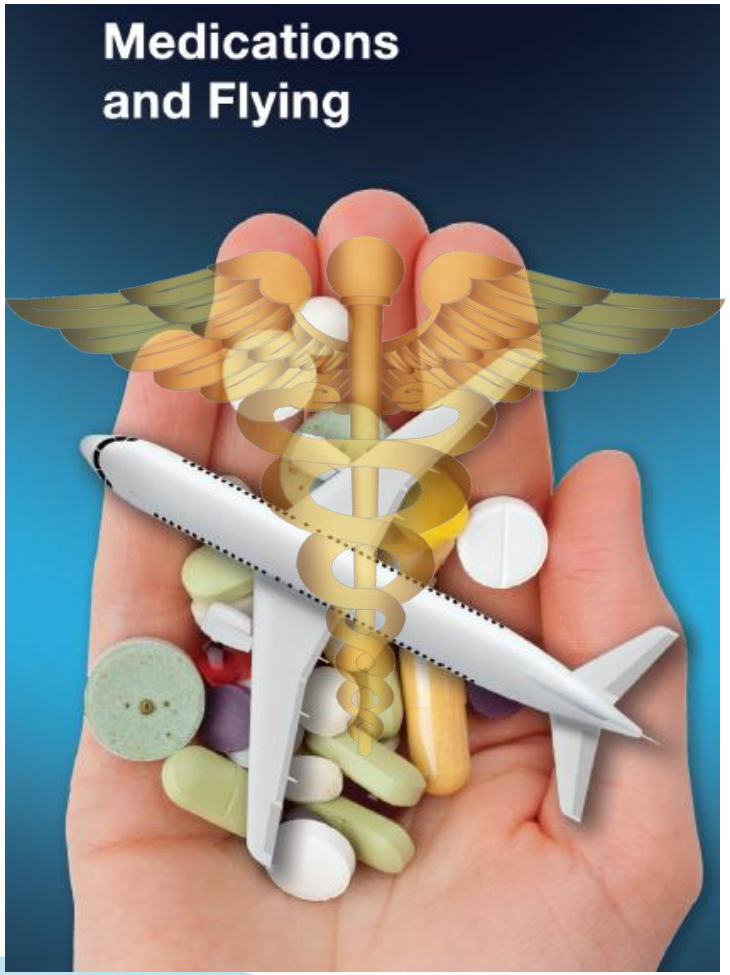
The National FAA Safety Team Presents

Federal Aviation Administration

Topic of the Month—October

Pilots and Medications



Presented to: WAFC and Friends

By: Stephen Bateman, CFI

Date: October 11th, 2021

Produced by AFS-850
The FAA Safety Team (FAASTeam)

Welcome

- **Steve Bateman, CFI, AOPA Director of Flying Clubs**
  - Treasurer, maintenance and safety officer – Westminster Aerobats Flying Club
  - FAASTeam lead representative, Baltimore FSDO
- **Our monthly in-and-out safety meeting using the FAASTeam Topic of the Month**
- **Sponsor Acknowledgment – WAFC, AOPA, FAASTeam, Baltimore FSDO**
- **WINGS Credit: Yes…but give me a day or two…**
- **Probably no time for questions, but send email: steve.bateman@aopa.org**

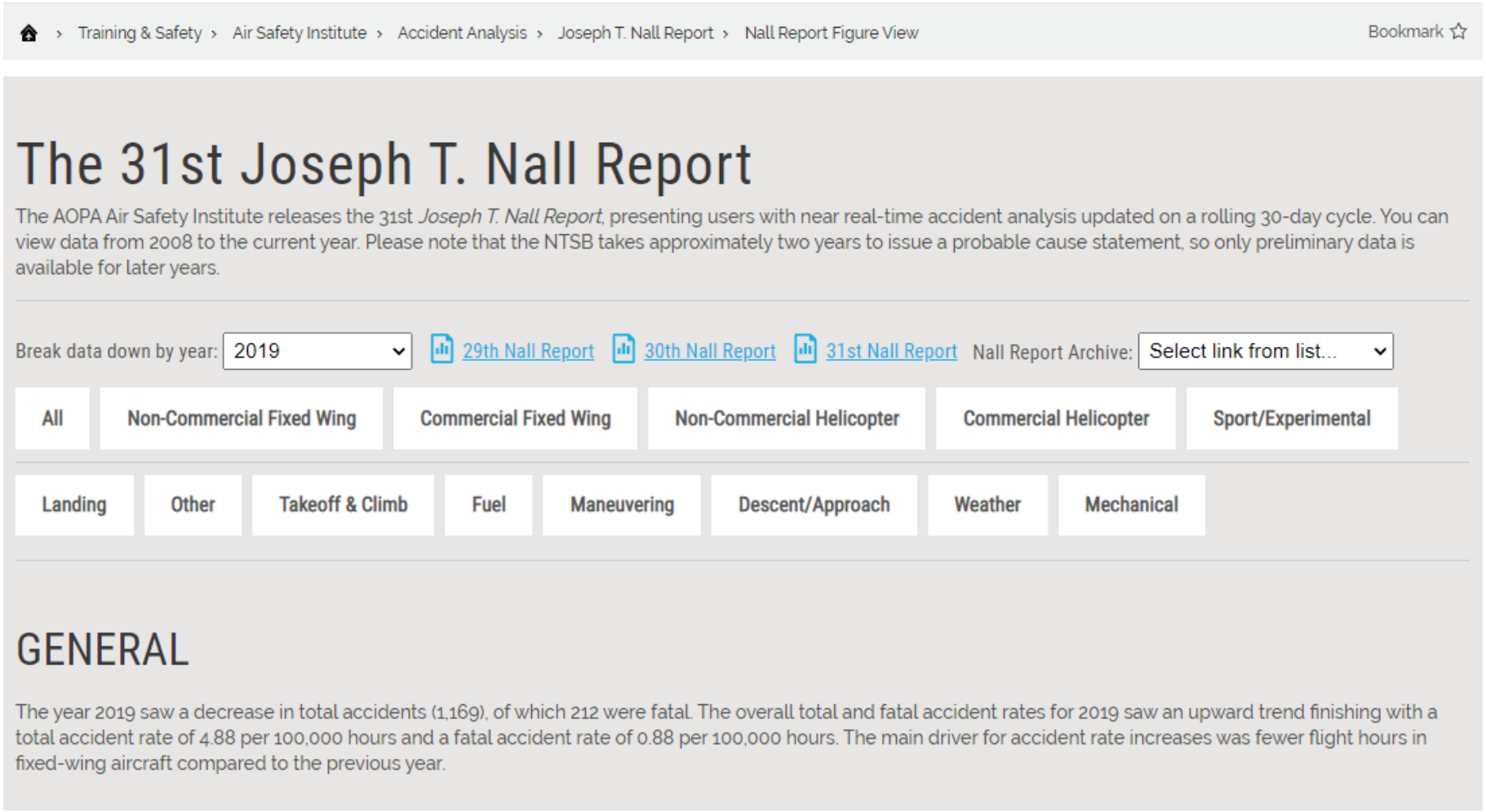
Important!

- Wilmington Delaware TFRs
- Extended P-40 TFRs
- Will be popping up like daisies…
- Check NOTAMs
- Subscribe to NOTAM notifications
- Call flight service when in flight

VIP TFR OVER WILIMINGTON, DE BEGINNING TODAY SATURDAY, MARCH 6, 2021

VIP TFR OVER HAGERSTOWN/THURMONT, MD BEGINNING FRIDAY, APRIL 2, 2021
(((CHANGE IN DEPARTURE TIME)))

New Nall Report Is Out!



Training & Safety › Air Safety Institute › Accident Analysis › Joseph T. Nall Report › Nall Report Figure View

Bookmark

The 31st Joseph T. Nall Report

The AOPA Air Safety Institute releases the 31st *Joseph T. Nall Report*, presenting users with near real-time accident analysis updated on a rolling 30-day cycle. You can view data from 2008 to the current year. Please note that the NTSB takes approximately two years to issue a probable cause statement, so only preliminary data is available for later years.

Break data down by year: 2019 | 29th Nall Report | 30th Nall Report | 31st Nall Report | Nall Report Archive: Select link from list...

All | Non-Commercial Fixed Wing | Commercial Fixed Wing | Non-Commercial Helicopter | Commercial Helicopter | Sport/Experimental

Landing | Other | Takeoff & Climb | Fuel | Maneuvering | Descent/Approach | Weather | Mechanical

GENERAL

The year 2019 saw a decrease in total accidents (1,169), of which 212 were fatal. The overall total and fatal accident rates for 2019 saw an upward trend finishing with a total accident rate of 4.88 per 100,000 hours and a fatal accident rate of 0.88 per 100,000 hours. The main driver for accident rate increases was fewer flight hours in fixed-wing aircraft compared to the previous year.

Oh…

Figure 1.2: General Aviation Accident Trends 2010-2019

2019 Non-commercial fixed-wing

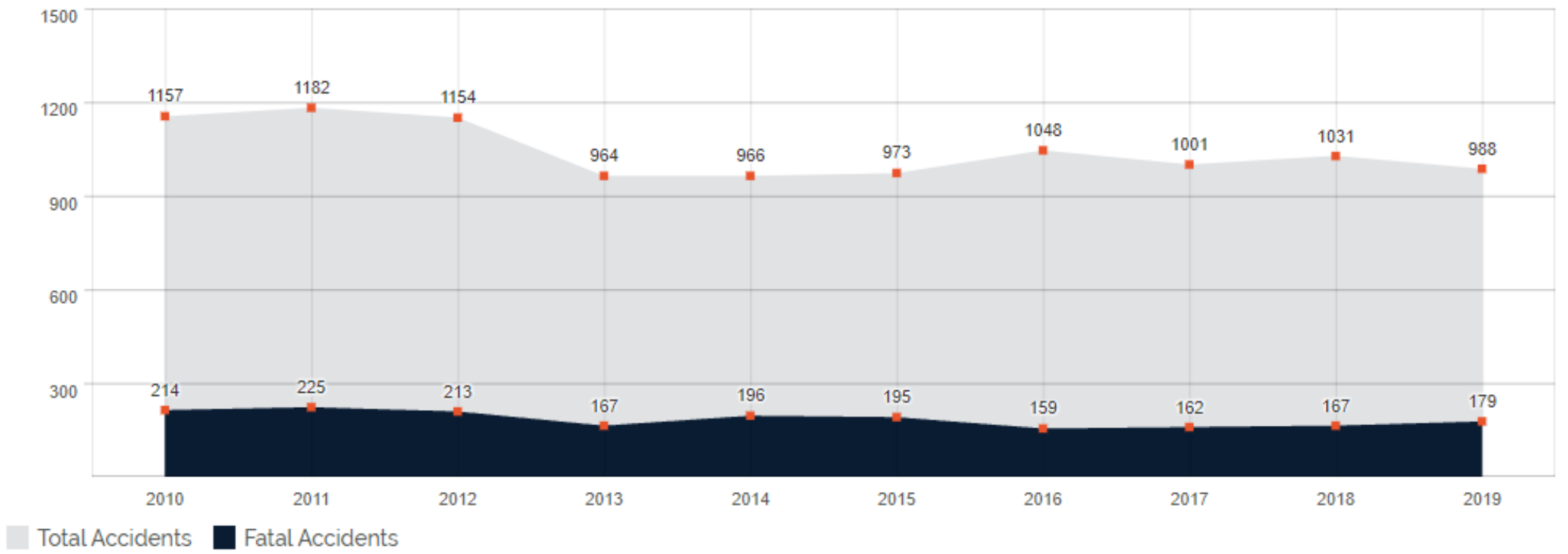


Figure 1.9: Pilot-related Accident trend

2019 Non-commercial fixed-wing

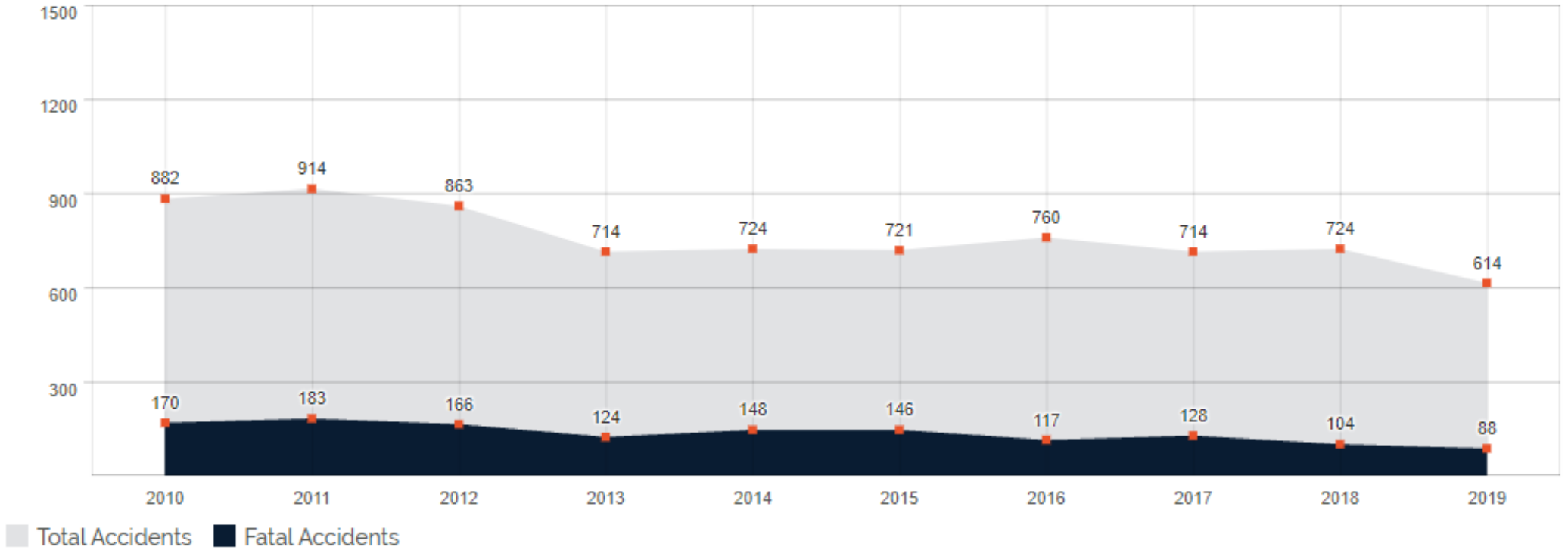
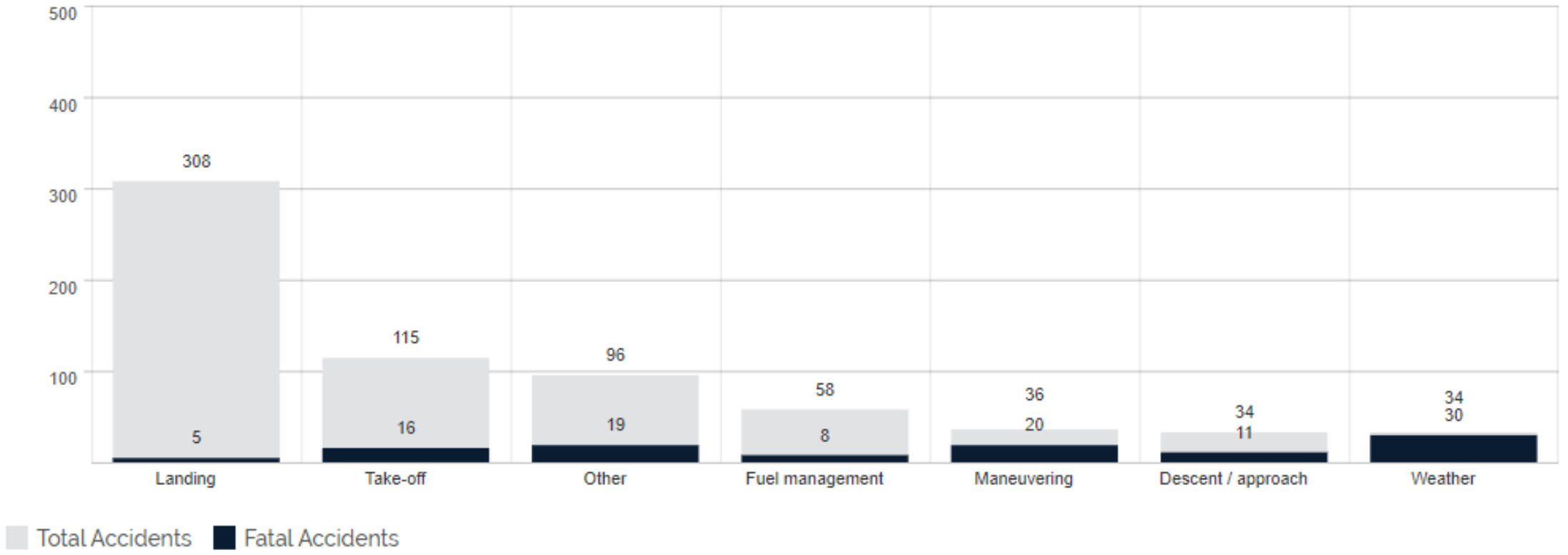


Figure 1.11: Major types of accidents

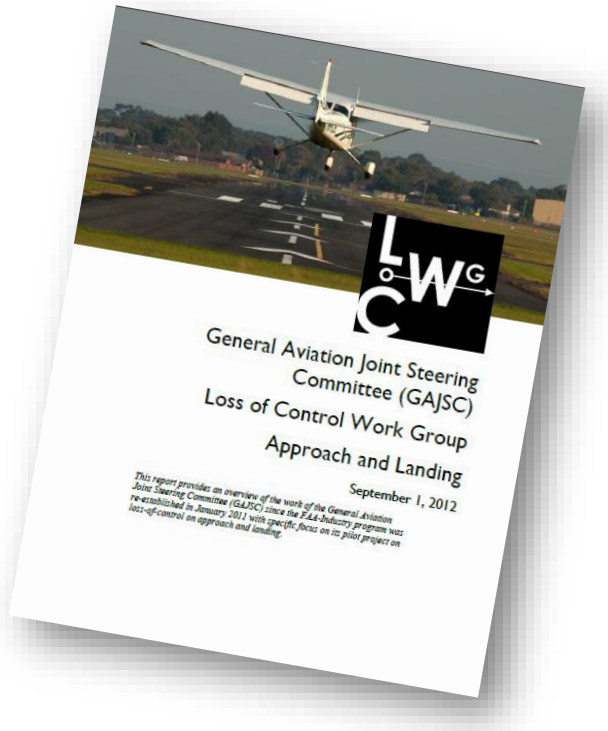
2019 Non-commercial fixed-wing



Overview

- **General Aviation Joint Steering Committee (GAJSC) & FAA Accident Study Findings**
- **Flying and Medications**
- **Drug Interactions**
  - Drug – Drug
    - Including OTC, prescription, illegal, booze…
  - Drug – Food. Example: Grapefruit juice:
    - "By blocking enzymes that help metabolize some drugs, grapefruit juice can *increase* the amount of the drug in the body"
    - "By blocking transporters that help us absorb some drugs, grapefruit juice can *decrease* the amount of the drug in the body"

https://www.fda.gov/consumers/consumer-updates/grapefruit-juice-and-some-drugs-dont-mix



FAA Findings

- **In a 2011 FAA study involving pilot fatalities….**
  - 570 out of 1,353 pilots tested positive for medications/drugs
  - 511 of the 570 (90%), were flying under CFR Part 91

42%

- **Extent of Impairment – Undetermined**
  - But *“cause for concern”…*

What's the Problem

- **Not easy to determine extent of impairment**
  - Different medication effects for different people
  - Post-mortem redistribution and sample type
- **Don't know about pilot's condition**
  - Pre-existing medical condition requiring medication
- **AME consulted?**
  - Would *YOU* consult your AME…?
  - Family doctor…?
- **Drug interactions…later…**

What's the Problem?

- **65% of MD visits result in a prescription**
  - We live in an over-medicated society
- **40% of the US population has 4 or more prescriptions**
- **Possibly combined with OTC medications**
- **Possibly combined with illegal drugs and/or booze**
- **Adverse reactions increase *dramatically* with 4 or more medication cocktails**
- **What's a pilot to do?**

Consult your AME

- **List all conditions**
- **List *all* medications**
  - Prescription
  - OTC
  - Dietary supplements

- **Scary…right?**
  - You might not be able to fly…
  - But you'll live to sneeze another day!

Do not issue = AME Responsibility
Do not fly = Our Responsibility

https://tinyurl.com/l43gpcu

Federal Drug Labeling Standards

Provide information for:

Patients

Healthcare professionals

Both

It Depends

Do not issue medications (…and conditions)

- Angina meds – dilation of arteries
- Anticholinergics - block involuntary muscle movements
- Cancer treatments – chemotherapy, radiation therapy
- Controlled substances – altered mental state
- Some diabetic meds – blood sugar, dizziness
- Dopamine agonists – affect mood and movement
- Centrally acting hypertensives – lower blood pressure
- Selected psychiatric or psychotropic meds – altered mental state
- Malaria and seizure meds
- High-dose steroids
- Smoking and weight loss meds

Do not fly medications

- Allergy meds
- Muscle relaxants
- OTC dietary supplements
- Pain meds
- Sleep aids
- Pre-medication or pre-procedure drugs
- Any prescribed or OTC drug that may cause drowsiness or cautions operators of vehicles or machinery

Sleep Aids & Cough Medications

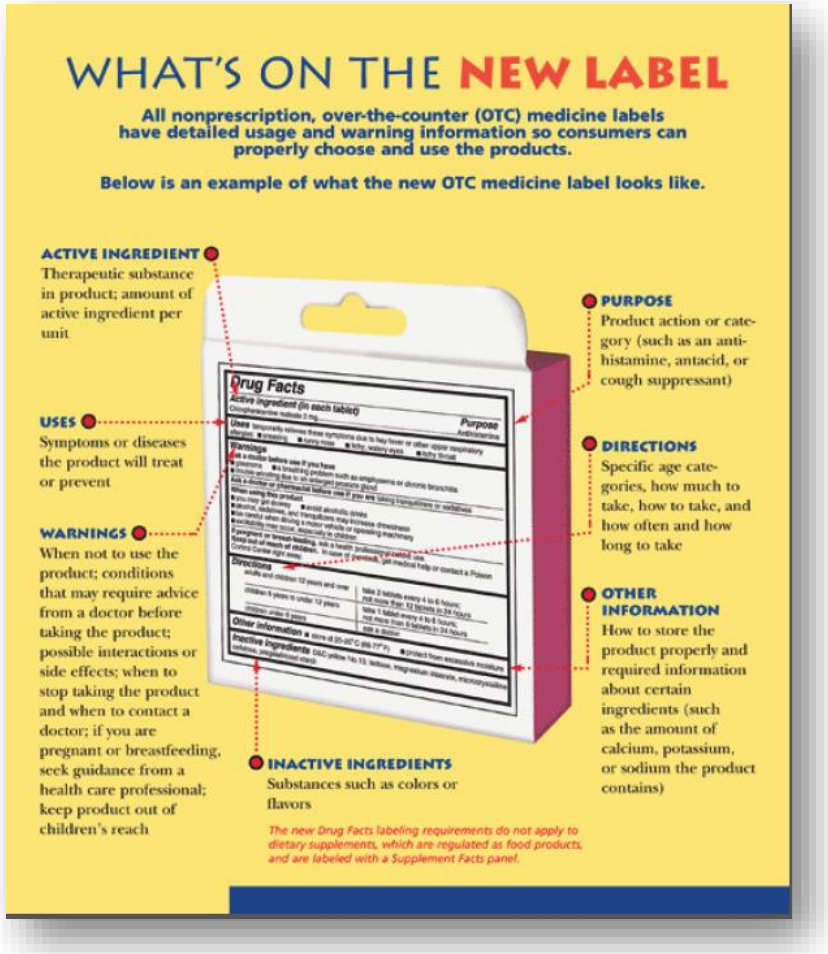
- **Both likely to contain antihistamines which may cause drowsiness or sedation**
  - "Hang Over" effect
  - Side effects may last several days
- **Short term use only**

Read The Instructions!

- **OTC Medication Labeling**
- **Labeling Standards**
  - Directed to ***medication users***
  - In non-technical language

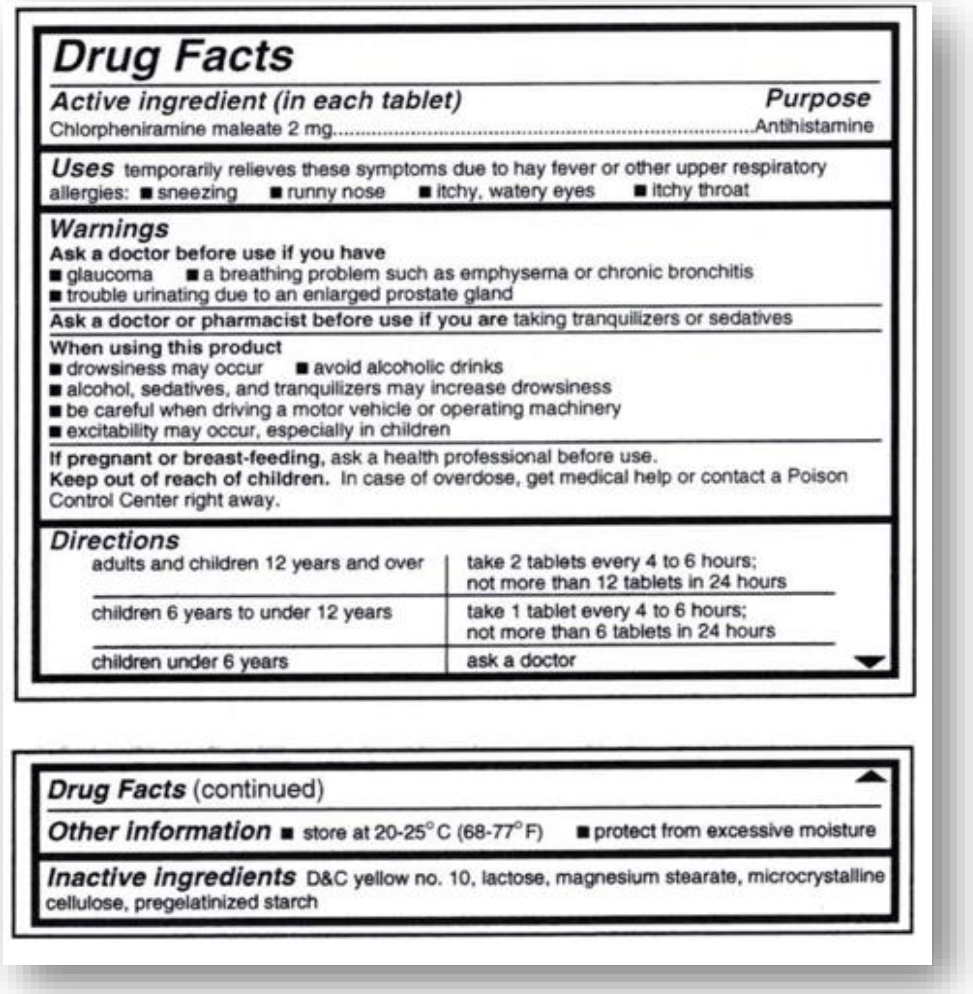
- **Read before you take it and fly!**

- **Don’t let the post-mortem determine that you shouldn’t have been flying**



OTC Medication Labeling

- **Read the label**
  - Active Ingredient(s)
  - Purpose
  - Uses
  - Warnings
  - Directions



Drug Facts

Active ingredient (in each tablet) — **Purpose**
Chlorpheniramine maleate 2 mg ..... Antihistamine

Uses temporarily relieves these symptoms due to hay fever or other upper respiratory allergies: ■ sneezing ■ runny nose ■ itchy, watery eyes ■ itchy throat

Warnings
Ask a doctor before use if you have
■ glaucoma ■ a breathing problem such as emphysema or chronic bronchitis
■ trouble urinating due to an enlarged prostate gland

Ask a doctor or pharmacist before use if you are taking tranquilizers or sedatives

When using this product
■ drowsiness may occur ■ avoid alcoholic drinks
■ alcohol, sedatives, and tranquilizers may increase drowsiness
■ be careful when driving a motor vehicle or operating machinery
■ excitability may occur, especially in children

If pregnant or breast-feeding, ask a health professional before use.
Keep out of reach of children. In case of overdose, get medical help or contact a Poison Control Center right away.

Directions

adults and children 12 years and over	take 2 tablets every 4 to 6 hours; not more than 12 tablets in 24 hours
children 6 years to under 12 years	take 1 tablet every 4 to 6 hours; not more than 6 tablets in 24 hours
children under 6 years	ask a doctor

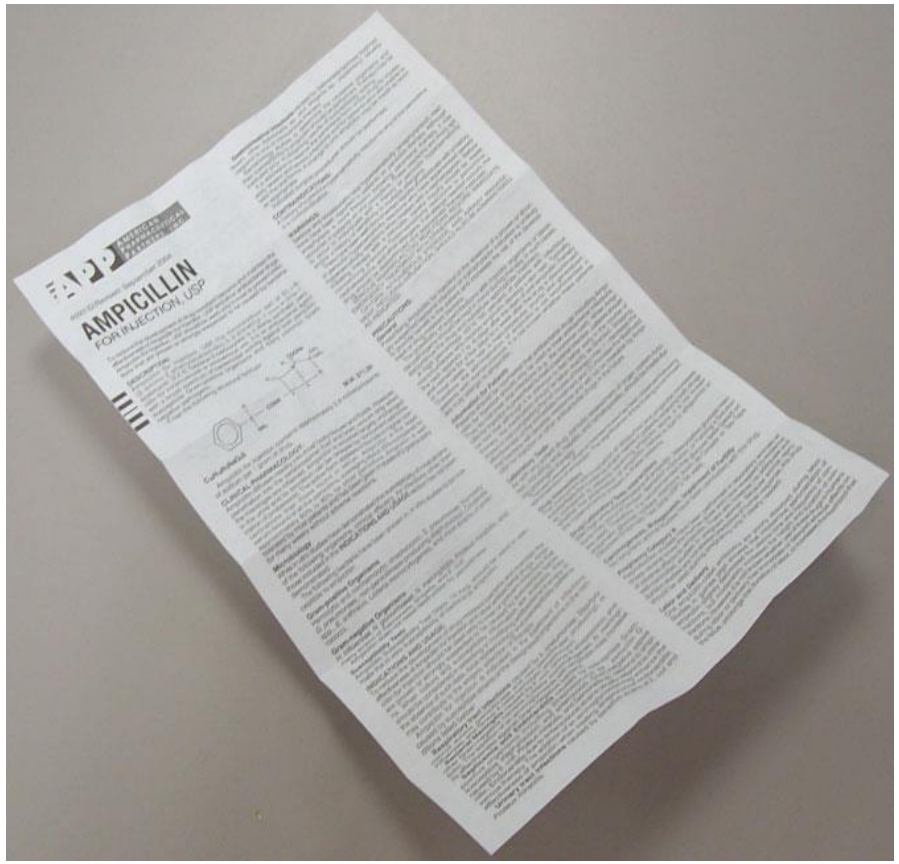
Drug Facts (continued)

Other information ■ store at 20-25°C (68-77°F) ■ protect from excessive moisture

Inactive ingredients D&C yellow no. 10, lactose, magnesium stearate, microcrystalline cellulose, pregelatinized starch

Prescription Drug Labeling

- **Known by several names including prescribing information or package insert**
- **Intended for *healthcare providers*, but available to anyone.**
  - May be several pages long in very small print
  - Very technical language…



Prescription Medications

- **May recommend not operating a motor vehicle**
  - Includes cars, airplanes, boats, etc.
- **May be prescribed individually**
  - Perhaps by different healthcare providers
  - Interactions may not be addressed or known
- **Prescription drug labeling**
  - Directed to healthcare provider

Drug Interactions with…

- What else we are popping
- What we eat and drink

Consult your AME!

https://www.fda.gov/media/76562/download

Interactions

- **Drug-drug** interactions occur when two or more drugs react with each other.
- **Drug-food/beverage** interactions result from drugs reacting with foods or beverages. For example, mixing alcohol with some drugs may cause you to feel tired or slow your reactions
- **Drug-condition** interactions may occur when an existing medical condition makes certain drugs potentially harmful

Drug-drug interactions

- **Antihistamines with hypertension drugs**
- **Drugs, food, or beverages that contain caffeine**
- **Pain relievers**
  - Acetaminophen (Tylenol, Paracetamol) , aspirin, ibuprofen, etc.
  - Aleve, Advil, Motrin…
- **Antacids**
  - Tum, Tum, Tum, Tum-Tum
  - Alka-Seltzer

Combining Medications

- **Prescriptions with Prescriptions**
  - Does the prescribing provider know you fly?
  - Does your AME know about <u>all</u> the medications you take and conditions you have?
- **Prescriptions with OTC**
  - Consult your AME and/or Regional Flight Surgeon
  - and/or consult your Pharmacist

Drug-food interactions

- **Empty or full stomach**
- **Alcohol impacts**
- **Certain foods**
  - Grapefruit and grapefruit juice
    - Can interact with some cholesterol and hypertension drugs
- **Pain relievers**
  - Acetaminophen (Tylenol, Paracetamol) , aspirin, ibuprofen, etc.
- **Antacids**

How long must I wait?

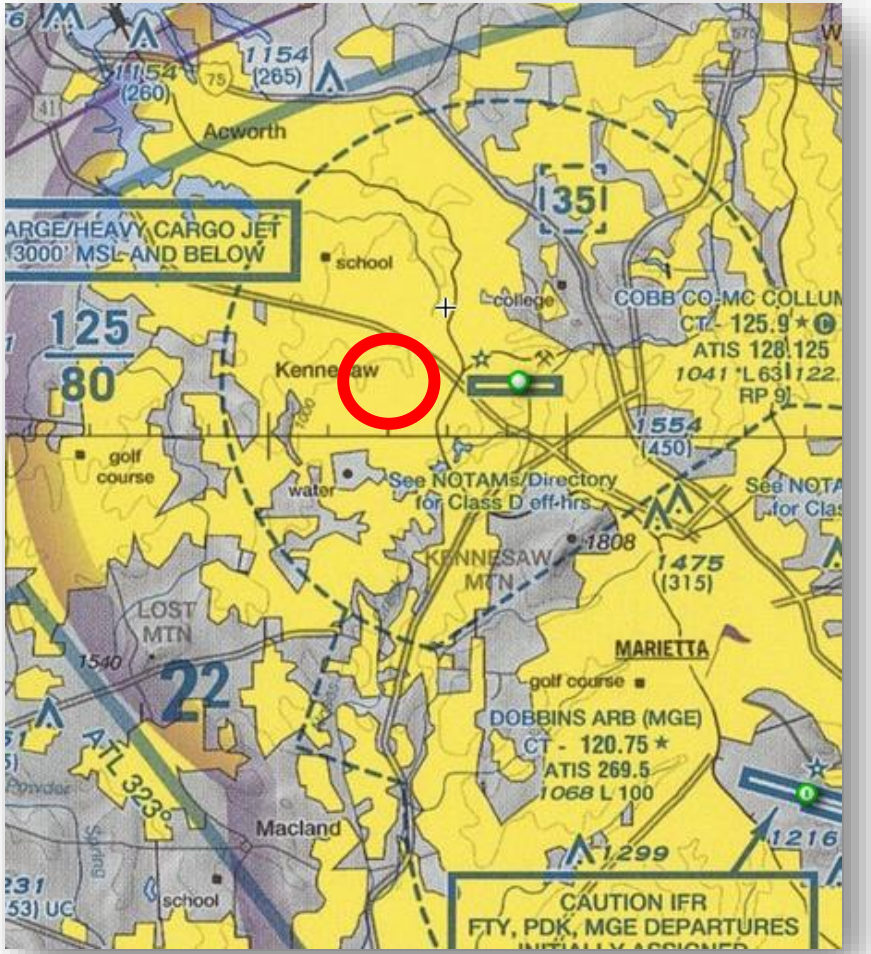
- **FAA recommends waiting five times the dosage interval.**
  - Particularly true for any medication causing drowsiness.
- **Four times per day = 6-hour intervals**
  - 5 x 6 = 30 hours

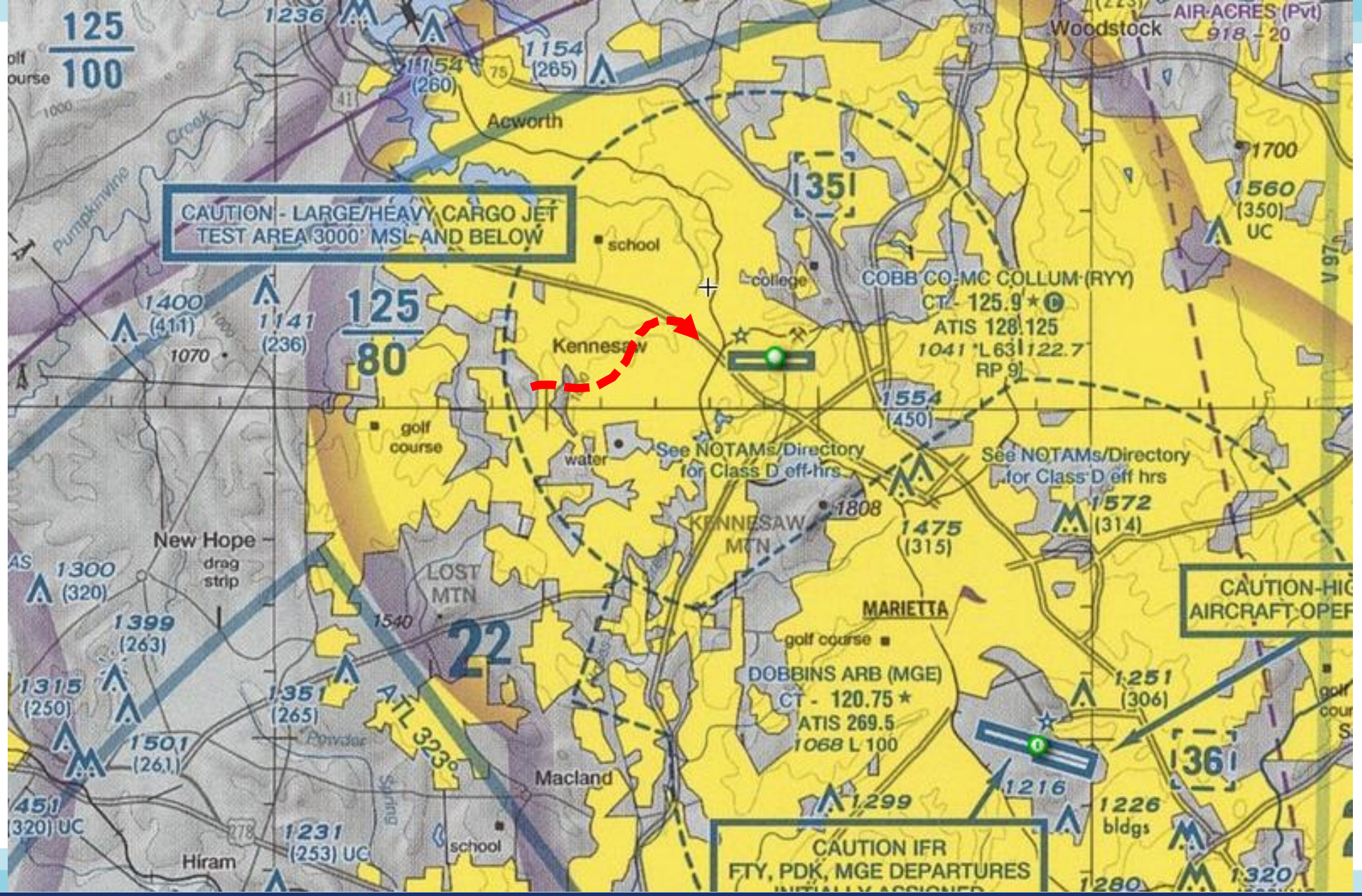
Loss of Control Case Study

- **Pilot**
  - Private Pilot
  - Total Time ……975
  - Time in type ….44
- **Aircraft**
  - TBM 700
- **NTSB Number**
  - MIA08FA141

LOC Case Study

- **enVironment**
  - Cobb County Field, GA (KRYY)
  - Runway 9/27 1078 MSL 6311x100’
  - Final Approach to Runway 9
  - ATC instructed S-turns for spacing
  - Weather
    - 5,500 BKN, 10 SM
    - Wind 120@6




CAUTION - LARGE/HEAVY CARGO JET
TEST AREA 3000' MSL AND BELOW
COBB CO-MC COLLUM (RYY)
CT - 125.9 ★
ATIS 128.125
1041 L 63 122.7
RP 9
See NOTAMs/Directory
for Class D off-hrs
See NOTAMs/Directory
for Class D off hrs
KENNESAW MTN
MARIETTA
golf course
DOBBINS ARB (MGE)
CT - 120.75 ★
ATIS 269.5
1068 L 100
CAUTION IFR
FTY, PDK, MGE DEPARTURES
Woodstock
AIR-ACRES (Pvt)
Acworth
Kennesaw
New Hope
drag strip
LOST MTN
Macland
Hiram
school
college
golf course
water
bldgs
125
100
125
80
35
22
36

LOC Case Study

- **Toxicology Findings**
  - Alfuzosin
    - Prostate
  - Bisoprolol*
    - Blood pressure
  - Ezetimibe/Simvastatin*
    - Cholesterol
  - Quinine
    - Unapproved use for Arthritis, Night Leg Cramps
  - Tramadol
    - For moderate to severe pain

***Known to AME and FAA**

•The National Transportation Safety Board determined the probable cause(s) of this accident as follows: *The pilot's failure to maintain airspeed during final approach resulting in an aerodynamic stall.*

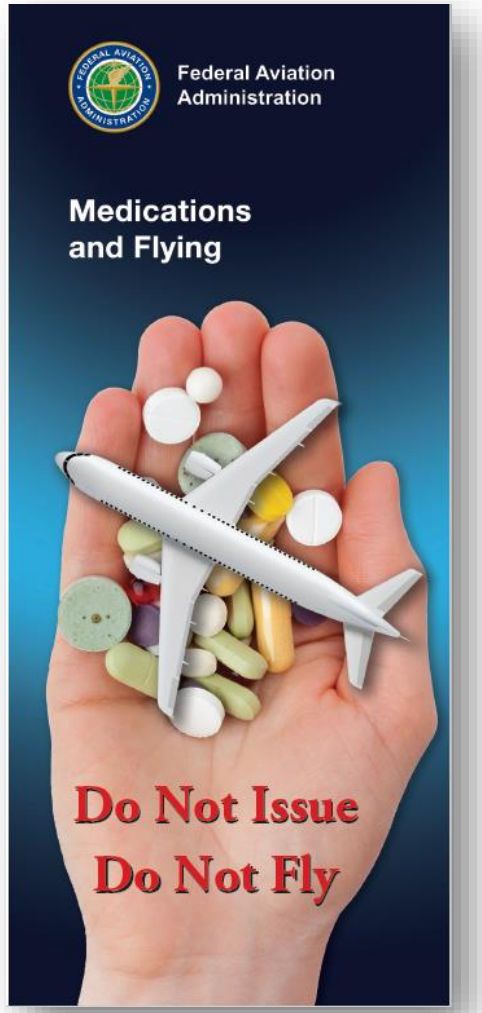
•As an additional comment they also stated: *"It is unclear what role, if any, the medication or the condition for which it might have been used played in the accident."*

Tips

- Consult your AME and read the labels before flying while using prescription and/or OTC Drugs
- Make sure your AME knows about all the drugs you take and the medical conditions requiring their use
- Let the prescribing doctor know that you are a pilot.
- Ask about adverse effects associated with drug combinations and with foods and dietary supplements
- In between doctor visits you are self assessing your condition before each flight
- Ground yourself when you're not fit to fly

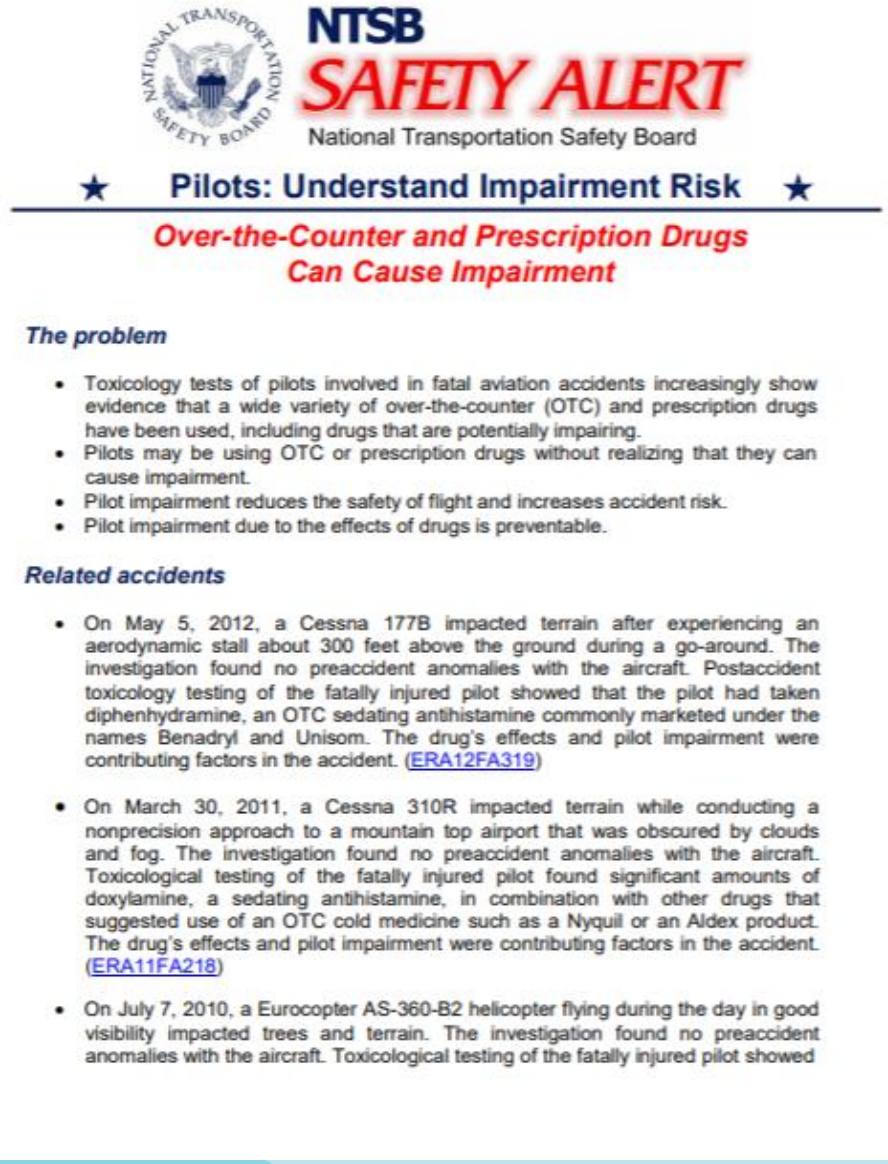
For more information

- https://tinyurl.com/y94lokh8



For more information

- **NTSB Safety Alert SA_037**



NTSB
SAFETY ALERT
National Transportation Safety Board

★ Pilots: Understand Impairment Risk ★

Over-the-Counter and Prescription Drugs Can Cause Impairment

The problem

- Toxicology tests of pilots involved in fatal aviation accidents increasingly show evidence that a wide variety of over-the-counter (OTC) and prescription drugs have been used, including drugs that are potentially impairing.
- Pilots may be using OTC or prescription drugs without realizing that they can cause impairment.
- Pilot impairment reduces the safety of flight and increases accident risk.
- Pilot impairment due to the effects of drugs is preventable.

Related accidents

- On May 5, 2012, a Cessna 177B impacted terrain after experiencing an aerodynamic stall about 300 feet above the ground during a go-around. The investigation found no preaccident anomalies with the aircraft. Postaccident toxicology testing of the fatally injured pilot showed that the pilot had taken diphenhydramine, an OTC sedating antihistamine commonly marketed under the names Benadryl and Unisom. The drug's effects and pilot impairment were contributing factors in the accident. (ERA12FA319)

- On March 30, 2011, a Cessna 310R impacted terrain while conducting a nonprecision approach to a mountain top airport that was obscured by clouds and fog. The investigation found no preaccident anomalies with the aircraft. Toxicological testing of the fatally injured pilot found significant amounts of doxylamine, a sedating antihistamine, in combination with other drugs that suggested use of an OTC cold medicine such as a Nyquil or an Aldex product. The drug's effects and pilot impairment were contributing factors in the accident. (ERA11FA218)

- On July 7, 2010, a Eurocopter AS-360-B2 helicopter flying during the day in good visibility impacted trees and terrain. The investigation found no preaccident anomalies with the aircraft. Toxicological testing of the fatally injured pilot showed

Your Choice, Your Consequences

- **At the end of the day, you, the PIC, must make the No-Go/Go decision**

- **You will live, or not, with the consequences**

Proficiency and Peace of Mind

- **Practice may make you perfect and might save your life!**
- **Fly often with a CFI**
- **Training is credited**
- **WINGS participation can save you money**
  - Insurance discounts
  - Less bent metal!

Thank you for attending!

You are vital members of our GA safety community!

Next Months ToM:

The National FAA Safety Team Presents

Topic of the Month – November

CFIT & Overreliance on Automation

Presented to: WAFC and Friends

By: Stephen Bateman, CFI

Date: November 8th, 2021

Produced by AFS-850
The National FAA Safety Team (FAASTeam)

Federal Aviation Administration