



TZS⁷⁷ **Korey Stringer Institute**

Preventing sudden death in sport

An Update Regarding State Safety Policies for Youth Athletes

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The Inter-Association Task Force for Preventing Sudden Death in Secondary School Athletics Programs: Best Practices Recommendations



National Federation of State High School Associations



The American Orthopaedic Society for Sports Medicine



The Inter-Association Task Force for Preventing Sudden Death in Secondary School Athletics Programs: Best-Practices Recommendations

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Advocate for states to adopt the 2009 NATA Heat Acclimatization Guidelines for Pre-season Practices.

“Before..season.. all teams should follow a heat acclimatization program..focuses on phasing in equipment use, intensity of exercise, duration of exercise,..total practice time. Specific guidelines should follow.. 2009... guidelines for secondary school athletics .. adhere to the key points of a .. program as defined by the National Federation of State High School Associations.” P. 549-550 *Inter-Association TF for Preventing Sudden Death in Secondary School Athletics Programs Best Practices Recommendations*



NFHS Sports Medicine Advisory Committee

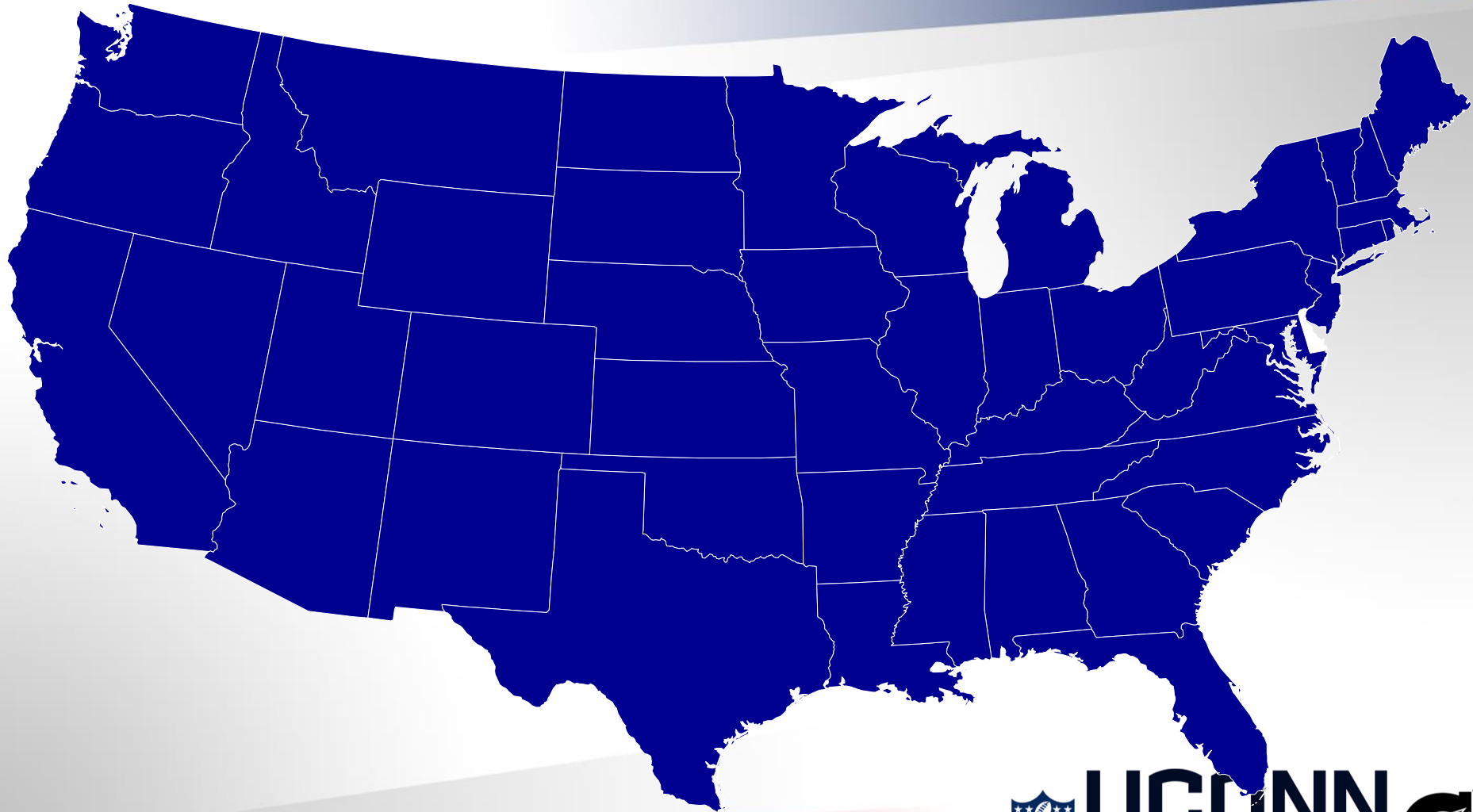
Heat Acclimatization and Heat Illness Prevention Position Statement

Exertional Heatstroke (EHS) is the leading cause of preventable death in high school athletics. Students participating in high-intensity, long-duration or repeated same-day sports practices and training activities during the summer months or other hot-weather days are at greatest risk. Football has received the most attention because of the number and severity of exertional heat illnesses. Notably, the National Center for Catastrophic Sports Injury Research reports that **35 high school football players died of EHS between 1995 and 2010.** EHS results in thousands of ER visits and hospitalizations each year.

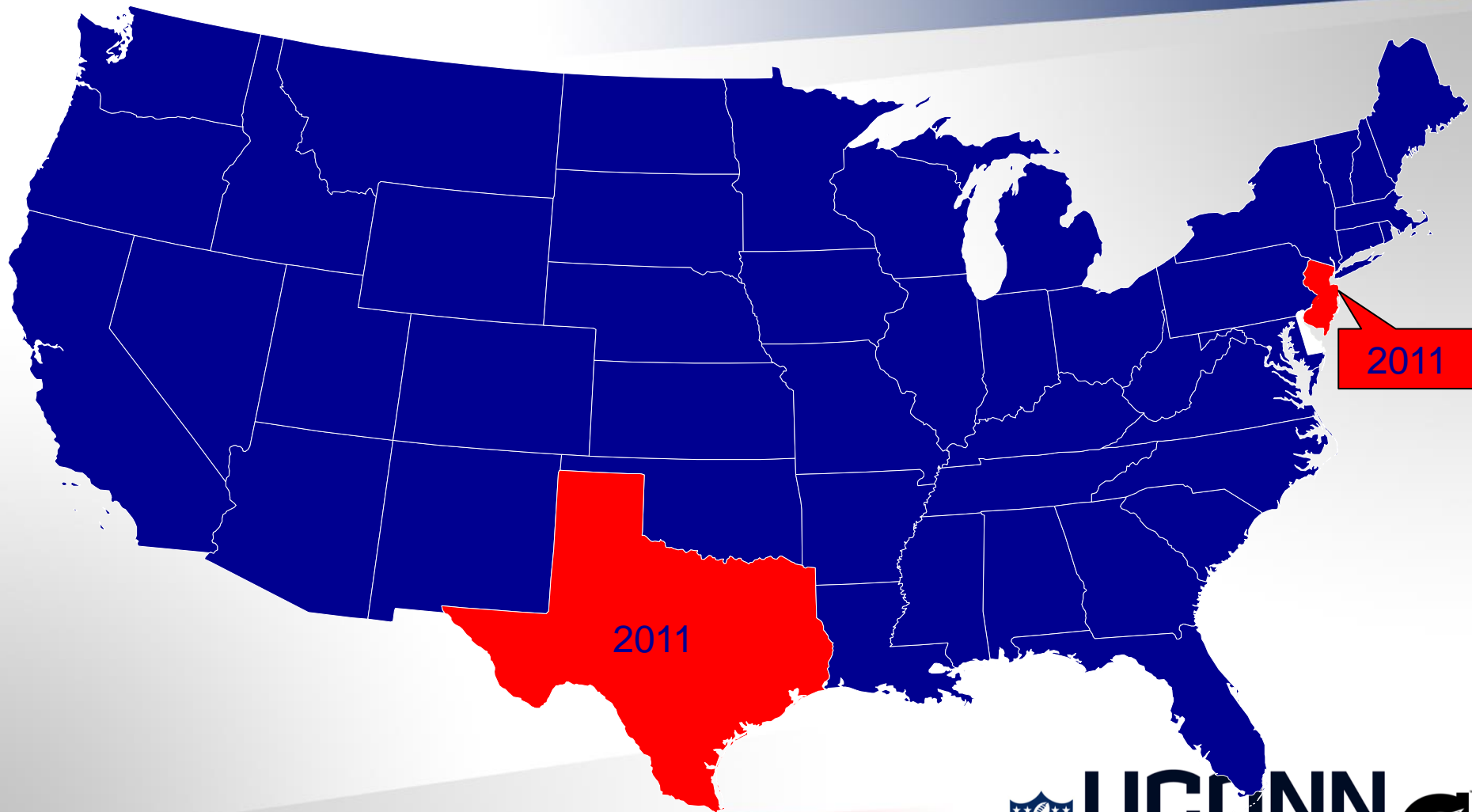


- 1. Days 1–5 are the first formal practices. No more than 1 practice occurs per day.**
2. Total practice time should not exceed 3 hours in any 1 day.
3. 1-hour max walk-through permitted on days 1–5, however 3 hr minimum between practice & walk-through.
4. During days 1–2 of first formal practices, helmet the only protective equipment permitted. Days 3–5, only helmets and shoulder pads. Beginning day 6, all protective equipment may be worn and full contact may begin.
 - Football only: on days 3–5, contact with blocking sleds and tackling dummies may be initiated.
 - Full-contact sports: 100% live contact drills should begin no earlier than day 6.
5. Day 6–14, double-practice days must be followed by a single-practice day. On single-practice days, 1 walk-through is permitted, separated from the practice by at least 3 hours of continuous rest. When a double-practice day is followed by a rest day, another double practice day is permitted after the rest day.
6. On double-practice day, neither practice should exceed 3 hours, and no more than 5 total hours. Warm-up, stretching, cool-down, walk-through, conditioning and weight-room activities are included as part of the practice time. The 2 practices should be separated by at least 3 continuous hours in a cool environment.
7. Because the risk of exertional heat illnesses during the preseason heat-acclimatization period is high, strongly recommend that an athletic trainer be on site before, during and after all practices.

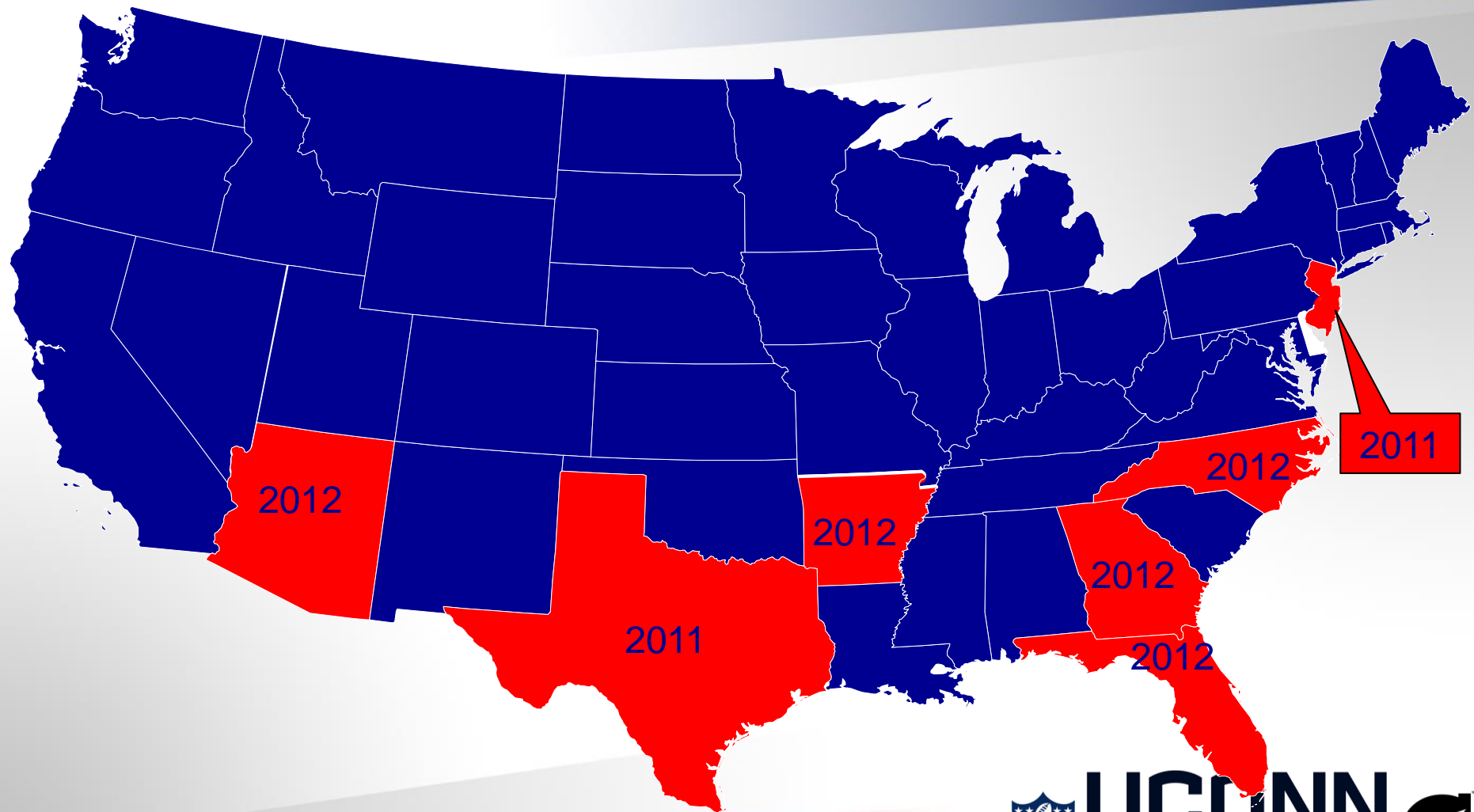
2010 Status



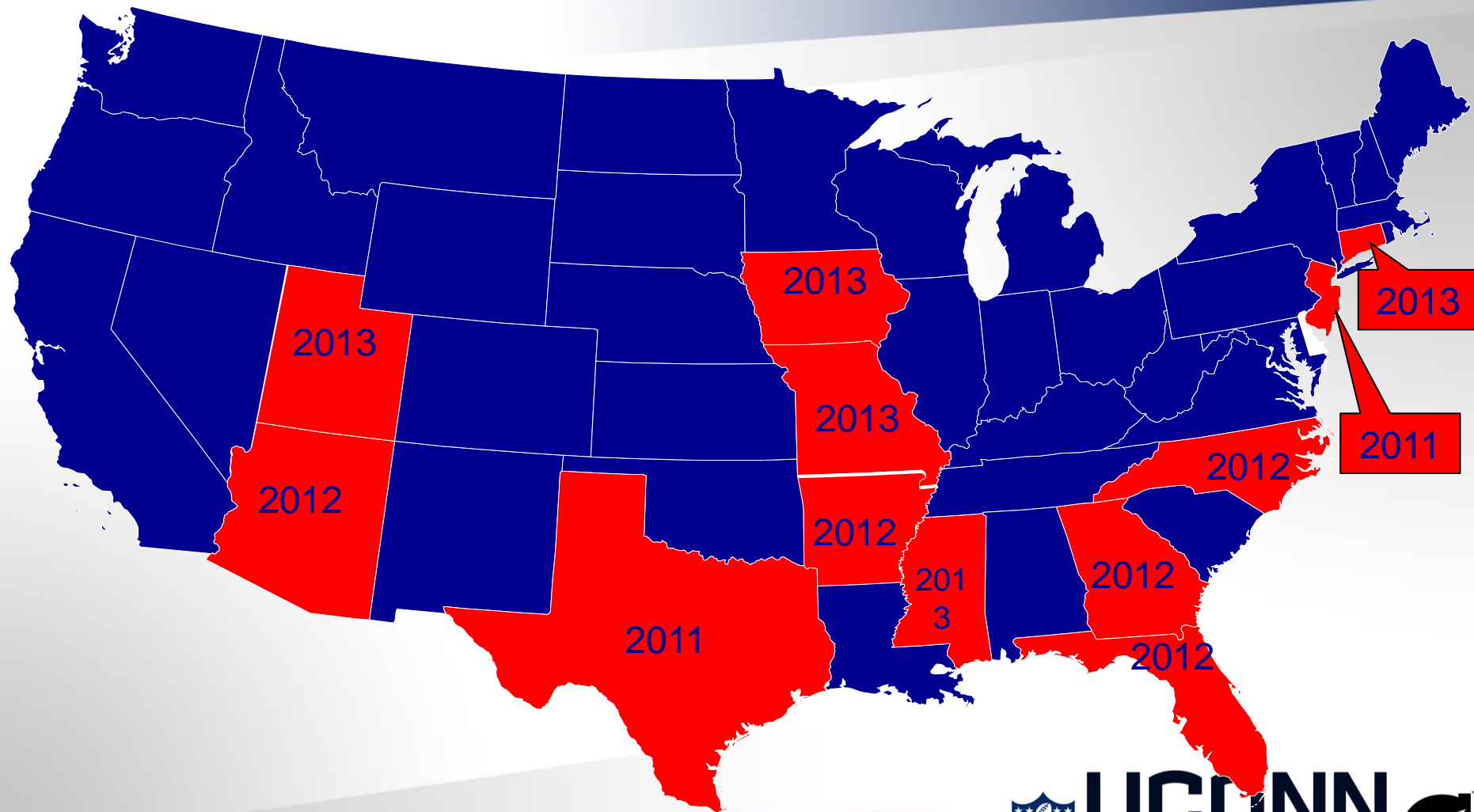
2011 Status



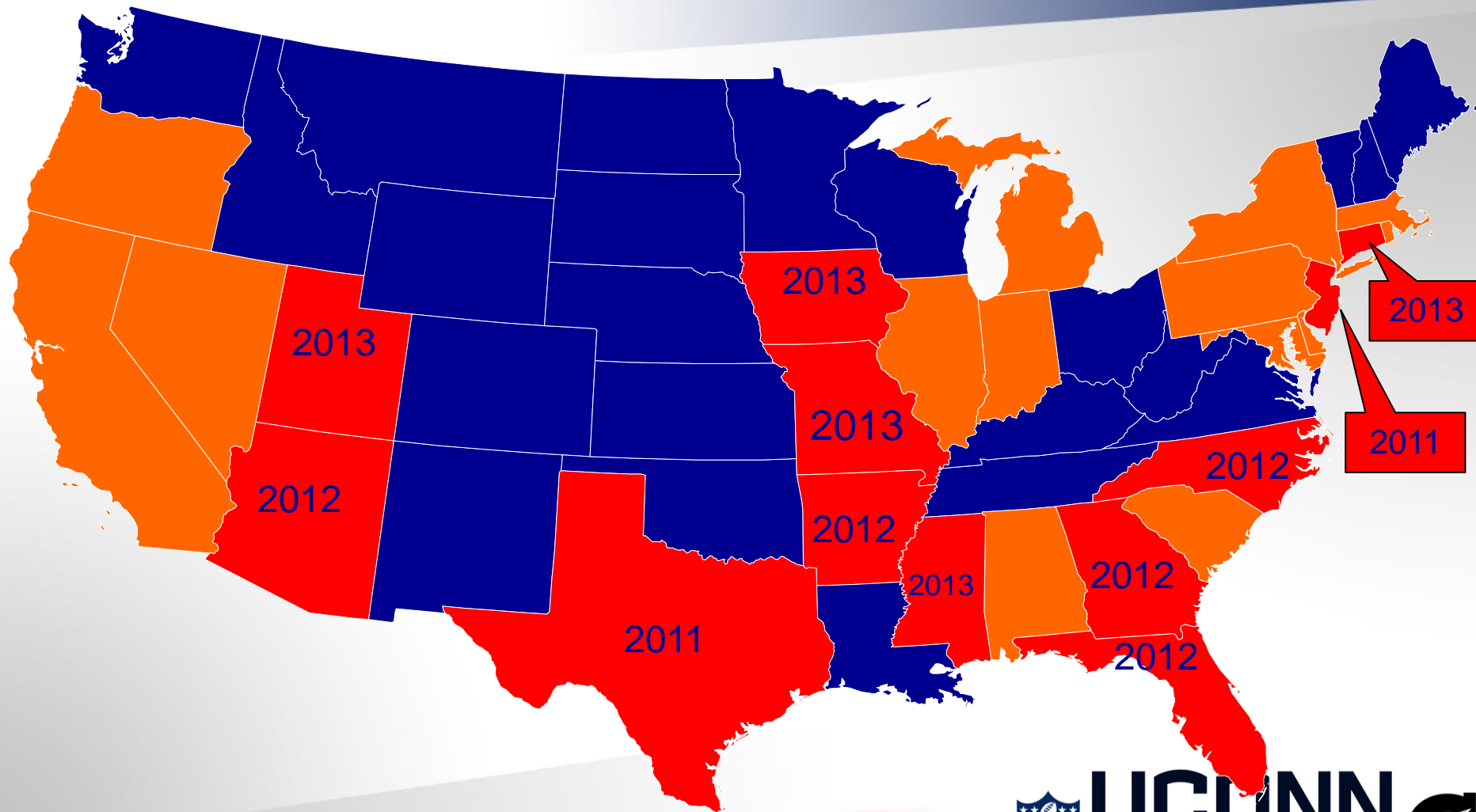
2012 Status



2013 Status



- Meets minimum standard
- Working with KSI to attain minimum standard
- Current guidelines do not meet minimum standards





High School Safety Focus Areas

2) Advocate for state policies for high schools to hire onsite medical care, such as athletic trainers, who are trained in the prevention, diagnosis and treatment of emergency medical conditions.



“In addition, most of the deaths in secondary school sports can be avoided by providing appropriate prevention, recognition, and treatment strategies. Accordingly, supervisors of secondary school athletics programs would benefit greatly from having an athletic trainer (AT) who can guide these efforts.”

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“Ideally, the AT is employed directly by the school district. This increases the likelihood that emergency planning recommendations are developed as school- wide policies and ensures that relevant health and safety state laws and state athletic association policies are managed and enforced consistently.”

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3) Advocate for state policies for high schools to have automated external defibrillators or AEDs that can be accessed within one minute of any athletic venue.

- Florida requires every school to have an AED

“An AED should be on site and readily available within 3 minutes (with 1 minute being ideal) for all organized athletic activities.”

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“School staff, medical professionals, coaches, and athletes should be educated at least annually about the location, function, and use of AEDs.”

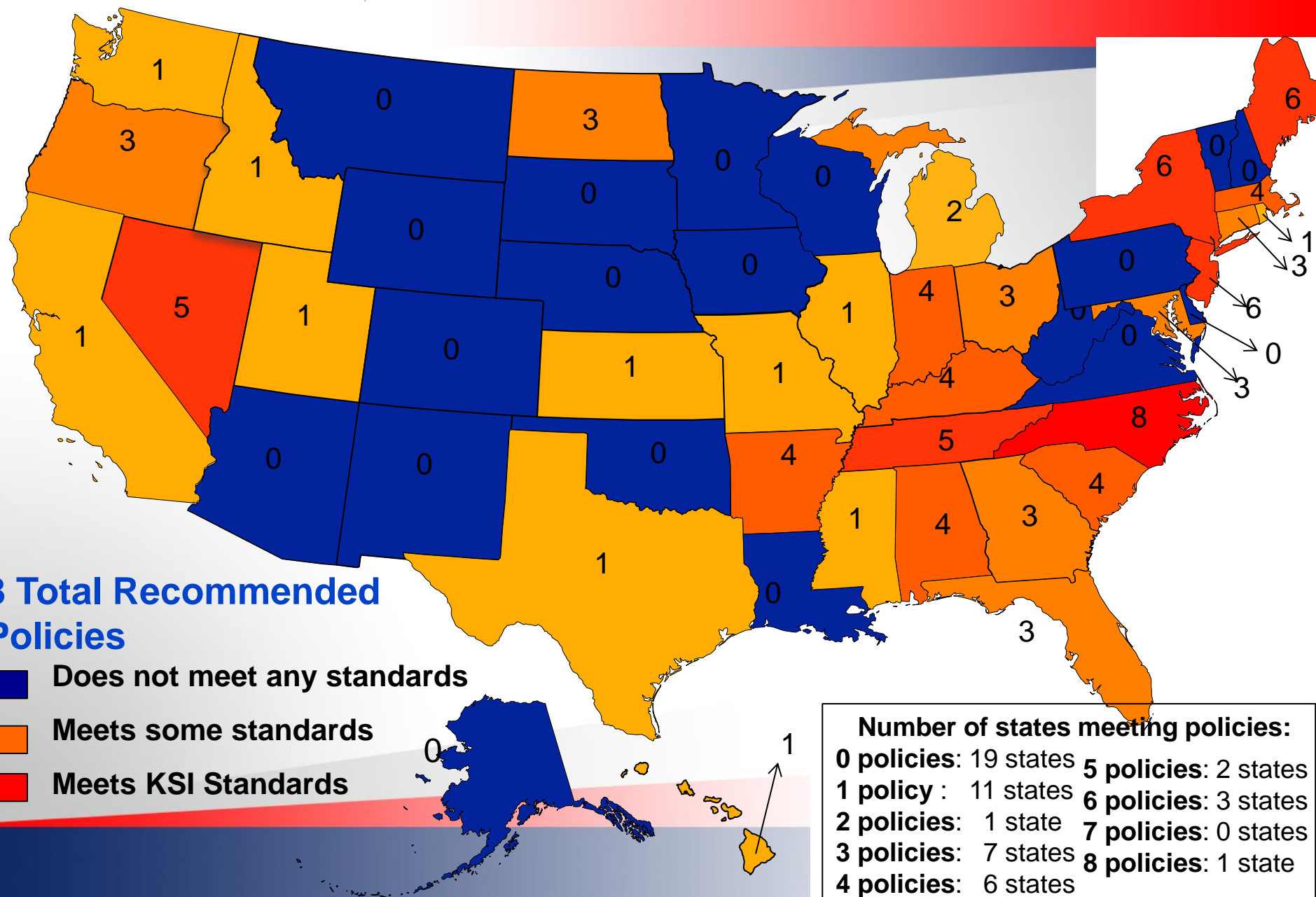
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State AED Policies

AED Requirement	States Meeting Requirement
1. AEDs are to be used under the advice and consent of a physician by individuals with proper training and certification.	21
2. AED should be stored in a safe place and easily accessible.	6
3. All athletic trainers, coaches, administrators, school nurses, and physical education teachers have access to an AED on school property and at all school sanctioned athletic events/activities.	2
4. Institutions sponsoring athletic events should have an AED on site or access to one at each athletic venue for practices, games, or other athletic events.	22
5. Individuals should be provided annual training and certification in cardiopulmonary resuscitation (CPR) and AED use.	16
6. Location of AED should be well marked, publicized, and known among trained staff.	6
7. The AED should be used only after enacting the EMS system. Another athletic training staff member, coach, athlete, or bystander can perform this action.	4
8. AEDs should be inspected frequently to ensure proper working order. This includes making sure the batteries are charged, and wires and electrodes are in good condition.	18

AED Policy Distribution by State



High School Safety Focus Areas

4) Advocate for state policies for high schools to create and maintain optimal emergency action plans that cover all potential emergency scenarios.

- Arkansas and North Carolina require high schools to develop an EAP and review it each year.

“Each school should have an EAP, including specific details for each athletic facility where practice and competition occur, to ensure that appropriate strategies and site-specific procedures are invoked during a time of crisis.”

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State EAP Policies

EAP Requirement	States Meeting Requirement
1. Every school or organization that sponsors athletics should develop an EAP for managing serious and/or potentially life-threatening injuries.	12
2. The EAP should be developed and coordinated with local EMS, school public safety officials, on site medical personnel or school medical staff, and school administrators.	5
3. Every school should have a written EAP document distributed to all staff members.	2
4. The EAP should be specific to each venue and include maps and/or specific directions to that venue.	3
5. On-site emergency equipment that may be needed in an emergency situation should be listed.	4
6. The EAP should identify personnel and their responsibilities to carry out the plan of action with a designated chain of command.	4
7. Appropriate contact information for EMS.	3
8. Facility address, location, contact information etc. should be identified in the EAP.	2
9. Plan should specify documentation actions that need to be taken post emergency.	0
10. EAP should be reviewed and rehearsed annually by all parties involved.	1
11. Healthcare professionals who will provide medical coverage during games, practices, or other events should be included.	1

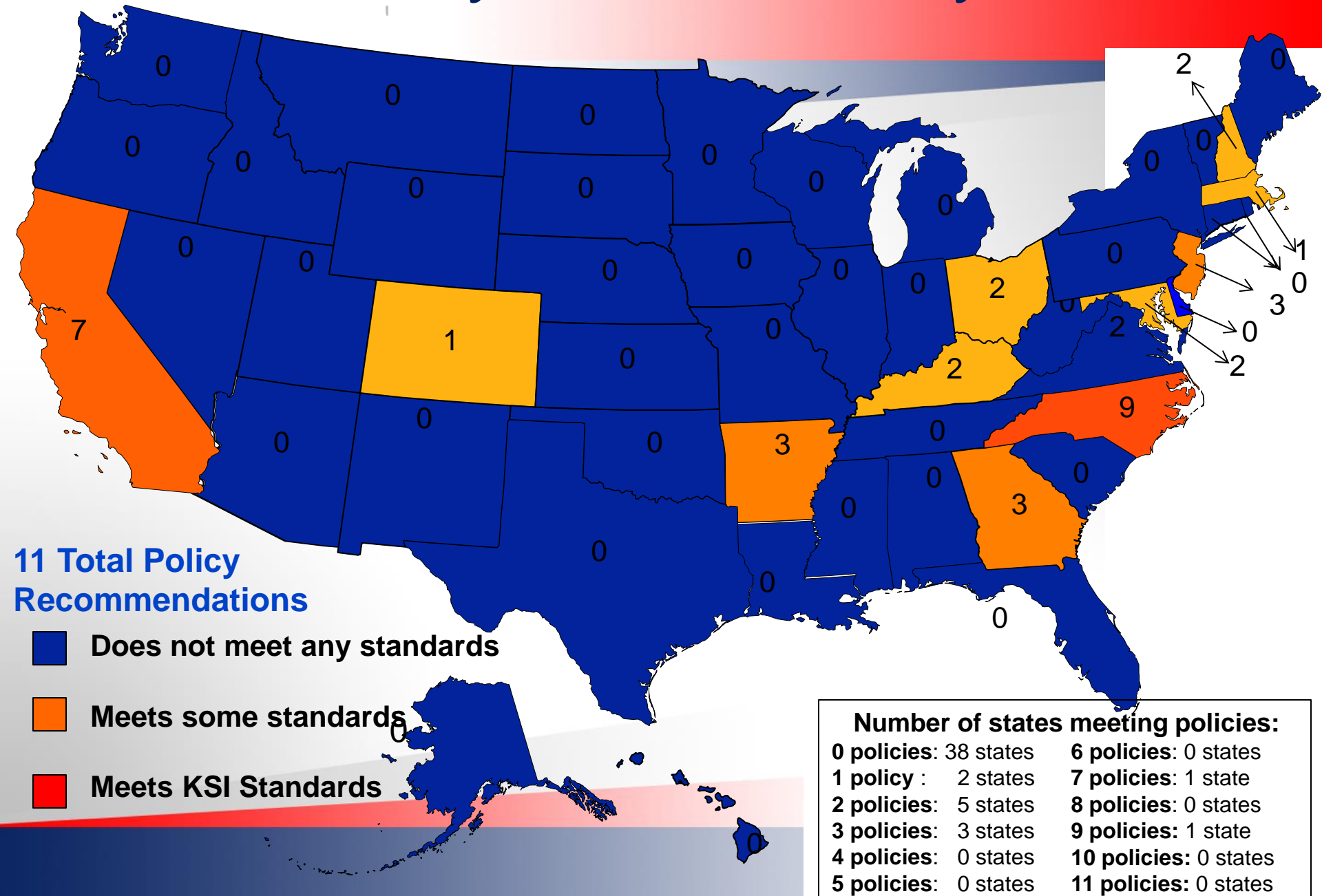
“The following components covering emergency communication and equipment should be included:

- A. Establish an efficient communication system to activate EMS at each athletic venue.
- B. Establish a communication system to alert on-site (school) responders to the emergency and its location.
- C. Post the EAP at each venue, including a list of emergency numbers, facility map with street address, and directions to guide EMS.
- D. Post the specific location of all emergency equipment.
- E. Strategically locate automated external defibrillators (AEDs) to allow immediate retrieval and use within 3 minutes (with 1 minute being ideal) of recognizing an emergency.
- F. Provide a readiness check of emergency equipment before each scheduled athletic activity.
- G. Maintain emergency equipment, including battery and lead replacement for AEDs, according to the manufacturers’ guidelines and document the maintenance.
- H. Register each AED with the local EMS system and integrate it with the specific EAP.”

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EAP Policy Distribution by State



5) Advocate for state policies for high schools to create and use pre-participation exams that utilize specific screening questions that target the top reasons why athletes die in sport.

“The task force supports recommendations from the American Academy of Family Physicians et al as the minimum standard for screening using a comprehensive personal history, family history, and physical examination.”

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“Related to emergency issues, the AT must be able to

- determine an athlete’s readiness to participate via an appropriate preparticipation physical evaluation and, if necessary, consult with the supervising team physician or treating physician, or both; ...”

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6) Advocate for state policies for high schools to implement standards for coaching education and certification in first aid, CPR and AED.

“All athletics staff who have contact with student-athletes and are associated with practices, competition, and strength-and-conditioning sessions, including coaches, strength-and-conditioning coaches (S&CCs), and administrators, should have ... A. Current certification in first aid and cardiopulmonary resuscitation (CPR), including the use of an AED.”

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“The AT should conduct an annual safety education program for athletes, coaches, administrators, and parents focusing on athletic head and neck injury, cardiac, heat-related, respiratory, exertional sickling, and other emergencies and EAPs.”

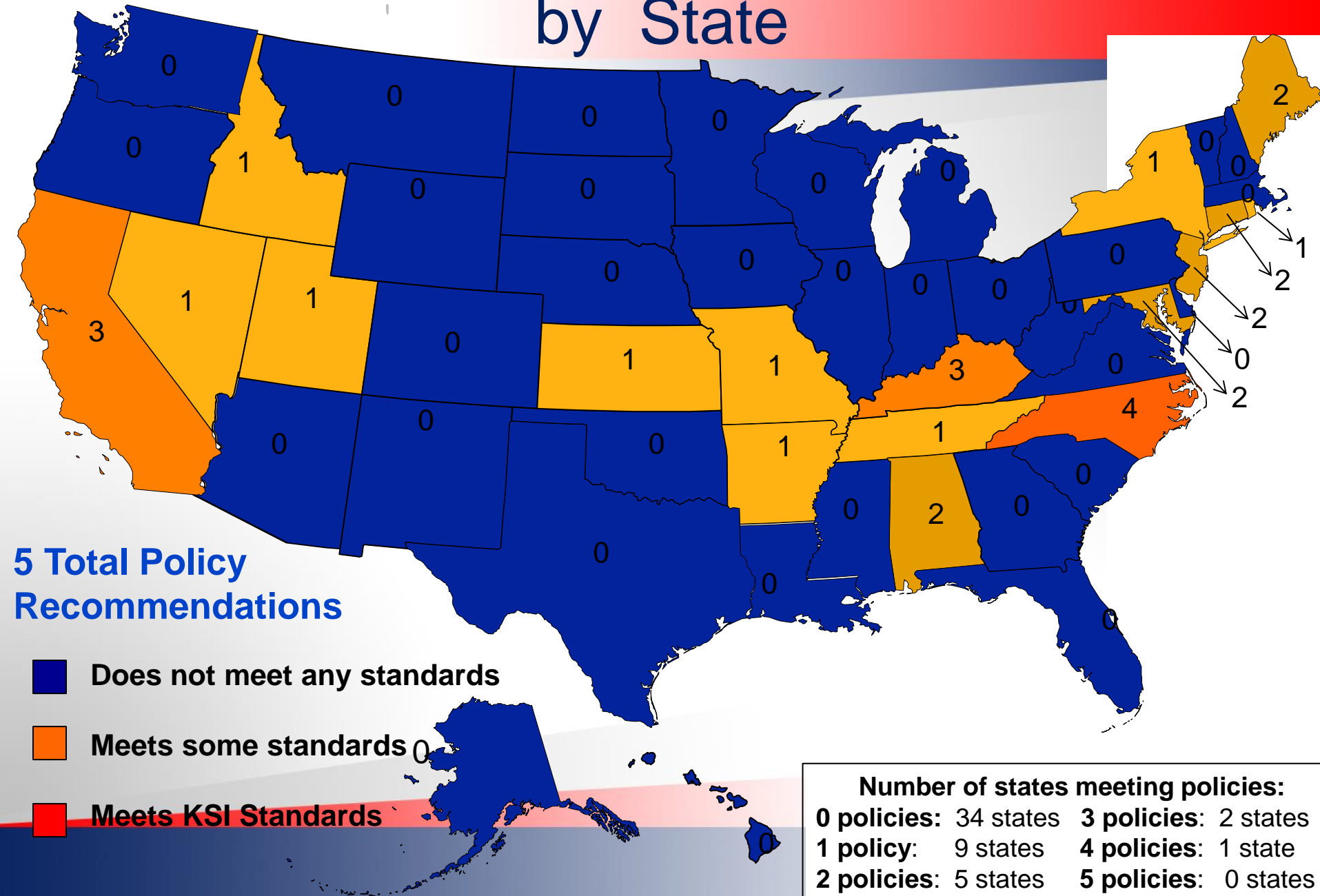
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State Coaching Education Requirements

Education Requirement	States Meeting Requirement
1. All coaches and athletic officials should be trained in CPR, First-Aid and AED use.	15
2. All coaches should be required to participate in ongoing education in coaching techniques and renew CPR, First-Aid, and AED certifications regularly.	5
3. All coaches should be trained by medical staff to recognize serious injuries and emergency situations.	6
4. All coaches should be informed of the school's policies and procedures, including the the availability of emergency equipment and the Emergency Action Plan.	3
5. All coaches should participate in yearly practice for implementation of the school's Emergency Action Plan.	0

Coaching Requirements Policy Distribution by State





High School Safety Focus Areas

7) Advocate for state policies for high schools to implement continuing education standards for coaches for medical and emergency conditions.



“Coaches also should be educated about factors contributing to sudden death and recognizing life- threatening situations.”

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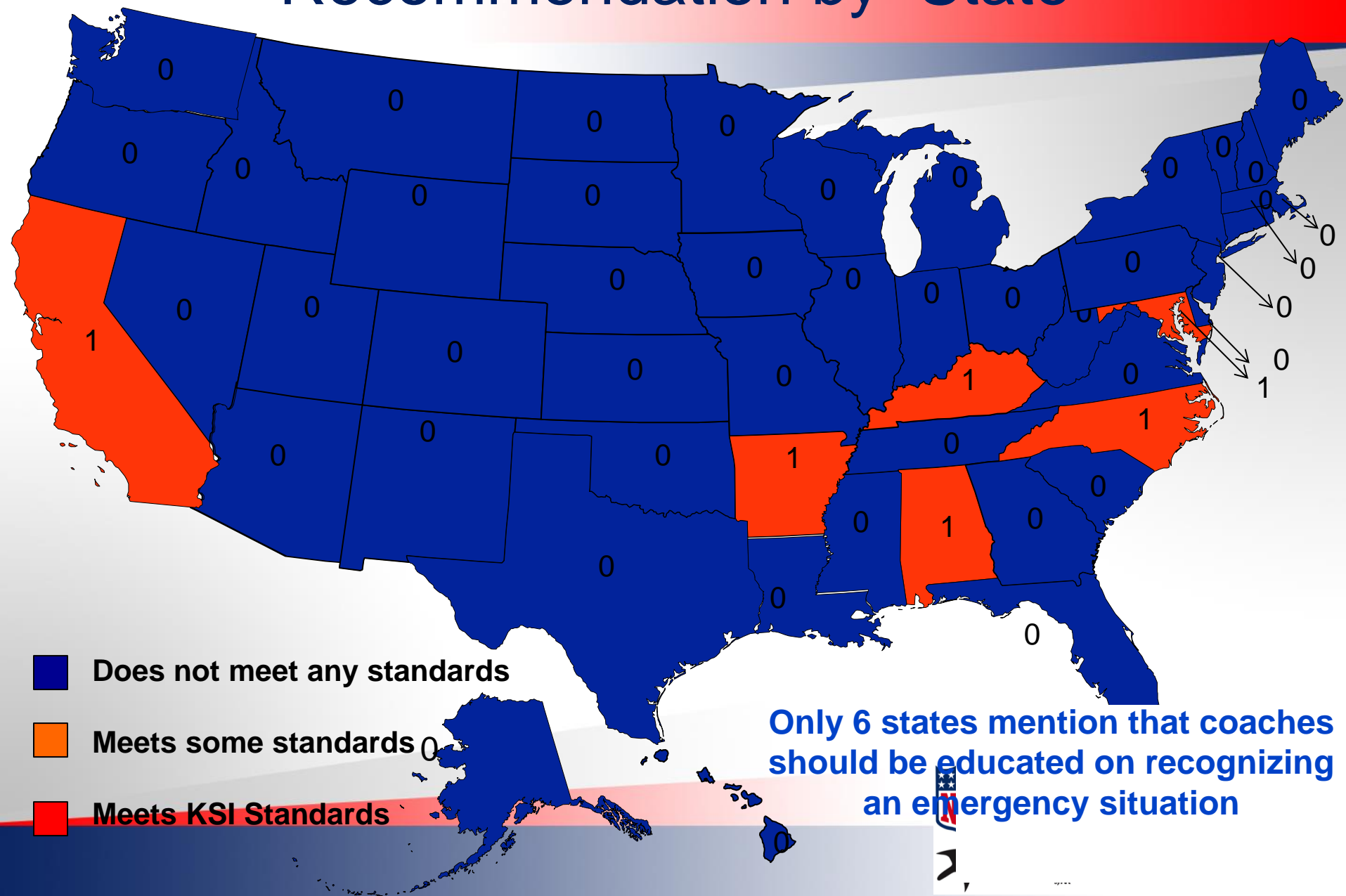
“Continuing education requirements should ensure certified S&CCs engage in educational opportunities that provide applicable, up-to-date information regarding important health and safety topics, emergency procedures, and prevention of sudden death.”

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Emergency Preparation for Coaches

Recommendation by State





High School Safety Focus Areas

8) Advocate for state policies for high schools to create and use environmental monitoring measures (such as wet-bulb globe temperature) for practice and game modifications or cancellations.



“Activities should be modified when environmental conditions are extreme. The WBGT should be used to determine these modifications, but specific WBGT thresholds for activity alterations may vary based on geographic location.”

“Guidelines must dictate appropriate rest breaks, including duration and total number, for practice sessions and should depend on session length and intensity of activity.”

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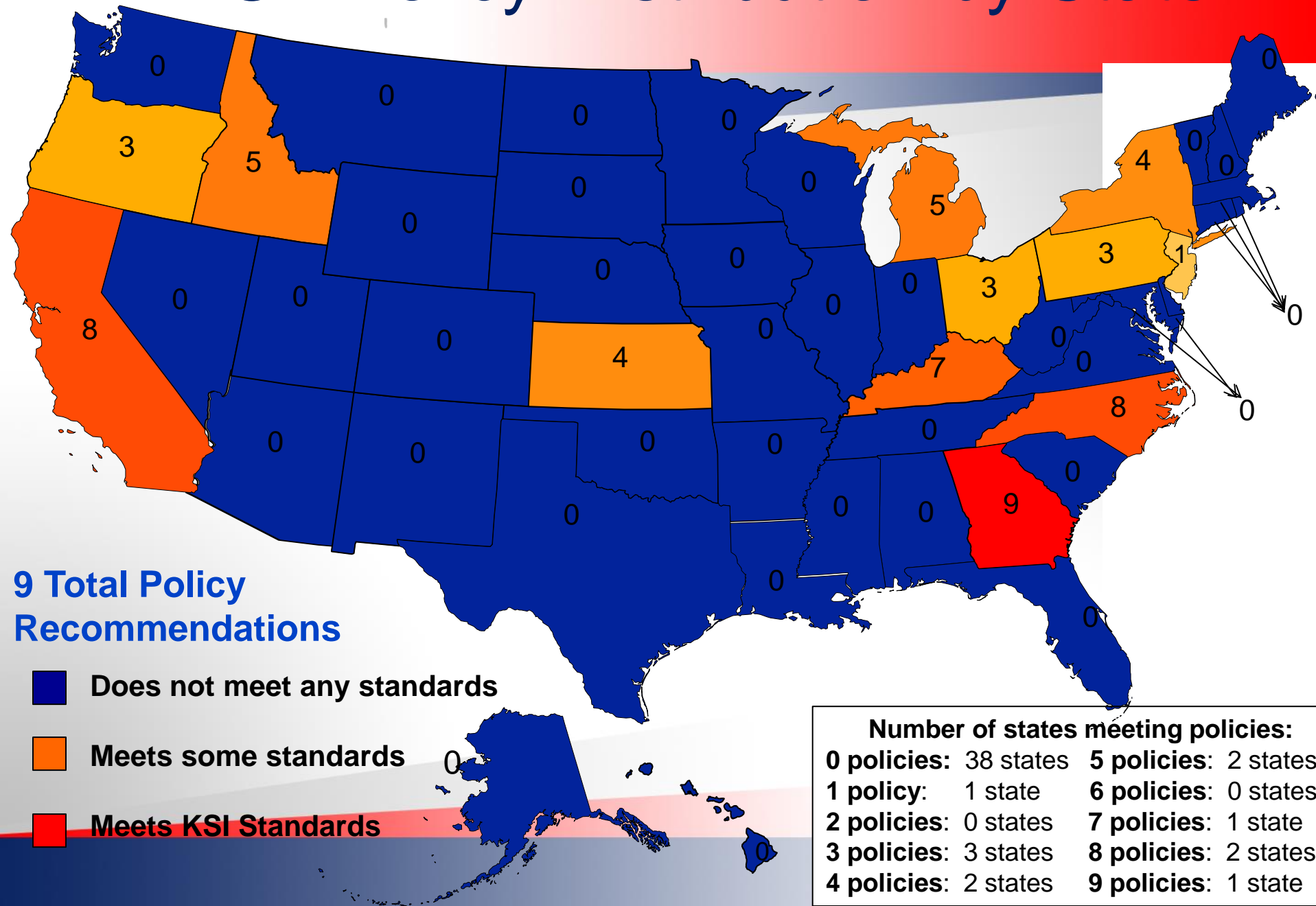
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WBGT Policies

WBGT Requirement	States Meeting Requirement
1. State requires all schools to have a heat modification policy for any sanctioned activity.	10
2. The recommended heat policy is based off of WBGT (not heat index or any other methods) Heat Index is only acceptable for schools without funding for WBGT and the state is actively petitioning for funding to supply a WBGT.	4
3. The WBGT temperature guidelines are based off of epidemiological data specific to that state/region (for bigger states a more comprehensive analysis may be needed). State required to seek alternative ways to obtain WBGT for their area via weather station WBGT or other valid local sources.	4
4. The heat policy has at least 4 step progression of modifications (does not include the limit that dictates normal practice).	6
5. Policy includes modification of equipment (if applicable to the sport).	10
6. Policy includes specific modification of work:rest ratios.	7
7. Policy includes specific modification of total practice time.	7
8. Policy includes specific modification of water breaks.	9
9. Policy mentions the use of a shaded area for rest breaks.	3

****Note: Policy refers to the NATA Position Statement on Exertional Heat Illness***

WBGT Policy Distribution by State



9) Advocate for states to adopt concussion and head injury policies in line with leading sport health organization recommendations.

- Connecticut requires a 5-step return-to-activity protocol

“Physicians and ATs working in the secondary school setting should complete an education module focusing on updates in appropriate medical management and return to activity after brain (concussion) and neck injuries.”

“To prevent a premature return to participation and to avoid placing the patient at risk for a catastrophic brain injury, the AT and team or treating physician should work together to implement a supervised, graduated return-to-participation progression after a concussion. If the patient becomes symptomatic at any stage of the graduated return-to-participation progression, exercise should be ceased, and the patient should regress 1 step and immediately consult with the physician or AT in charge. The patient should progress no more than 1 step in a 24-hour period.”

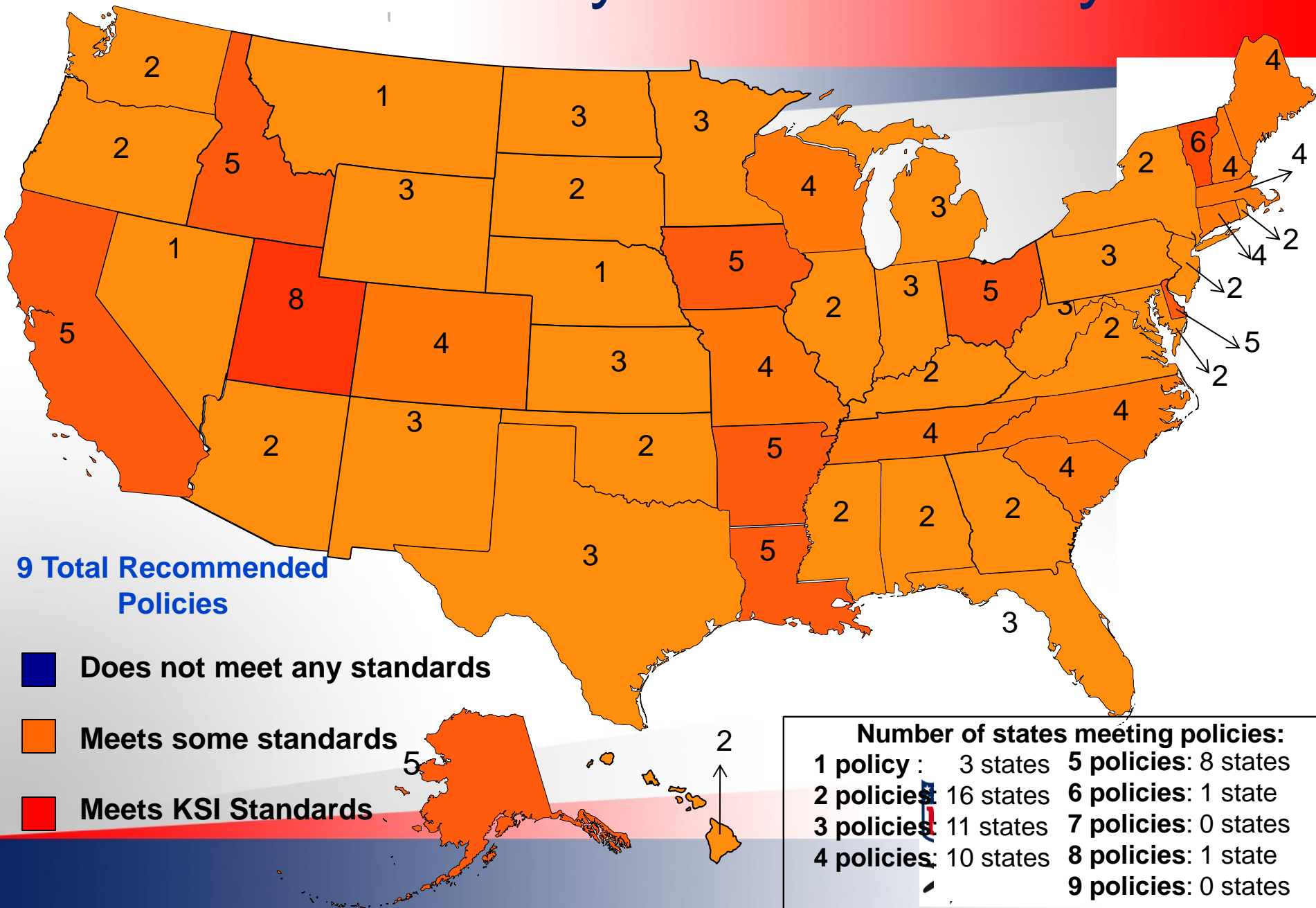
“No athlete with a suspected concussion should be permitted to return to a practice, game, or activity on the same day.”

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Concussion Requirement	States Meeting Requirement
1. Schools should develop an EAP for handling potentially life-threatening injuries and a referral plan for concussions.	9
2. Use certified helmets/equipment.	1
3.The PPE (preparticipation exam) should include concussion specific questions.	3
4. Preseason education for personnel, coaches, and athletes (should be tailored to the group being taught, strongly recommend educational materials for parents) on basics of concussion (i.e. that helmets do not prevent cerebral concussions, signs/symptoms, treatment, testing options, RTP).	24
5. High school athletes suspected of sustaining a concussion are not permitted to return to a practice, game, or activity involving exertional activity on the same day.	38
6. Athletes suspected of a concussion are not permitted to return to participation until written release from a licensed physician or athletic trainer.	49
7. No child/adolescent should return to sport/activity unless he/she has managed to return to school.	2
8. Implementation of a graduated return to participation protocol (see Zurich/AMSSM example, at least 5 steps, no more than 2 in one day).	19
9. Comprehensive medical-management plans for acute care of a potential head or cervical spine injury.	16

Concussion Policy Distribution by State





2009 Zackery Lystedt/ 2011 Gfeller-Waller



**Gfeller-Waller Law
#21 (June 16, 2011)**

**All 50 States have some type of
concussion protocol. 47 States
and the District of Columbia meet
Lystedt standards.**



10) Advocate for states to create and implement supervision policies and exercise acclimatization policies, specifically for strength and conditioning sessions.

- 2013 Task Force Meeting on Preventing Sudden Death in High School Athletics

“Athletes should acclimatize progressively to training demands and environmental conditions for optimal safety.”

“Conditioning periods should be phased in gradually and progressively to encourage proper exercise acclimatization and to minimize the risk of adverse events.”

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