Introduction to Field Sobriety Testing

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CDAM Summer Session 2012

What makes a field sobriety test valid and valid for what?

- Does it accurately discriminate impaired motorists from sober motorists?

- Should these tests be used for probable cause? Circumstantial evidence? Direct evidence?

- Think about Daubert and read US v Horn, 185 F Supp 530 (2002)

The Big Studies

- 1977
- 1981
- Florida
- Colorado
- San Diego

1977

Dr. Marcelline Burns

- Research psychologist
- Co-founder of the Southern California Research Institute in Los Angeles
- Author: Medical-Legal Aspects of Drugs
- Will NOT release her DATA!!!

"As a rule, a police officer is reluctant to arrest a driver unless there is a high degree of certainty that the mandatory chemical test (breath, blood or urine) will yield a BAC reading of .10% or higher. Not only is it costly in officer time and effort to transport and test a driver who cannot be booked, it also leads to charges of harassment and generates bad community relations. These considerations certainly contribute to an over-representation among arrested drivers of those individuals whose BAC is quite high and for whom there is less uncertainty regarding impairment." –1977 Study

"TESTS"

- Grip strength
- Maze tracing
- Telegraph key (10 seconds tapping)
- Tongue Twisters ("methodist, episcopal, sophisticated statistics.")
- Two-Point Tactile Discrimination
- Color-number naming
- Serial Performance

"Lies, damned lies, and statistics"

The Walk and Turn is 68% accurate.

The One Leg Stand is 65% accurate.

The AGN is 77% accurate.

	OFFICERS' DECISIONS			% Correct Decisions
	Arrest	Don't Arrest		
≥.10%	Hit n = 54	False Negative n = 10	64	84
≥.10%	False Alarm n = 47	Correct Rejection n = 127	174	73
	101	137		
% Correct Decisions	53	93		76

54/64=.84375

Therefore, the tests are 84% accurate, right?

If you arrest everyone: 64/64=.100

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"[N]ote that the officers indicated they would have arrested 101 persons, 47 of whom had BACs below .10%. Obviously, an error rate of 47% in making arrests is not acceptable. Actually, officers in the field are reluctant to err in the direction of false alarms, and observations indicate that the most common error probably is a false negative."

Officer Inexperience?

- Police officer-examiners were recruited from Los Angeles area agencies and were selected to represent a broad spectrum of experience with DWI testing. This ranged from relatively new officers with less than 200 DWI arrests to veteran officers with as many as 2000 arrests.

"[I]ndividual differences in skill and in response to alcohol which underlie these misclassifications inevitably will be troublesome for a quantified test battery. A case in point is the male participant, age 28, whose drinking practices categorized him as a heavy drinker. He was of muscular build and appeared to be in top physical condition. His peak BAC reading was .147%, but there was no sign of intoxication in test performance, speech, or appearance. At the other extreme, a female, age 63, appeared to be intoxicated at .067% BAC, and could not perform the balance or walking tests. She is a light drinker, and she is arthritic."
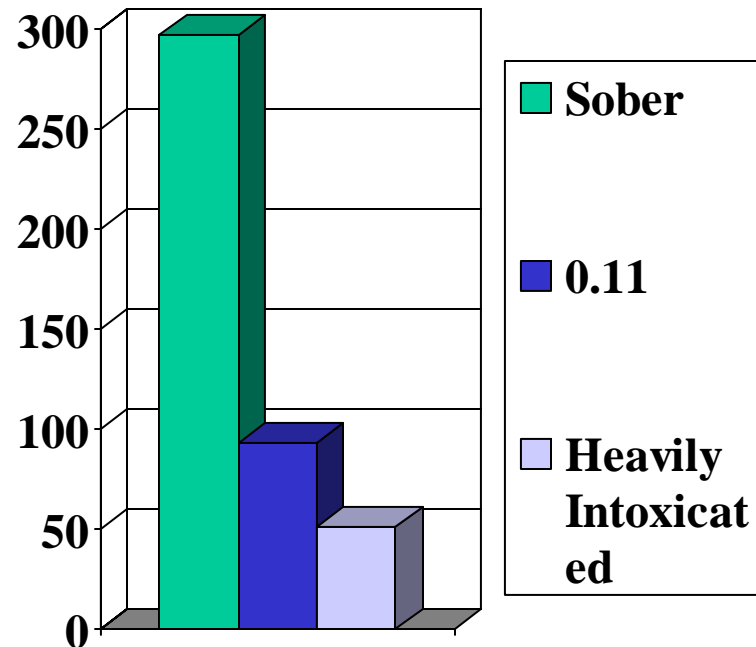
1981 Study

- 10 Police officers
- 297 Participants – One mysteriously leaves
- BAC ranged from 0.00 to 0.18
- Introduced standardized testing
- AGN is replaced by "gaze nystagmus"
- Claimed 81% accurate for >.10 BAC
- Claimed interrater reliability and test-retest reliability of .60 to .80

Important Stuff!

- BAC were targeted at .00, .05, .11, and .15

- 79% should have been clearly sober or clearly intoxicated

OFFICER ESTIMATED BAC

		>.10%	<.10%	% Correct
A	>.10%	HIT	FALSE NEGATIVE	n=125 64%
C				
T		n=80	n=45	
U		18%	10%	
A	<.10%	FALSE POSITIVE	CORRECT REJECTION	n=316 88%
L				
		n=38	n=278	
B		9%	63%	
A	% Correct	n=118	n=323	81%
C		68%	86%	

38/118 = 32% FALSE ARRESTS AT .00 and .05!
18% of subjects at ZERO were described as impaired!

Interrater and test-retest reliability .60 to .80

Cronbach's alpha	Internal consistency
$\alpha \geq .9$	Excellent
$.9 > \alpha \geq .8$	Good
$.8 > \alpha \geq .7$	Acceptable
$.7 > \alpha \geq .6$	Questionable
$.6 > \alpha \geq .5$	Poor
$.5 > \alpha$	Unacceptable

Gaze Nystagmus in 1981

- Check for onset at 45 Degrees
- Checks eyes only twice
- First pass is 4 seconds out looking at the eye for onset, then the other eye at 4 seconds
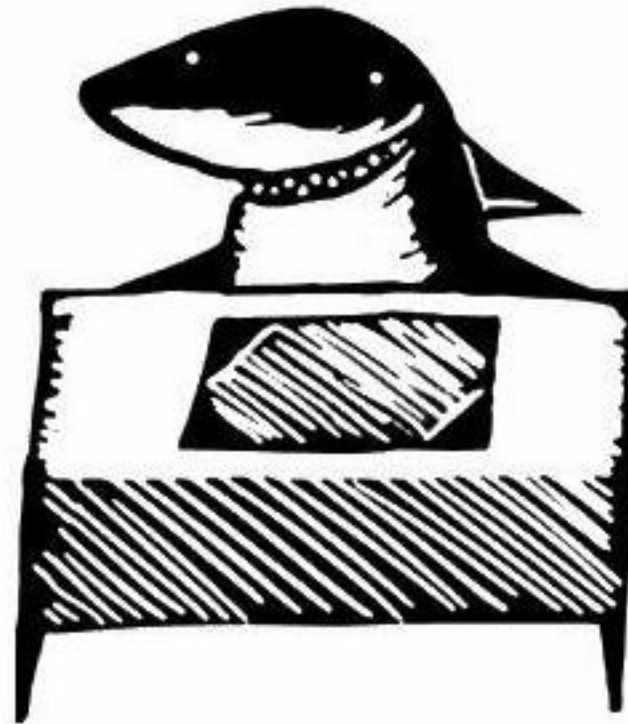- Second pass is 2 seconds out looking for lack of smooth pursuit and nystagmus at maximum deviation

Maze Legal Group PC
Michigan-Drunk-Driving.com

Florida

- At least 32% of sober people failed the OLS.

- 76% of sober motorists failed the WAT with two or more clues!

Thank you! Any Questions?