



## Fall 2019 Newsletter

Gregory J. Hanker, M.D., AME

*Welcome to this third installment of our new feature on SCAUWG.ORG presented by Aviation Medical Examiner - Gregory J. Hanker, M.D. – Dr. Hanker is an orthopedic surgeon practicing at the Southern California Orthopedic Institute in Van Nuys.*

*Dr. Hanker's primary goal as an Aviation Medical Examiner (AME) is to assist the local aviation community in obtaining their medical certification, especially complex cases where FAA special authorization may be necessary.*

To try and make sense of the FAA's *regulatory approach to medical certification* using the MedXpress system – which is complex, confusing and problematic – due to its requirement for the plethora of historical medical and personal information that I referred to in my previous Spring and Summer AMEPilot Newsletters, I have provided an approach to this medical certification process which would enable the airman applicant to be well prepared to complete their flight physical with their AME without worry of a delay (DEFER), in the issuance of their medical certificate.

In a recent newsletter from the AOPA Dr. Jonathan Sackier nicely pointed out the FAA's "*regulatory medicine*" approach to a pilot's medical certification: "... the regulatory process of medically qualifying pilots is complicated by virtue of the very bureaucracy of the system and the FAA's mandate for aviation safety." "The FAA's mandate is to anticipate risk and mitigate the likelihood of harm coming to airmen, their passengers and earth bound mortals under their flight paths."

In my Spring Newsletter I discussed the use of **DISPOSITION TABLES** published in the Aviation Medical Examiner guide (Guide) on the FAA's website (faa.gov). DISPOSITION TABLES basically list risk assessment for each specific medical condition/disease, and the table provides guidance on how to proceed with the

evaluation of that specific medical condition/disease. If the airman applicant for their flight physical has a medical issue/condition/disease, the disposition table can provide the airman guidance on how to proceed with their pre-physical preparation in order to understand and appreciate the course of action that will be taken by the AME in evaluating the airman's "aeromedical risk" for safe flying in regard to the specific issue/condition/disease that is present. This will assist the airman applicant to properly prepare so that their medical certificate will be ISSUED rather than DEFERRED.

I also discussed the **CACI system** available to the AME.

**CACI CONDITIONS**  
(Updated 09/27/2017)

Conditions AMEs Can Issue (CACI) is a series of conditions which allow AMEs to regular issue if the applicant meets the parameters of the CACI Condition Worksheet. The worksheets provide detailed instructions to the examiner and outline condition-specific requirements for the applicant.

1. Review the disposition table BEFORE the CACI worksheet to verify a CACI is required.
2. **If all the CACI criteria are met and the applicant is otherwise qualified**, the AME may issue on the first exam or the first time the condition is reported to the AME without contacting AMCD/RFS. Document the appropriate notes in Block 60 and keep the supporting documents in your files; they do not need to be submitted to the FAA at this time.
3. If the requirements are not met, the AME must defer the exam and send the supporting documents to the FAA.

**CACIs with Certification Worksheets:**

<a href="#">ARTHRITIS</a>	<a href="#">HYPERTENSION</a>
<a href="#">ASTHMA</a>	<a href="#">HYPOTHYROIDISM</a>
<a href="#">BLADDER CANCER</a>	<a href="#">RETAINED KIDNEY STONE(S)</a>
<a href="#">BREAST CANCER</a>	<a href="#">MIGRAINE AND CHRONIC HEADACHE</a>
<a href="#">CHRONIC KIDNEY DISEASE</a>	<a href="#">MITRAL VALVE REPAIR</a>
<a href="#">COLITIS</a>	<a href="#">PRE-DIABETES</a>
<a href="#">COLON CANCER</a>	<a href="#">PROSTATE CANCER</a>
<a href="#">GLAUCOMA</a>	<a href="#">RENAL CANCER</a>
<a href="#">HEPATITIS C – CHRONIC</a>	<a href="#">TESTICULAR CANCER</a>

**CACI** –Conditions the **AME Can Issue** – refers to certain specific medical conditions/diseases that would normally require a DEFER or DENIAL by the AME, but instead by meeting specific criteria as listed in the **CACI worksheet**, medical certification can ISSUE thereby avoiding lengthy delays by the FAA's review process. In the past an AME had to DEFER every time they had a pilot with a new medical condition that did not meet the criteria for an unrestricted medical

certificate. *Recall the 15 medical conditions that automatically disqualify a pilot from medical certification* (pages 9 & 10 of the Guide). Even low risk medical conditions required the AME to either DEFER or to contact the FAA/regional flight surgeon for verbal authorization. This caused significant delays in the certification process and burdened both the AME and the FAA. The CACI program was therefore implemented to increase the efficiency of medical certification by allowing AME's to ISSUE low risk medical conditions that met specific parameters developed by the FAA.

In my Summer Newsletter I discussed **DISEASE PROTOCOLS** published in the Guide (currently on pages 229 & 230). A specific DISEASE PROTOCOL clearly outlines the minimum expected medical information needed for a condition/disease. 27 disease protocols are listed: from allergies to valve replacement. By referencing the relevant disease protocol an airman applicant can self-navigate through the FAA's complex and overwhelming medical certification process thereby allowing the airman applicant to adequately prepare well ahead of time for their flight physical.

**Decision considerations** as to ISSUE, DEFER or DENY an airman's medical certification are based on the guidance provided by DISPOSITION TABLES, DISEASE PROTOCOLS, and CACI WORKSHEETS. These **certification aids** help both the AME and the airman to offer the right information to the FAA as quickly as possible in order to make an expeditious medical decision. Utilizing the certification aids will significantly decrease correspondence that an airman would be required to provide to the FAA for their medical certification.

Let's look at an example of a very common medical condition/disease present in a large segment of the aviation and general population – **HYPERTENSION**. **Hypertension or elevated blood pressure is present in approximately 103 million Americans. 20% don't even know they have it as it can be a silent disease. Hypertension can be present for years without any symptoms. Even without symptoms damage to your heart and blood vessels relentlessly continues placing you at risk for serious health problems especially heart attack and stroke leading to severe disability and possibly death.** (Refer to [mayoclinic.org](http://mayoclinic.org) for a thorough discussion about hypertension.)

For pilots, as part of a routine physical examination with their family physician or during their flight physical, their blood pressure will be measured. The FAA guideline maximum value for a pilot's **blood pressure** is to be at or below **155/95**. This value is quite high by current medical standards (average of 120/80), but it is the value the FAA has chosen to assess hypertension as an aeromedical risk for incapacitation.

In the MedXpress application process the pilot must answer **Item 18.h** in the Medical History - **High or low blood pressure**.

**18.h. High or low blood pressure.** The applicant should provide history and treatment. Issuance of a medical certificate to an applicant with high blood pressure may depend on the current blood pressure levels and whether the applicant is taking anti-hypertensive medication. The Examiner should also determine if the applicant has a history of complications, adverse reactions to therapy, hospitalization, etc. (Details are given in **Item 36** and **Item 55**)

The AME guide requires the applicant to provide a history and any treatment. Issuance of a medical certificate to an applicant with high blood pressure will depend on the current blood pressure levels and whether the applicant is taking antihypertensive medications. The Examiner should determine if the applicant has a history of complications, adverse reactions to therapy, hospitalization, etc. (see page 33 of AME guides). The AME is then referred to Item 36 and Item 55 in the Physical Examination/ Flight Physical.

Another tip off to the AME would be the applicant's response to **Item 17.a**: Do you currently use any medication (prescription or nonprescription)?

**ITEM 17.a. Do You Currently Use Any Medication (Prescription or NONprescription)?**

If the applicant checks yes, give name of medication(s) and indicate if the medication was listed in a previous FAA medical examination.

This includes both prescription and nonprescription medication. (Additional guidelines for the certification of airmen who use medication may be found throughout the Guide).

For example, any airman who is undergoing continuous treatment with anticoagulants, antiviral agents, anxiolytics, barbiturates, chemotherapeutic agents, experimental hypoglycemic, investigational, mood-ameliorating, motion sickness, narcotic, sedating antihistaminic, sedative, steroid drugs, or tranquilizers must be deferred certification *unless* the treatment has previously been cleared by FAA medical authority. In such an instance, the applicant should provide the Examiner with a copy of any FAA correspondence that supports the clearance.

During periods in which the foregoing medications are being used for treatment of acute illnesses, the airman is under obligation to refrain from exercising the privileges of his/her airman medical certificate unless cleared by the FAA.

If the applicant lists an antihypertensive medication this is a clue to the AME that there is a problem with the applicant's blood pressure. Also, **Item 19: Visits to a health professional within the last 3 years**, requires the applicant to list the name, date, address, type of health professional and a brief statement of the reason for the consultation.

**ITEM 19. Visits to Health Professional Within Last 3 Years**

The applicant should list all visits in the last 3 years to a physician, physician assistant, nurse practitioner, psychologist, clinical social worker, or substance abuse specialist for treatment, examination, or medical/mental evaluation. The applicant should list visits for counseling only if related to a personal substance abuse or psychiatric condition. The applicant should give the name, date, address, and type of health professional consulted and briefly state the reason for the consultation. Multiple visits to one health professional for the same condition may be aggregated on one line.

Routine dental, eye, and FAA periodic medical examinations and consultations with an employer-sponsored employee assistance program (EAP) may be excluded unless the consultations were for the applicant's substance abuse or unless the consultations resulted in referral for psychiatric evaluation or treatment.

When an applicant does provide history in Item 19, the Examiner should review the matter with the applicant. The Examiner will record in **Item 60** only that information needed to document the review and provide the basis for a certification decision. If the Examiner finds the information to be of a personal or sensitive nature with no relevancy to flying safety, it should be recorded in **Item 60** as follows:

If the reason is for “blood pressure evaluation/monitoring” then hypertension becomes a concern that the AME must address.

During the flight physical **Item 36. Heart** will be examined (page 71–75 Guide), and this includes blood pressure measurements and a review of medications taken by the airman for treatment of hypertension .

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**ITEM 36. Heart**

CHECK EACH ITEM IN APPROPRIATE COLUMN	Normal	Abnormal
36. Heart (Precordial activity, rhythm, sounds, and murmurs)		

This is where the critical issue of **PHARMACEUTICALS** comes into play. According to FAA policy, medications acceptable for treatment of hypertension include all FDA (Food and Drug Administration) approved diuretics, alpha–adrenergic blocking agents, beta–adrenergic blocking agents, calcium channel blocking agents, angiotensin-converting enzyme agents (ACE inhibitors) and direct vasodilators. Not acceptable to the FAA are centrally acting agents such as reserpine, guanethidine, guanadrel, guanabenz and methyldopa; flecainide when there is evidence of left ventricular dysfunction or recent myocardial infarction; and the use of nitrates for coronary artery disease or to modify hemodynamics. Therefore, the AME must DEFER issuance of a medical certificate to any applicant whose hypertension:

- has not been evaluated
- who uses unacceptable medications
- whose medication status is unclear
- whose hypertension is uncontrollable
- manifests significant adverse effects of medications
- or whose certification has previously been specifically reserved to the FAA.

On page 79 of the AME guide there is the **DISPOSITION TABLE for HYPERTENSION (HTN)** – all classes. Remember that the TABLE for a specific medical condition such as hypertension will provide the guidance for the AME as to how to proceed with the medical certification process: i.e. ISSUE, DEFER or DENY.

Hypertension (HTN) All Classes Updated 10/28/2015		
Disease/Condition	Evaluation Data	Disposition
A. No medication  (If treating physician discontinued medications 30 days ago or longer.)	If airman meets standards:	ISSUE Summarize this history in Block 60.
B. Treated with <u>3 or fewer* acceptable medications</u> .	See CACI – Hypertension Worksheet  For additional information, see <a href="#">Hypertension FAQs</a>	Follow the <a href="#">CACI – Hypertension Worksheet</a> . Annotate Block 60.
C. Any of the following: <ul style="list-style-type: none"> <li>• Treated with <u>4 or more* acceptable medications</u>;</li> <li>• HTN is clinically uncontrolled;</li> <li>• <a href="#">Unacceptable medications</a> are used;</li> <li>• Side effects are present;</li> <li>• Medical status of the airman is unclear; or</li> <li>• Certification has been specifically reserved to the FAA</li> </ul>	Submit the following to the FAA for review: <ul style="list-style-type: none"> <li><input type="checkbox"/> Current status report from treating physician with treatment plan, prognosis and how long the condition has been stable;</li> <li><input type="checkbox"/> Specific mention if there is a secondary cause for HTN or any evidence of a co-morbid condition (ex. diabetes or OSA), or end organ damage (ex. renal insufficiency, kidney disease, eye disease, MI, CVA heart failure, etc); and</li> <li><input type="checkbox"/> List of medications, dates started and stopped, and any side effects.</li> </ul>	DEFER  Submit the information to the FAA for a possible Special Issuance.  Follow up Issuance Will be per the airman's authorization letter
Notes: *Number of medications counts each component. (Example: lisinopril/HCTZ is 2 medications.)		
If this airman is new to you or you are not certain of their HTN control, you may request a current status report from the treating physician for your review.		
If the airman did not meet standards on exam, See <a href="#">Item 55. Blood Pressure</a> .		

The HTN TABLE is constructed in a hierarchal format from low risk disease conditions to higher risk. Selection A – the pilot is taking no medications or has discontinued medications 30 days ago or longer, and the airman meets the FAA guideline for maximum blood pressure (155/95), then the FAA can immediately ISSUE the medical certificate to the pilot. Selection B – the pilot is receiving pharmacological treatment/medication and the treatment is with 3 or fewer acceptable medications, then the AME can make use of the **CACI–HYPERTENSION WORKSHEET**. If the medical criteria are satisfied per the CACI-WORKSHEET than the AME can immediately ISSUE the medical certificate. (More on this CACI HTN WORKSHEET below). Selection C – treatment is with 4 a more acceptable medications (combo meds such as lisinopril contain 2 different antihypertensive medication ingredients and therefore count as 2 separate medications); HTN is clinically uncontrolled; unacceptable medications are used; side effects are present; medical status of the airman is unclear; or certification has been specifically reserved by the FAA “such as a **SI – Special Issuance**” then information must be submitted to the FAA (a comprehensive list of this information is presented) and the AME will need to DEFER to the FAA for a SI. If the FAA has

previously granted to the airman an *authorization for special issuance of their medical certificate (Authorization)* then it is possible that the airman's medical certificate could be renewed under the **AME Assisted Special Issuance program (AASI)**. Under the AASI process the FAA would have previously granted initial *Authorization* given the airman's hypertension was under control and met the criteria specified in the Disposition Table or the CACI program. The *Authorization letter* would be accompanied by attachments that specify the information that the treating physician must provide for the re-issuance determination. The AME may then re-issue the airman the medical certificate under the provisions of this *Authorization*, if the airman applicant provides the following information:

- \*the *Authorization* granted by the FAA

- \*a current status report from the treating physician detailing;

  - that the condition is stable, and if so, how long

  - any secondary causes for the hypertension

  - any comorbid conditions such as diabetes

  - any history of end organ damage such as heart failure, heart attack, stroke, kidney disease or eye disease

and the name and dosage of medications, as well as the presence or absence of any side effects.

If these conditions for the AASI are not met, then the AME will have to DEFER the medical certification to the FAA for approval.

Note that at the bottom of the HTN disposition table it suggests if the airman is new to you or you are not certain of their HTN control, you may request a current status report from the treating family physician for your review. This suggests to the airman applicant that if there is any concern on their part about the diagnosis or treatment of their HTN it is prudent on their part to have a note from the treating family physician indicating that "all is well" with their HTN management.

On page 80 of the AME guide the **CACI WORKSHEET** is presented.

### **CACI - Hypertension Worksheet** (Updated 10/28/15)

The Examiner should review a current status report by the treating physician and any supporting documents to determine the applicant's eligibility for certification. HOWEVER, the AME is not required to review a current status report from the treating physician IF the AME can otherwise determine that the applicant has had stable clinical blood pressure control on the current antihypertensive medication for at least 7 days, without symptoms from the hypertension or adverse medication side-effects, and no treatment changes are recommended. If the applicant **meets ALL the acceptable certification criteria** listed below, the Examiner can issue. Applicants for first- or second- class must provide this information annually; applicants for third-class must provide the information with each required exam.

<b>AME MUST REVIEW</b>	<b>ACCEPTABLE CERTIFICATION CRITERIA</b>
Treating physician or the AME finds the condition stable on current regimen for at least 7 days and no changes recommended	<input type="checkbox"/> Yes
Symptoms	<input type="checkbox"/> None
Blood pressure in office	<input type="checkbox"/> Less than or equal to 155 systolic and 95 diastolic  (Although 155/95 is acceptable for certification, the airman should be referred to their primary provider for further management, if the blood pressure is above clinical practice standards)
Acceptable medication(s) See <a href="#">Pharmaceuticals</a>	<input type="checkbox"/> Combinations of up to 3 of the following: Alpha blockers, Beta-blockers, calcium channel blockers, diuretics, ACE inhibitors, ARBs, direct renin inhibitors, and/or direct vasodilators are allowed.  <b>NOT acceptable:</b> Centrally acting antihypertensives (ex: clonidine)
Side effects from medications	<input type="checkbox"/> No

**AME MUST NOTE in Block 60 one of the following:**

CACI qualified hypertension.

Not CACI qualified hypertension. Issued per valid SI/AASI. (Submit supporting documents.)

NOT CACI qualified hypertension. I have deferred. (Submit supporting documents.)

The **CACI – Hypertension Worksheet** clearly indicates that the AME must review the following:

[Yes] – Treating physician or the AME finds the condition stable on current regimen for at least 7 days and no changes recommended.

[None] – symptoms

[Blood pressure less than or equal 155/95]- blood pressure in office

[Combinations of up to 3 of the following: alpha blockers, beta blockers, calcium channel blockers, diuretics, ACE inhibitors, ARB's, direct renin inhibitors, and/or direct vasodilators are allowed] – acceptable medications; see Pharmaceuticals for antihypertensives. NOT acceptable: centrally acting antihypertensives.

[No] – side effects from medications.

If these 5 acceptable certification criteria are met then the AME can issue a **CACI qualified hypertension** medical certification. This obviates the need for the AME to furnish additional medical information to the FAA for their review and approval. Consequently, the airman applicant can immediately have an issuance of their medical certification.

The Guides page immediately following the CACI Hypertension Worksheet contains useful information on frequently asked questions (FAQ's).

### HYPERTENSION (HTN) - FREQUENTLY ASKED QUESTIONS (FAQs)

We continue to see deferrals when an airman has HTN and is on medications. Please review the following FAQs before making a determination.

GENERAL: **1.** What is the FAA specified limit for blood pressure during an exam? The maximum systolic during exam is 155mmHg and the maximum diastolic is 95mmHg during the exam. (See Item 55. Blood Pressure.) **2.** If during the exam the airman's blood pressure is higher than 155/95, do I have to defer? Not necessarily. If the airman's blood pressure is elevated in clinic, you have any the following options: • Recheck the blood pressure. If the airman meets FAA specified limits on the second attempt, note this in Block 60 along with both readings. If the airman is still elevated, follow B: • Have the airman return to clinic 3 separate days over a 7-day period. If the airman meets FAA specified limits during these re-checks, note this and the readings in Block 60. Also note if there was a reason for the blood pressure elevation. If the airman does not demonstrate good control on re-checks, follow C: • Send the airman back to his/her treating physician for re-evaluation. If medication adjustment is needed, a 7-day no-fly period applies to verify no problems with the medication. If this can be done within the 14 day exam

transmission period, you could then follow the Hypertension Disposition Table. **3.** Can I hold an exam longer than 14 days to allow the airman time provide the necessary information? No.

MEDICATION(S): **4.** Can an airman fly while on HTN medication? Yes, the majority of common blood pressure medications can be approved for flight. If the airman's blood pressure is controlled with 3 or fewer medications and there are no adverse medication side effects, the AME can often issue an unrestricted medical certificate (if otherwise qualified). See Hypertension Disposition Table. Guide for Aviation Medical Examiners. What HTN medications are acceptable/not acceptable by the FAA? See Pharmaceuticals – Antihypertensive. **6.** The airman had medication(s) adjusted and now meets the standards, but it took longer than 14 days and the exam was deferred. What can the airman do now? • If the airman is now well controlled and is on 3 or fewer medications, direct them to the CACI - Hypertension Worksheet. They should obtain the required information from their treating physician and submit it to the FAA. • If the airman is on 4 or more medications (combination medications count as the sum of their parts), direct them to the Hypertension Disposition Table. They should obtain the required information from their treating physician and submit it to the FAA. **7.** What if the treating physician stopped the medications less than 30 days ago? See Section B of the Hypertensive Disposition Table and follow the CACI - Hypertension Worksheet. **8.** What if the airman stopped the medication on his/her own so they could fly? Educate your airman (and their treating physician, if needed) that most HTN medications are acceptable and almost no one is denied for HTN. **9.** What if the airman has multiple conditions, e.g. HTN, Obstructive Sleep Apnea, and/or prior heart attack? The airman must provide the required information for each condition. **10.** What if the airman is on a HTN medication that is not allowed by the FAA? The treating physician can evaluate if the airman can safely be changed to an acceptable HTN medication. • If the medication(s) can be changed and the airman meets the required criteria, they should submit the items as detailed in Section C of the Hypertensive Disposition Table for FAA review. The treating physician note should describe the clinical rationale as to why the unacceptable medication was previously chosen and why it is ok for the airmen to be on a different medication now. • If the airman cannot safely be changed to an acceptable HTN medication, defer the exam and send in the documents listed in Section C of the Hypertensive Disposition Table for FAA review.

In the upcoming **Winter AMEPilot Newsletter** I will further address the importance of **PHARMACEUTICALS** in the *decision consideration process for medical certification*.

To schedule your Flight Physical or to enquire about medical issues contact me at the Southern California Orthopedic Institute; 6815 Noble Avenue; Van Nuys, California 91405. Ask for my Medical Assistant Leyla Rivas at (818) 909-5055.

**“Good health and safe flying!”** – Gregory J. Hanker, M.D. AMEPilot



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