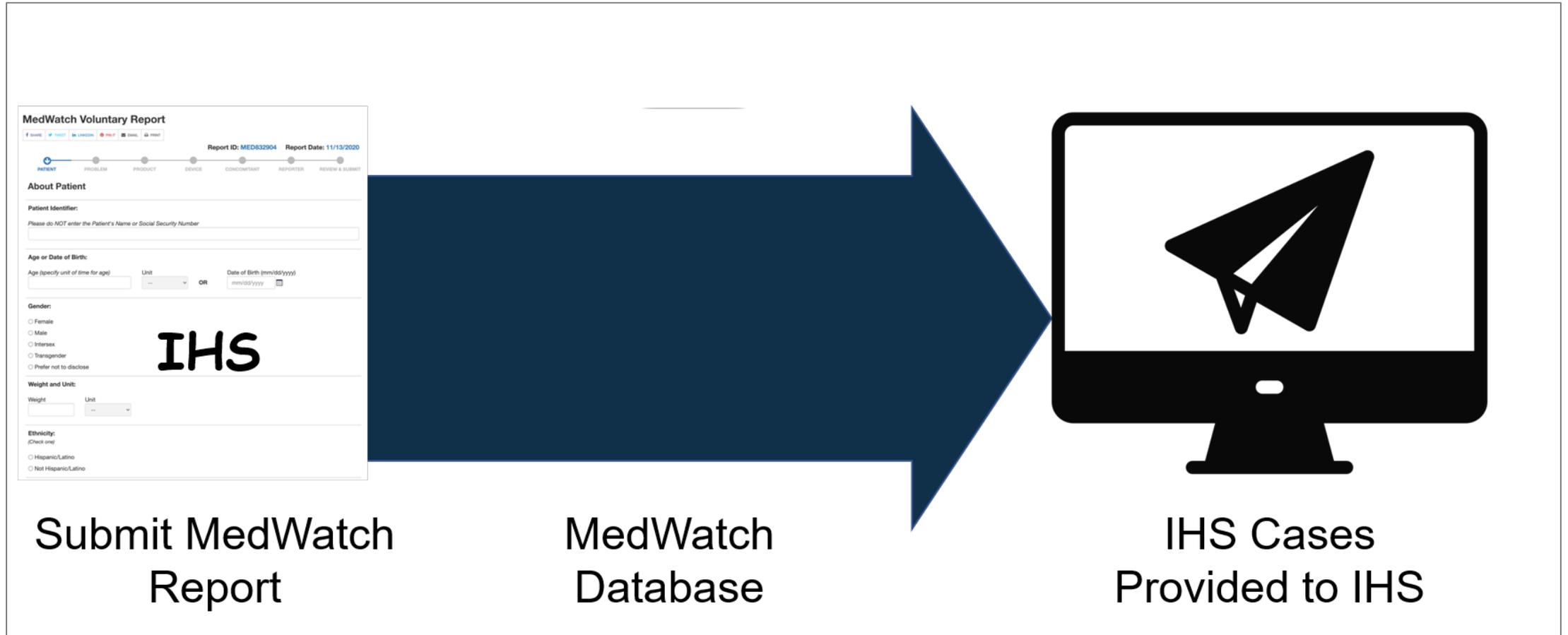
Health Professional? Yes No

3. Occupation

4. Also

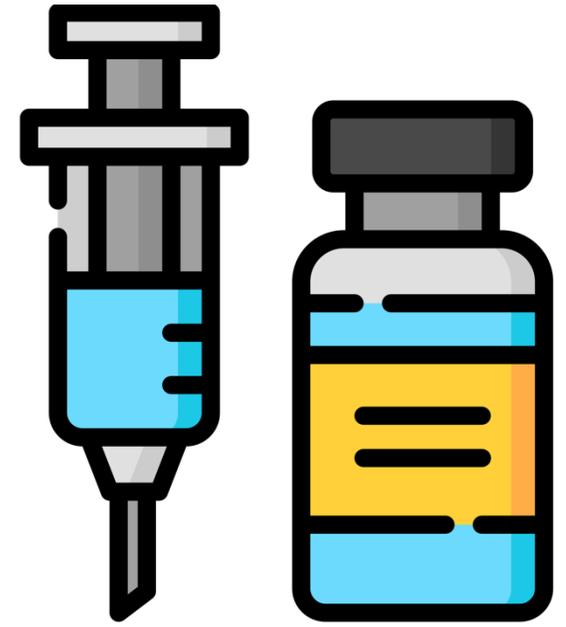
If you do NOT want your identity disclosed to the manufacturer, please mark this box:

IHS Pharmacovigilance



Statin Associated Autoimmune Myopathy

- Reports of patients developing severe muscle pain and weakness that appears to be associated with statin therapy
- Pain and weakness continue to progress after discontinuation
- Rheumatologist working with IHS identified this as SAAM
 - The body's immune system develops antibodies against itself
- Multiple cases referred by members of the NPTC to the NPTC core team
- Cases encouraged to be reported to MedWatch
- FDA has contacted IHS and continues to monitor this effect



Adverse Vaccine Event Reporting

Vaccine Safety: Common Adverse Events

- Vaccines are considered to be safe and effective with most common adverse events being mild and are signs that the body is developing immunity:
 - Pain, swelling, or redness where the shot was given
 - Mild fever
 - Chills
 - Feeling tired
 - Headache
 - Muscle and joint aches
- https://www.vaccines.gov/basics/safety/side_effects



Vaccine Safety: Serious Adverse Events

- More serious side effects are rare but can occur. Some examples:
 - Anaphylaxis (0.65 cases/1 million vaccinations)
 - Thrombocytopenia from Rubella vaccine (1 case/40,000 vaccinations)
 - Orchitis from Mumps vaccine (0.3 cases/1 million vaccinations)
 - Intussusception from Rotavirus vaccine (1 case/100,000 vaccinations)
 - Guillain-Barre from flu vaccine (1 case/1.25 million vaccinations; association is stronger with flu infection than the vaccine)

Spencer JP, Trondsen Pawlowski RH, Thomas S. Vaccine Adverse Events: Separating Myth from Reality. Am Fam Physician. 2017;95(12):786-794.

Vigilance is
Needed Even
More Now



V-Safe



12/01/20

Learn more about **v-safe**
www.cdc.gov/vsafe

- The CDC has created a new smart phone tool called v-safe. Once you have signed up and have received the COVID-19 vaccination, v-safe will send you a text message asking you how you are doing and if you have any adverse events.
- If you have clinically significant adverse events, the CDC will contact you for more information.
- You will also receive a text notification when (if) you are due for a second COVID vaccine.
- <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/safety/vsafe.html>

Submitting an Adverse Vaccine Event

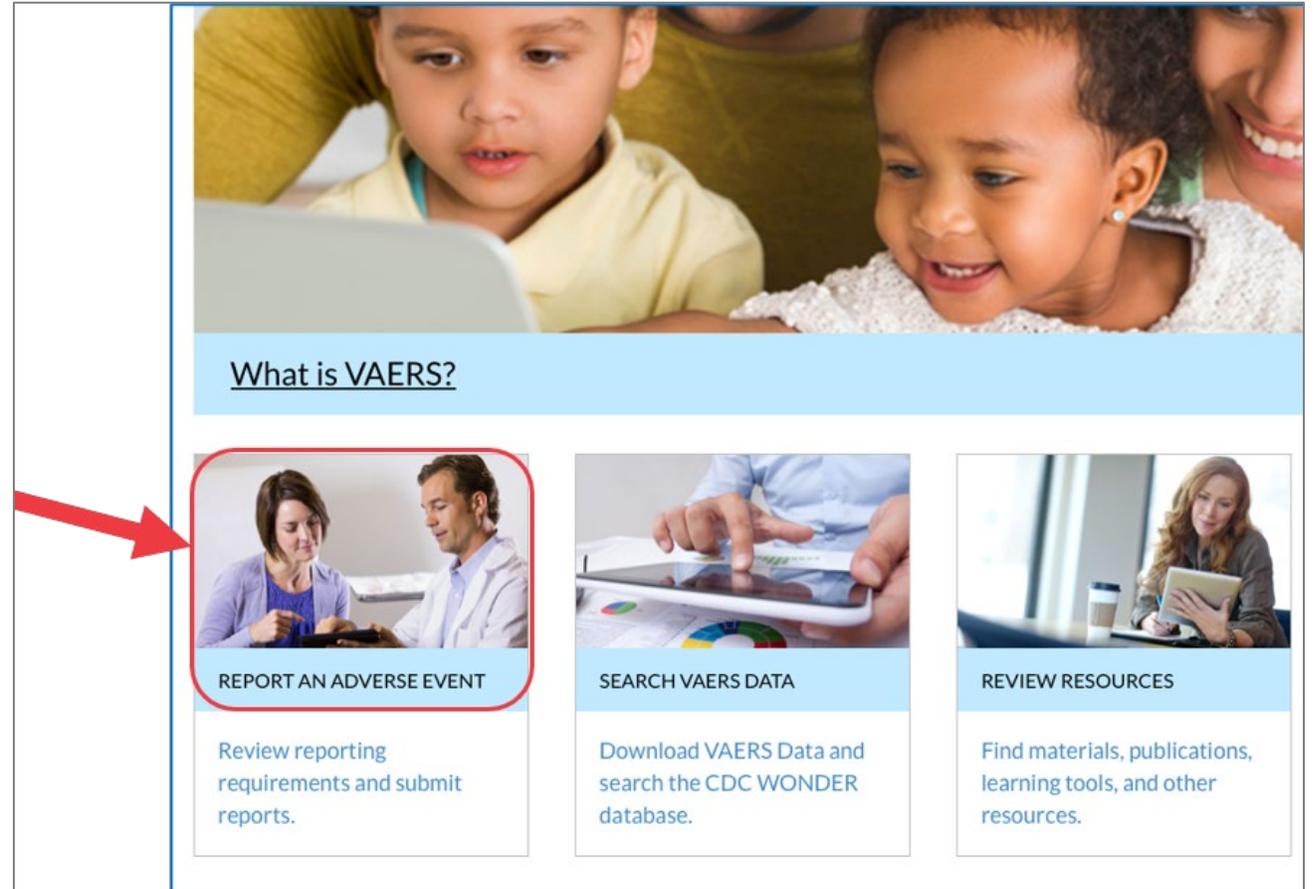
- It is required by IHS policy in Chapter 7 of the Indian Health Manual
- Healthcare providers may be required by law to report under certain conditions.
 - Any adverse event listed in the [VAERS Table of Reportable Events Following Vaccination](#) that occurs within the specified time period after vaccinations.
 - An adverse event listed by the vaccine manufacturer as a contraindication to further doses of the vaccine.

Sample: Table of Reportable Events

VAERS Table of Reportable Events Following Vaccination*	
Vaccine/Toxoid	Event and interval** from vaccination
Tetanus in any combination; DTaP, DTP, DTP-Hib, DT, Td, TT, Tdap, DTaP-IPV, DTaP-IPV/Hib, DTaP-HepB-IPV	<ul style="list-style-type: none"> A. Anaphylaxis or anaphylactic shock (7 days) B. Brachial neuritis (28 days) C. Shoulder Injury Related to Vaccine Administration (7 days) D. Vasovagal syncope (7 days) E. Any acute complications or sequelae (including death) of above events (interval - not applicable) F. Events described in manufacturer's package insert as contraindications to additional doses of vaccine (interval - see package insert)
Pertussis in any combination; DTaP, DTP, DTP-Hib, Tdap, DTaP-IPV, DTaP-IPV/Hib, DTaP-HepB-IPV	<ul style="list-style-type: none"> A. Anaphylaxis or anaphylactic shock (7 days) B. Encephalopathy or encephalitis (7 days) C. Shoulder Injury Related to Vaccine Administration (7 days) D. Vasovagal syncope (7 days) E. Any acute complications or sequelae (including death) of above events (interval - not applicable) F. Events described in manufacturer's package insert as contraindications to additional doses of vaccine (interval - see package insert)
Measles, mumps and rubella in any combination; MMR, MMRV, MM	<ul style="list-style-type: none"> A. Anaphylaxis or anaphylactic shock (7 days) B. Encephalopathy or encephalitis (15 days) C. Shoulder Injury Related to Vaccine Administration (7 days) D. Vasovagal syncope (7 days) E. Any acute complications or sequelae (including death) of above events (interval - not applicable) F. Events described in manufacturer's package insert as contraindications to additional doses of vaccine (interval - see package insert)
Rubella in any combination; MMR, MMRV	<ul style="list-style-type: none"> A. Chronic arthritis (42 days) B. Any acute complications or sequelae (including death) of above event (interval - not applicable) C. Events described in manufacturer's package insert as contraindications to additional doses of vaccine (interval - see package insert)
Measles in any combination; MMR, MMRV, MM	<ul style="list-style-type: none"> A. Thrombocytopenic purpura (7-30 days) B. Vaccine-strain measles viral infection in an immunodeficient recipient <ul style="list-style-type: none"> o Vaccine-strain virus identified (interval - not applicable) o If strain determination is not done or if laboratory testing is inconclusive (12 months) C. Any acute complications or sequelae (including

Reporting a Vaccine Adverse Event

- Open a web browser and go to <https://vaers.hhs.gov>
- Scroll down and select **Report an Adverse Event**.



What is VAERS?

REPORT AN ADVERSE EVENT
Review reporting requirements and submit reports.

SEARCH VAERS DATA
Download VAERS Data and search the CDC WONDER database.

REVIEW RESOURCES
Find materials, publications, learning tools, and other resources.

Reporting a Vaccine Adverse Event Options

- There are two options to submit an adverse event to VAERS:
 - Using the online report.
 - Uploading and submitting a PDF form.
 - This option enables you to begin the report, save it, and finish it at a later time.

Two Ways to Submit an Online Report to VAERS



Option 1 - Report Online to VAERS (Preferred)

Submit a VAERS report online. The report must be completed online and submitted in one sitting and cannot be saved and returned to at a later time. Your information will be erased if you are inactive for 20 minutes; you will receive a warning after 15 minutes.



Option 2 - Report using a Writable PDF Form

Download the Writable PDF Form to a computer. Complete the VAERS report offline if you do not have time to complete it all at once. Return to this page to upload the completed Writable PDF form by clicking here.

Checklist

What will I need to fill out the report?

- Patient information (age, date of birth, sex)
- Vaccine information (brand name, dosage)
- Date, time, and location administered
- Date and time when adverse event(s) started
- Symptoms and outcome of adverse event(s)
- Medical tests and laboratory results (if applicable)
- Physician's contact information (if applicable)

Full checklist

If you need further assistance with reporting to VAERS, please email info@VAERS.org or call 1-800-822-7967.

Reporting a Vaccine Adverse Event Form

- After clicking the online report icon, a new page will open.
- Begin filling out the report with as much info as possible.
 - Please note that items marked with an asterisk (*) are mandatory.

VAERS Vaccine Adverse Event Reporting System
www.vaers.hhs.gov

About VAERS | Report an Adverse Event | VAERS Data | Resources | Submit Follow-Up Information

Completion Status | Report an Adverse Event - Patient Information | Instructions | en Español

Patient Information
 Reporter Information
 Facility Information
 Vaccine Information
 Additional Information

Note: Fields marked with an * are essential and should be completed.

Item 1

Patient first name: Patient last name:

Street address:

City: State: County:

Zip code: Phone: Email:

Item 2

* Date of birth mm/dd/yyyy or mm/yyyy

Item 3

* Sex:
 Male Female Unknown

Item 4

* Date of vaccination mm/dd/yyyy or mm/yyyy Time:

Click to preview VAERS form

IMPORTANT: Document IHS (cont.)

- Place **IHS** in the Item 26 field (Immunization Project Report Number)



The image shows a screenshot of a form field. The field is titled "Item 26" with a help icon. Below the title, the text "Immunization project report number: (Health Dept use only)" is displayed. The input field contains the text "IHS".

- Federal, Tribal, and Urban programs are all encouraged to put **IHS** into this field to help better evaluate adverse events experienced in our patient population.

Final Step

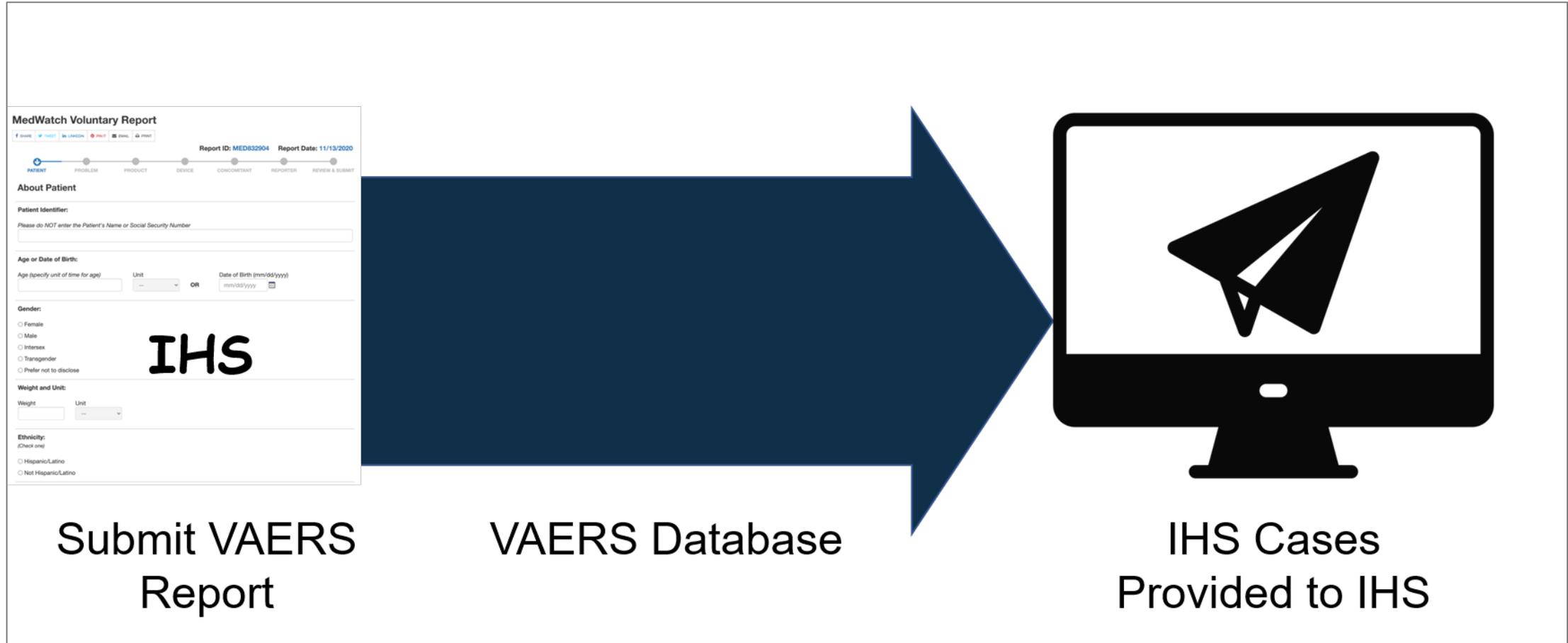
After you have completed the form, click the **Submit** button in the bottom right to send your report to VAERS and complete the reporting process.

Warning: Knowingly filing a false VAERS report with the intent to mislead the Department of Health and Human Services is a violation of Federal law (18 U.S. Code § 1001) punishable by fine and imprisonment.

Prev

Submit

IHS Pharmacovigilance (cont.)





Quarterly Adverse Drug/Vaccine Event Report



This Quarterly Adverse Drug/Vaccine Event Report period includes adverse events submitted to the FDA MedWatch or FDA/CDC VAERS programs from January 1, 2020 through November 1, 2020.

Medication and Suspected Adverse Event	Comments
Chlorhexidine Mouthwash: Throat swelling and hives. Hives persisted for 2 months.	Hypersensitivity reactions, including anaphylaxis, have been reported.
Remdesivir: <ul style="list-style-type: none"> - 3 reports decreased renal function - 3 reports of increased LFTs - Severe leukopenia - Shivering during infusion - Increased O2 requirements followed by STEMI - Decreased Hgb - Hypotension and bradycardia 14h after 2nd dose 	Anticipated adverse events include hyperglycemia, increased LFTs, renal failure, and fever. Hypersensitivity or infusion related reactions may include: hypotension, nausea, vomiting, diaphoresis, and shivering. From internal IHS remdesivir utilization surveillance, adverse events have included: <ul style="list-style-type: none"> - 8 reports of decreased renal function - 13 reports of increased LFTs - Leukopenia - Allergic reaction - Atrial Fibrillation - Infusion related reactions (5 reports of nausea, 3 reports of bradycardia, hypotension, & shivering)
Semaglutide: Hair loss	Causal relationship is unclear. Hair loss is not reported in the package insert but 11 cases of alopecia have been reported to the FDA MedWatch program. Hair loss is associated with uncontrolled diabetes and may be disease related rather than medication related.
Varenicline: Pain in multiple joints	Musculoskeletal pain has been observed in <1% of patients. Joint swelling, stiffness, range of motion, and dislocation have been reported to the FDA MedWatch program.
Verapamil: Bradycardia	Common adverse event consistent with pharmacologic action.

NPTC Quarterly Adverse Event Report

Report suspected Adverse Drug/Vaccine Events:

- Report suspected adverse drug events to [MedWatch](#) - Enter "IHS" in the reporter field
- Report suspected adverse vaccine events to [VAERS](#) - Enter "IHS" in the field for item #26

I-STAR and Employees

- Document employee AVEs
- May attach a copy of the VAERS report

<https://home.ihs.gov/i-star/>

The screenshot shows the IHS Intranet interface. At the top, there is a dark blue navigation bar with the IHS logo, 'IHS Intranet', 'A-Z Index', and a search box. Below this is a sidebar for 'IHS Safety Tracking & Response (I-STAR)' with links for 'Updates and Tips', 'General Information', 'I-STAR Event Reporting', 'Resources', 'Training', and 'Contacts'. The main content area is titled 'I-STAR Event Reporting' and contains a breadcrumb trail: 'IHS Safety Tracking & Response (I-STAR) > I-STAR Event Reporting'. Below the breadcrumb are two links: '> IHS Event Reporting Form (LIVE Site)' and '> Good Catch Form (LIVE Site)'. At the bottom of the page, there is a footer with links: 'Intranet Home / Employee Resources / HIPAA / No Fear Act / HHS Intranet / Privacy / FOIA / Webmaster'.

The image shows a preview of the VAERS form. The form is titled 'VAERS' and has a hamburger menu icon. It is divided into several sections: 'Patient Information', 'Reporter Information', 'Facility Information', 'Vaccine Information', and 'Additional Information'. Each section contains several input fields. A red rectangular box highlights the 'Patient Information' section. A large red arrow points from the bottom of the screenshot to the text 'Click to preview VAERS form'.

Drug Safety Board

- To help the FDA assess the impact of their safety decisions on the healthcare systems of its Federal Partners



Drug Safety Information

- **Drug Safety Communications**

- Communications distributed by the FDA regarding the prescribing and monitoring of FDA approved medications and devices.
 - NSAID use and pregnancy warning
 - Lorcaserin withdrawal

- **Drug Safety Alerts**

- Information about the safe and effective use of one or more medications. Drug safety alerts provide information about current topics and findings to help raise awareness and promote medication safety.
 - Removal of Boxed Warning for Canagliflozin and amputations
 - Metformin Recall
 - Look alike-sound alike medications

Drug Safety Communication

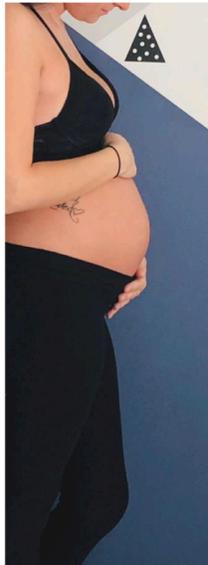
Indian Health Service
National Pharmacy and Therapeutics Committee

Pharmacovigilance Drug Safety Communication



NSAID Use During Pregnancy May Cause Fetal Renal Dysfunction Resulting in Low Amniotic Fluid

The FDA has issued a Drug Safety Communication (DSC) to alert clinicians about risks of NSAID use in pregnant women. The use of nonsteroidal anti-inflammatory drugs (NSAIDs) around 20 weeks or later in pregnancy may cause rare but serious kidney problems in an unborn baby.



After around 20 weeks of pregnancy, the unborn babies' kidneys produce most of the amniotic fluid. Amniotic fluid provides a protective cushion and helps the unborn babies' lungs, digestive system, and muscles develop. Kidney problems can lead to oligohydramnios (low levels of this amniotic fluid surrounding the baby).

Complications of prolonged oligohydramnios may include limb contractures and delayed lung maturation.

Oligohydramnios is often, but not always, reversible with treatment discontinuation. In some post marketing cases of impaired neonatal renal function, invasive procedures such as exchange transfusion or dialysis were required.

These adverse outcomes are seen, on average, after days to weeks of treatment, although oligohydramnios has been infrequently reported as soon as 48 hours after NSAID initiation.

FDA recommends that health care professionals limit prescribing NSAIDs between 20 to 30 weeks of pregnancy and avoid prescribing them after 30 weeks of pregnancy.

If NSAID treatment is determined necessary (e.g., the use of 81 mg aspirin for certain pregnancy-related conditions), limit use to the lowest effective dose and shortest duration possible.

Indian Health Service
National Pharmacy and Therapeutics Committee

Pharmacovigilance Drug Safety Communication



September 24, 2020

Serious Adverse Drug Events associated with the "Benadryl Challenge"

The FDA has issued a Drug Safety Communication (DSC) to alert clinicians about recent reports of teenagers taking higher than recommended doses of diphenhydramine (Benadryl®) in response to a video challenge that appeared on the social media platform called TikTok.

TikTok is a website and phone application that enables users to share short videos on any topic.



A series of videos called the "Benadryl Challenge" were recently posted on TikTok and encouraged viewers to take 10-20 doses of diphenhydramine to get high and hallucinate.

Higher than recommended doses of diphenhydramine can result in serious heart problems, seizures, coma, and death.

The FDA encourages consumers, parents, and caregivers to store diphenhydramine and other medications out of reach and sight or to lock up medications to prevent misuse or accidental poisonings.

Encourage teens and caregivers to read and follow the Drug Facts label.

In the event of suspected overdose, health care professionals should attempt to determine whether a patient took diphenhydramine.

Drug Safety Alerts

Prevent Look-Alike / Sound-Alike (LASA) Medication Errors



Improve medication identification by providing details. Try to include:

- Diagnosis or Intended Use
- Dose or strength
- Route of administration or formulation

Reduce the risk of medication error in patient care areas.

- Keep rarely used or LASA medications in the pharmacy.
- Label bins or shelves with brand names for LASA medications.
- Keep medication dispensing areas clean and organized.
- Have a double check system in place to help prevent accidental errors.

Store medications so they are easily recognized.

- Store LASA medications in separate locations or non-alphabetically.
- Place medications so the label and medication name is always showing.
- Use Tall Man lettering to emphasize differences in medications with sound-alike names: [metFORMIN](#) and [metoPROLOL](#).
- Add auxiliary labels to storage bins or shelves or provide labels with information such as route of administration or formulation to more easily identify the correct medication.
- Label bins or shelves with brand names for LASA medications.
- Minimize the availability of multiple medication strengths.

Indian Health Service National Pharmacy and Therapeutics Committee Pharmacovigilance Drug Safety Alert



August 26, 2020

FDA Removes Boxed Warning About Risk of Leg and Foot Amputations for Canagliflozin (Invokana®)

Background: Canagliflozin belongs to a class of medicines called sodium-glucose cotransporter-2 (SGLT2) inhibitors. It is used in patients with Type 2 Diabetes to lower blood glucose.

- | | |
|------|--|
| 2013 | FDA approves canagliflozin for the treatment of Type 2 Diabetes. |
| 2017 | A Boxed Warning that canagliflozin may increase the risk of leg and foot amputation is added to the package insert. |
| 2018 | Canagliflozin is approved by the FDA to reduce the risk of major heart-related events such as heart attack, stroke, or death in patients with type 2 diabetes who have known heart disease. |
| 2019 | Canagliflozin is approved by the FDA to reduce the risk of end-stage kidney disease, worsening of kidney function, heart-related death, and being hospitalized for heart failure in certain patients with type 2 diabetes and diabetic kidney disease. |
| 2020 | FDA removes Boxed Warning about risk of leg and foot amputations for canagliflozin: <ul style="list-style-type: none">• Recent clinical trials show that there continues to be an increased risk of leg and foot amputation with canagliflozin; however, the risk is lower than previously described, especially when treatment is appropriately monitored.• Recently observed cardiovascular and renal protection effects increases the benefit of canagliflozin therapy in patients with type 2 diabetes. |

Recommendation: Although the Boxed Warning will be removed, there is still an increased risk of leg and foot amputations. **Health care professionals and patients should continue to recognize the importance of preventative foot care and monitor for new pain, tenderness, sores, ulcers, and infections in the legs and feet.** Risk factors that may predispose patients to the need for

How to Get Drug Safety Messages

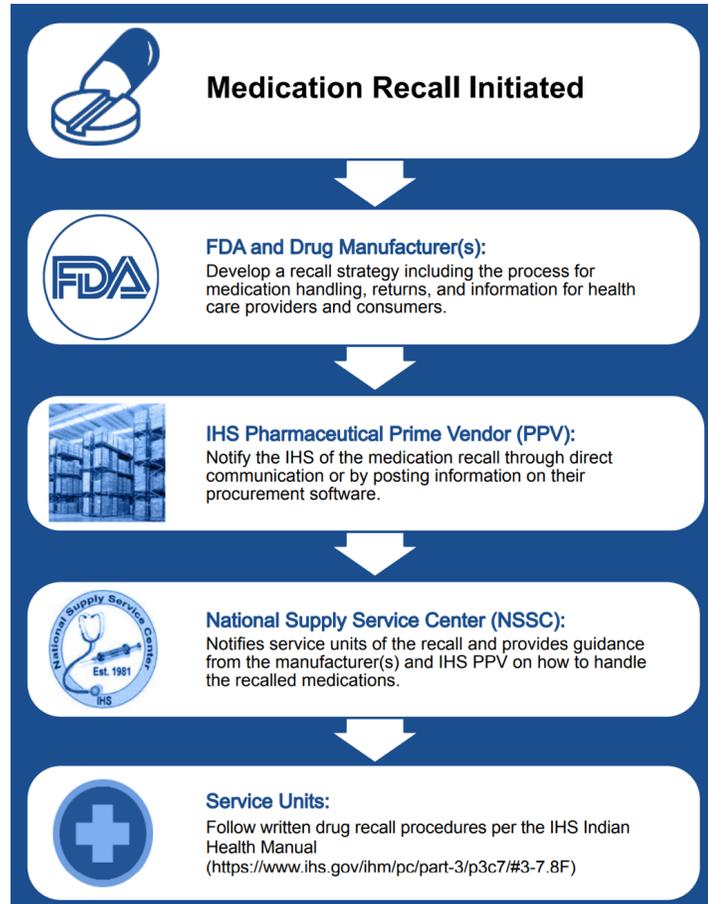
LISTSERV Email Groups



- **NPTC**
- Pharmacy
- Public Health Nursing
- Diabetes Coordinators
- NCCMO
- Advanced Practice Nursing
- Midwives
- CCC
- IHS Nursing
- IHS Clinical Directors

https://www.ihs.gov/listserv/topics/signup/?list_id=183

Drug Recalls



Indian Health Service

URGENT: Metformin ER Recall

DATE
FACILITY NAME
ADDRESS
CITY, STATE ZIP

Dear **PATIENT**,

This letter is to inform you that there is a medication recall for metformin ER (also called Glucophage®). Metformin is a tablet that is normally used to manage diabetes. The Food and Drug Administration (FDA) found a chemical called NDMA in some brands of metformin ER tablets. Based on our information, we believe that you may have received a prescription for metformin ER that could contain small amounts of NDMA.

What is NDMA? NDMA (N-nitrosodimethylamine) is a chemical that is classified as a probable cancer-causing agent based on laboratory test results when ingested in large amounts.

Is the NDMA in the metformin ER dangerous? The NDMA in metformin ER products does not pose any immediate health risks. NDMA can be found in water and foods. The FDA has determined that the levels of NDMA in metformin ER are similar to the levels you would expect to find in common foods like grilled and smoked meats.

What can you do?

Do not stop taking your metformin ER until you talk to a health care provider.

You should continue taking metformin ER. It could be dangerous to stop taking metformin ER without first talking to your health care provider. You can return the contaminated metformin ER and have it exchanged for another brand (if available) or discuss treatment options with their health care provider.

If you have any questions, please call our pharmacy staff at ###-####

Thank you,
FACILITY

Some General Principals to Reduce the Risk of ADEs



Remove Medications

- Remove medications when not needed
 - Identify medications causing adverse drug events and consider stopping or alternatives.
 - Identify medications used to prevent or treat side effects.
 - Reassess the need for chronic medications.
- Stop one med at a time

Anticholinergic Medications

- Risk of delirium, cognitive impairment, falls, constipation, urinary retention, dry mouth
 - Avoid first generation antihistamines (diphenhydramine)
 - Use loratadine or non-pharmacologic therapy (sleep hygiene)
 - Avoid tricyclics or paroxetine
 - Other SSRI or SNRI
 - Limit overactive bladder (oxybutynin)
 - Emphasize non-drug (caffeine, alcohol, fluids before bed)

Medications and Hypoglycemia

Risk factors for drug induced hypoglycemia

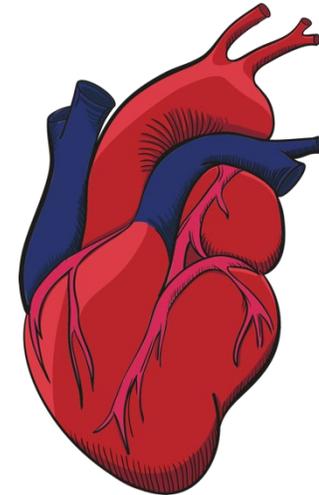
- Advanced age
- More than one glucose lowering medication
- Interactions
- Tight control
- Excessive alcohol intake
- Reduced carbohydrate intake
- Exercise
- Hepatic dysfunction
- Renal dysfunction
- History of hypoglycemia
- Recent hospitalization

- ACE Inhibitors
- Fluoroquinolones
- Quinine/quinidine
- Tyrosine kinase inhibitors



Sulfonylureas

- Increased risk of hypoglycemia
 - 1st generation > glyburide (especially in the elderly or renal impairment) > glipizide > glicazide
- Secondary failure (5+ years)
- Cardiovascular neutral
 - TOSCA.IT
 - CAROLINA



Vaccaro O, Masulli M, Nicolucci A, et al. Effects on the incidence of cardiovascular events of the addition of pioglitazone versus sulfonylureas in patients with type 2 diabetes inadequately controlled with metformin (TOSCA.IT): a randomised, multicentre trial. *Lancet Diabetes Endocrinol.* 2017;5(11): 887–97.

Rosenstock J, Kahn SE, Johansen OE, et al. Effect of linagliptin vs glimepiride on major adverse cardiovascular outcomes in patients with type 2 diabetes: the CAROLINA randomized clinical trial. *JAMA.* 2019;322(12):1155–66.

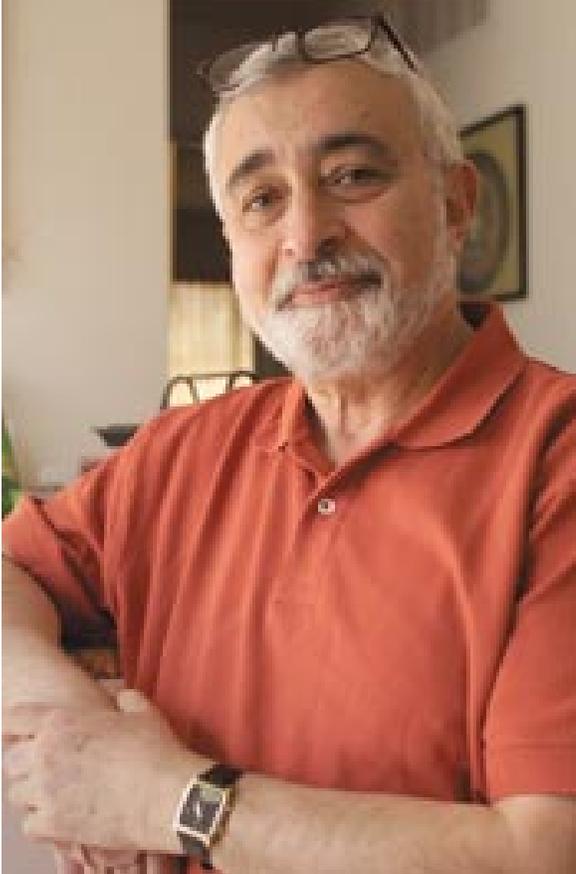
Leiter LA, Shestakova MV, Trubitsyna NP, Piletic M, Satman I. Implementing an optimized glucose-lowering strategy with a novel once daily modified release gliclazide formulation. *Diabetes Res Clin Pract.* 2016;112:50–6.



Conclusion

1. Report adverse drug events to MedWatch
 - Put **IHS** in the **Reporter Section** (section G)
2. Report adverse vaccine events to VAERS
 - Put **IHS** in field #26
3. Sign up for the NPTC listserv

It Took More Than 430 Reports



Dr. John L. Gueriguian, records show, voiced concern to Warner-Lambert as early as January 1994 about Rezulin's "potential toxicities."

Photo: Chuck Kennedy, for the Times

You can make a difference.
You can improve medication safety.
You are the pharmacovigilance team.



Thank you!