

AEDS IN NEBRASKA SCHOOLS: EVIDENCE OF AVAILABILITY AND EFFICACY

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We know children.



Disclosures: None

Background

- **ACC 2012 THINK TANK** - Attendees representing over 35 organizations identified gaps in quality of American athlete CV care, and suggested ways to improve it.
- **One proposed strategy-** Optimize use of existing clinical tools
- **Could best be accomplished at the state level** (models NJ, TN, NC, WA)
- **Sept 2013 to Jan 2014, a Nebraska state-wide task force was created to improve CV care for young athletes**
- **Goal:**
 - **Measure baseline quality**
 - **Devise interventions to improve quality**

Nebraska Task force: Members/organizations

- Bryan Heart Athletic Cardiology
- Nebraska State Activities Association (NSAA)
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- American Academy of Pediatrics/Nebraska Chapter Representative
- Nebraska Academy of Family Physicians/Representative
- American Heart Association/ Nebraska Chapter Representative
- American College of Cardiology/ Nebraska Chapter Representative
- Nebraska State School Nurses
- Nebraska State Physician's Assistant Association
- Nebraska Department of Education/Representative
- Nebraska Department of Health and Human Services (DHHS)
- University of Nebraska-Lincoln Athletic Medicine
- Nebraska State Athletic Trainers Association Representative
- Nebraska State Legislator
- Statistician
- Children's Hospital & Medical Center

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Background- Measures of quality

- **What is level of emergency preparedness in Nebraska schools? (Ref: AHA, Hasinski, Circulation, 2004) How often is the AED used, and what are the outcomes?**
- **Who is clearing the athletes and what is their present knowledge base and training?**
- **Are recommended NSAA (Nebraska School Activities Association) PPE forms being used?**

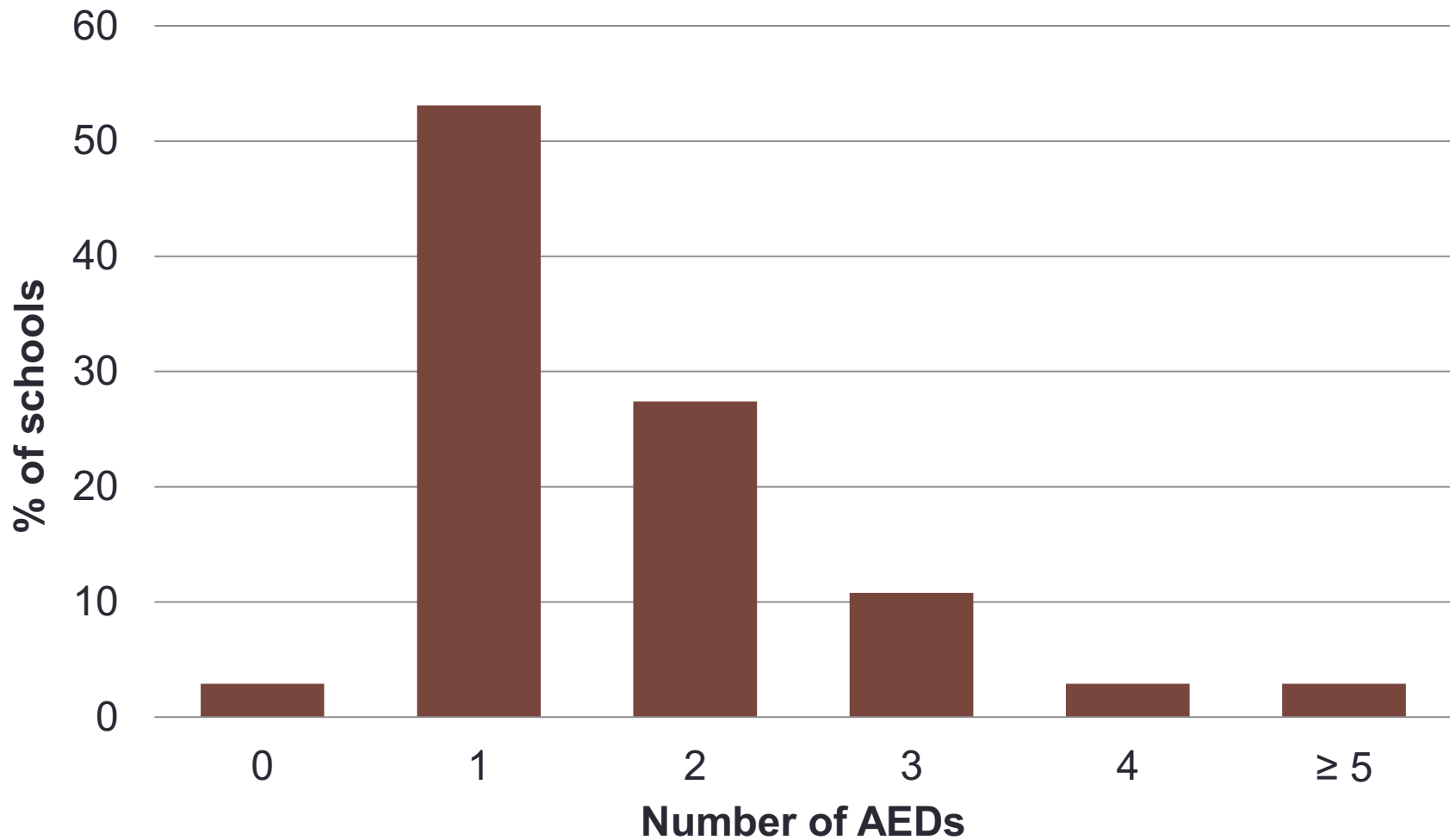
Purpose – Measure Emergency Preparedness and AED Outcomes in Nebraska’s high schools and middle schools

- **Measures**
 - **Availability of AED**
 - **Location/Accessibility of AED**
 - **Presence of Emergency preparedness protocols, and rehearsals on a regular basis**
 - **School requires CPR-AED training of staff, coaches, and students**
- **AED outcomes**

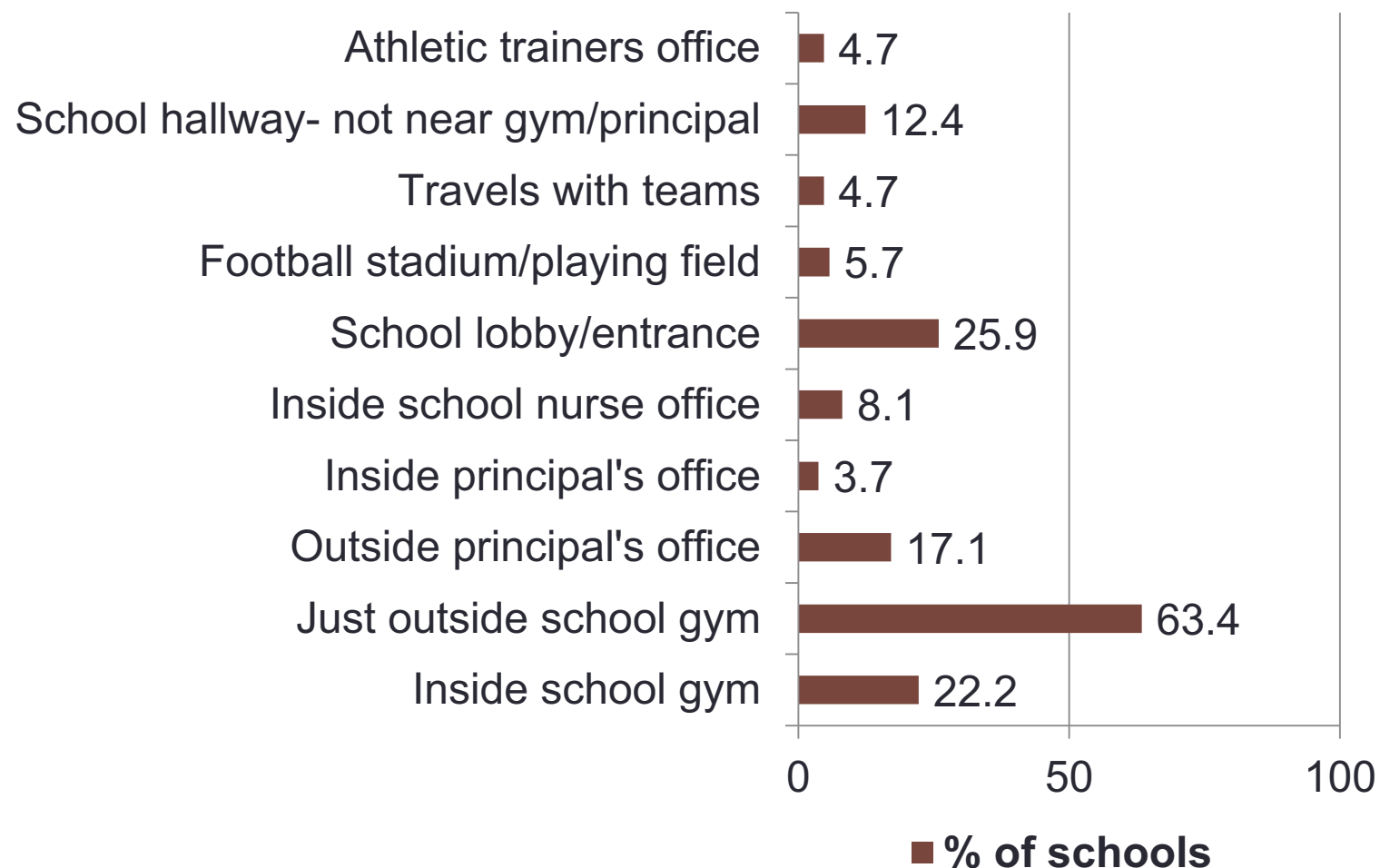
Methods

- **List of all Nebraska schools was obtained from NSAA**
- **Request to complete an online survey:**
 - **Sent to the school nurse at all 320 Nebraska schools**
- **Survey returned by 307 schools, 96%**
- **Asked school nurse to recall**
 - **Was AED used at school in past 5 years?**
 - **If yes, follow-up phone call to those reporting AED events**

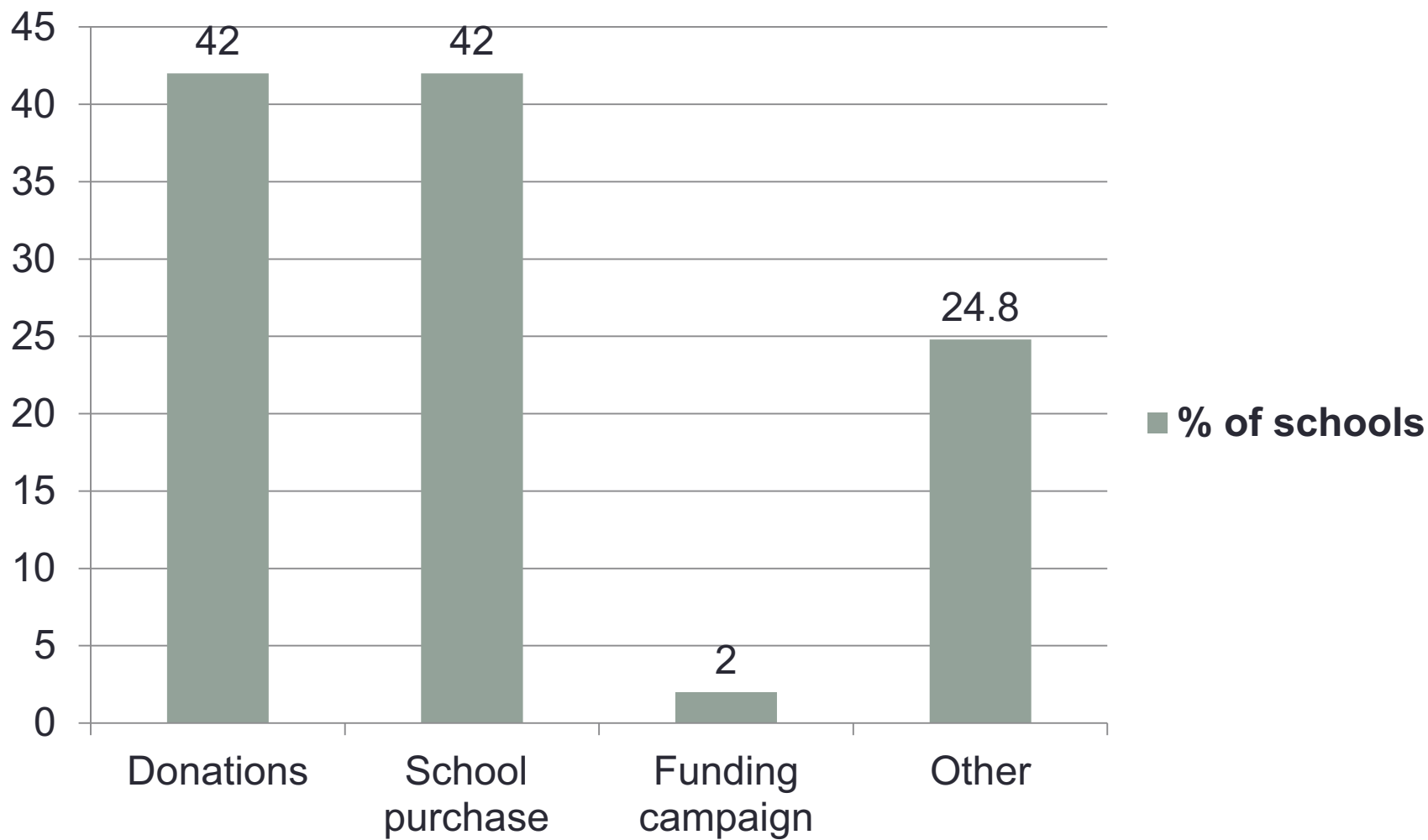
Results- ≥ 1 AED in 298/307, 97.1%



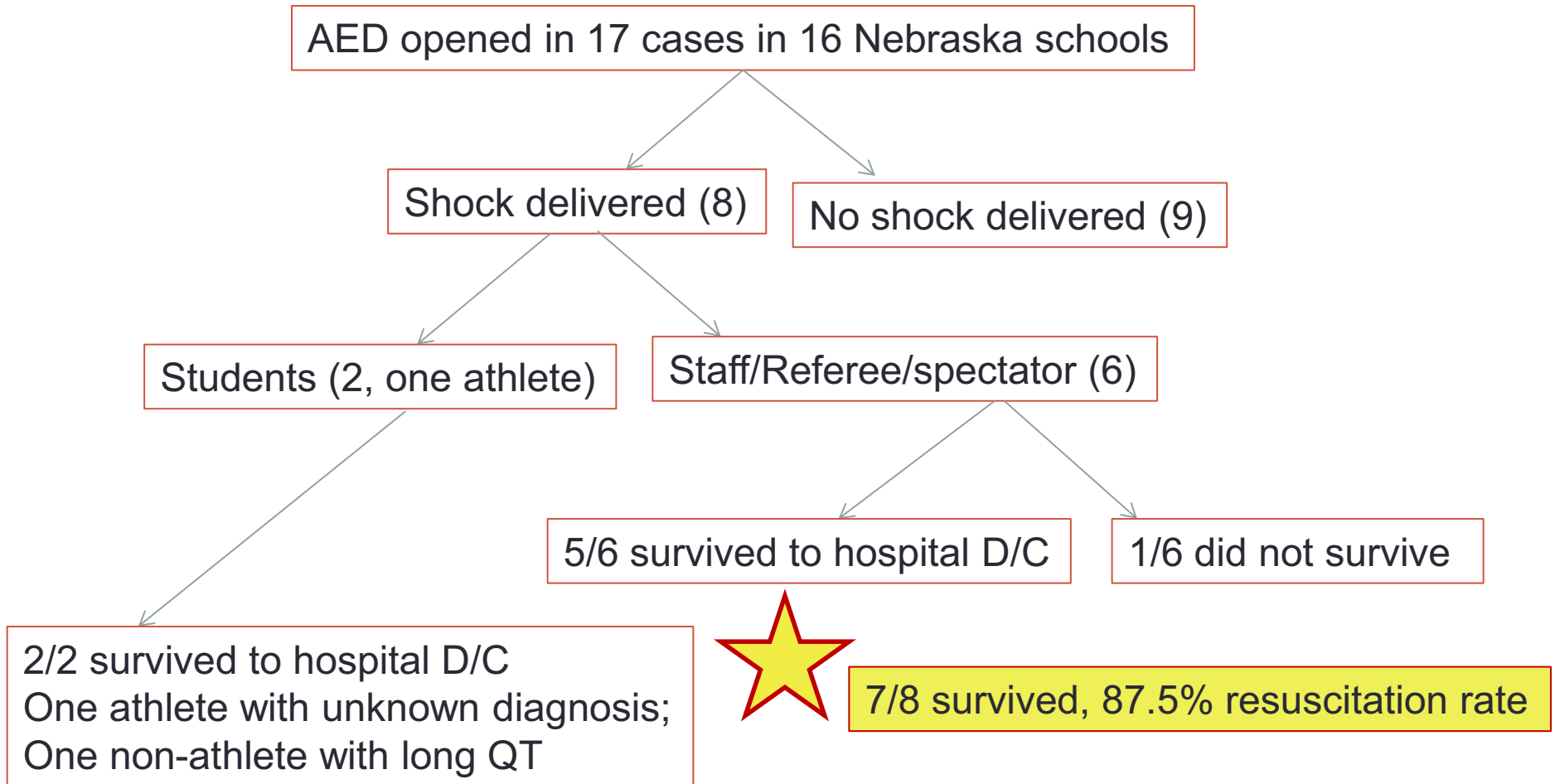
Results- AED accessibility and location



Results- AED Funding source



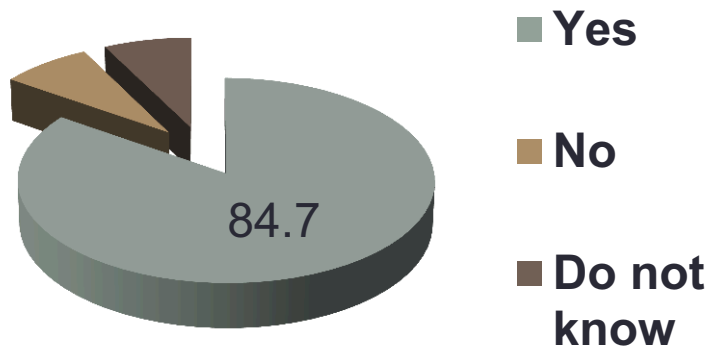
Results- Outcomes of AED use over past 5 years, n=17



D/C= discharge

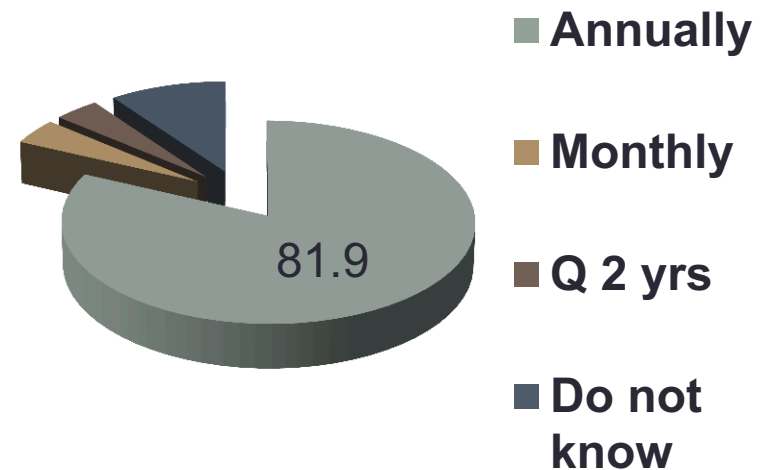
Results- Emergency action plan (EAP)

Have EAP



% of schools

Frequency of rehearsal/drills



% of schools

Results- Required student and staff education

Type of staff	% of responding schools
School nurse	68.4
Administrative staff	37.5
Athletic director	41.7
Athletic trainer	21.8
All coaching staff	49.9
Student- for HS graduation	5.2
Do not know	5.9
N/A	9.5

Conclusions

- **AED availability in Nebraska schools is excellent, exceeding 97%.**
- **School administrators can anticipate about 6% AED use over 5 yrs, primarily in the older non-student population.**
- **Defibrillation rate is high, with the majority of patients surviving to hospital discharge.**

Conclusions- Opportunities for improvement

- **The greatest opportunities for improvement in the Nebraska schools AED emergency preparedness plan are:**
 - **Education of staff/students in the performance of CPR/AED**
 - **Having EAP in place**
 - **Enhanced AED accessibility- Remove from locked offices**
 - **Obtaining AEDs for the remaining 3% of schools**

Going forward

- **Work with NSAA on identified opportunities for improvement in AEDs**
 - EAPs in 100% of schools
 - Obtain AEDS for remaining schools
 - Education in CPR-AED
- **We have completed our measures of other suspected quality gaps**
 - Use of 4th PPE less than ideal- NSAA Sports Med Advisory Committee (also task force members) working on enhanced use, and implementation of E-PPE
 - Provider knowledge gaps abundant- Plan an intensive Nebraska state provider education program in the spring
 - To include PEDS, Fam Practice, PAs, NPs, ATCs and chiropractors
 - Similar to DOT certification, but not an actual certification



Thank you

Limitations

- **Outcomes:**
 - **Based on recall**
 - **Only asked about use of AEDs, not instances of SCA**
 - **May have skewed results towards high resuscitation rate overall**