

A PRACTITIONER'S PERSPECTIVE

The McKinsey Report

Medication, Testing
&
Troubled Times

Twenty Years Ago

Page 1 of the McKinsey Report (1991):

The racing...“industry faces a number of problems, including:

- The need to improve its appeal in the marketplace; total attendance levels have been maintained only by increasing racing days to offset declines in average daily attendance.
- Increasingly difficult economic conditions for owners, breeders and tracks. Reflecting the difficulty of maintaining profitable operations at all levels...”



"I thought elephants never forgot, but according to these results you have alzheimer's disease."



Public Opinion And The Reality Of Racing

Trainers??

THE NEXT PERFORMANCE-ENHANCEMENT CONTROVERSY...



Trainer Administered

Contrary to public opinion, most trainers aren't feeding Red Bull. Most of the positive tests in California are due to inadvertent positives.

Dispensed Medication: bottles contain 100-500 tabs and are utilized to treat many horses.

Numerous supplements and herbal remedies are utilized daily.

Racetrack Medicine

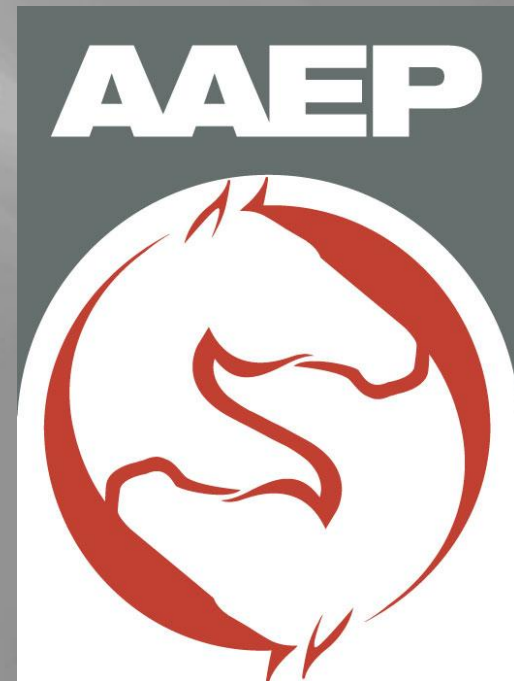
WHITE PAPER

Clinical Guidelines for
Veterinarians Practicing in
a Pari-Mutuel
Environment

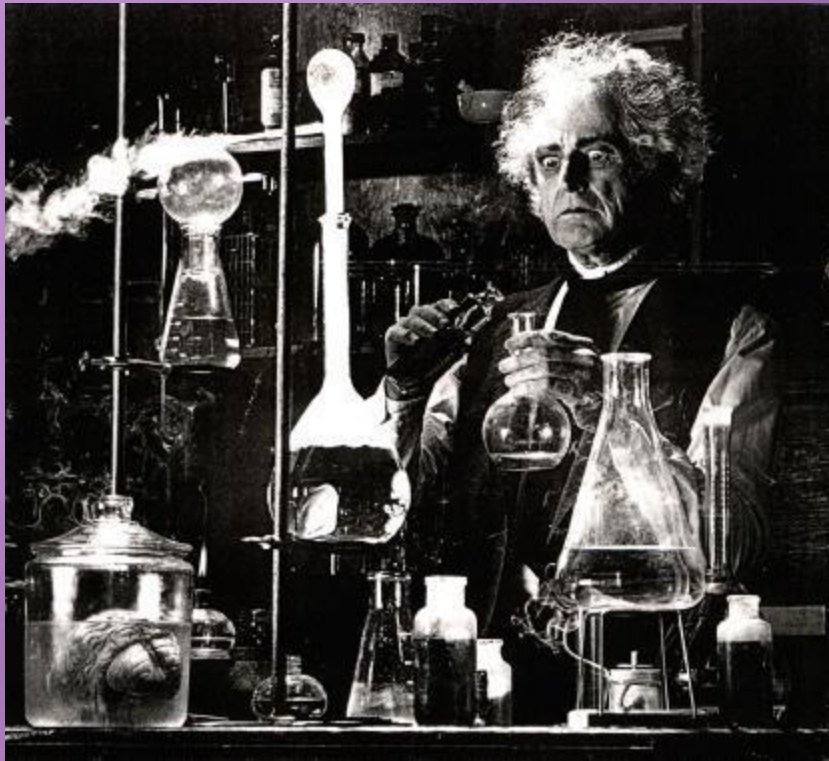
Putting the Horse First:

Veterinary Recommendations
for the Safety and Welfare of
the Thoroughbred Racehorse

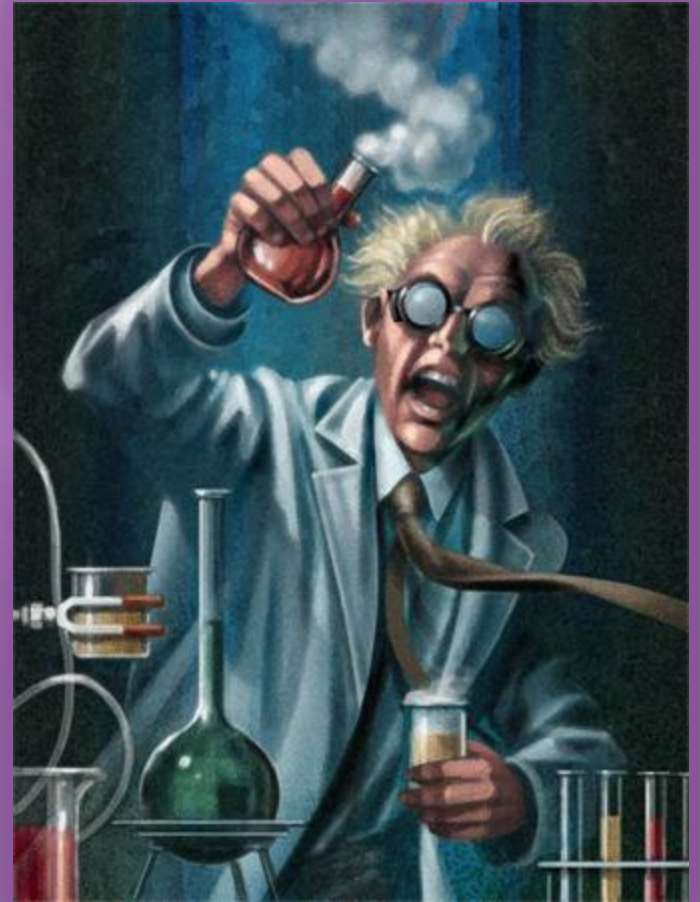
American Association of
Equine Practitioners

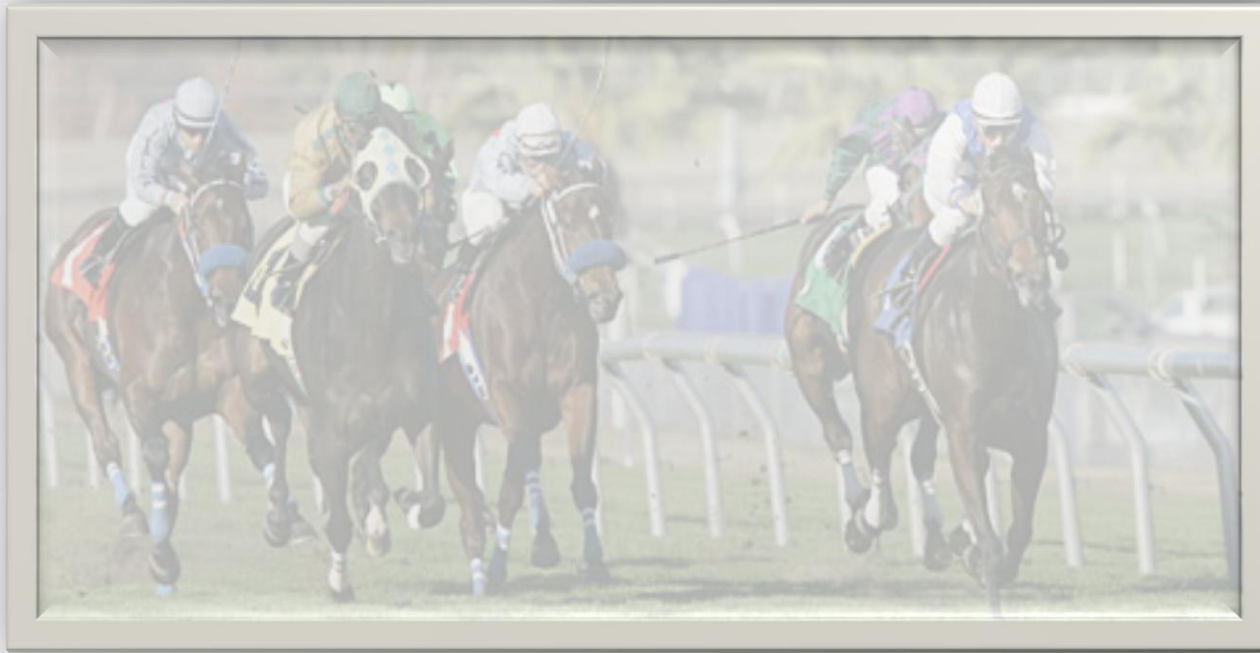


Not In My Spare Time



Veterinarians??





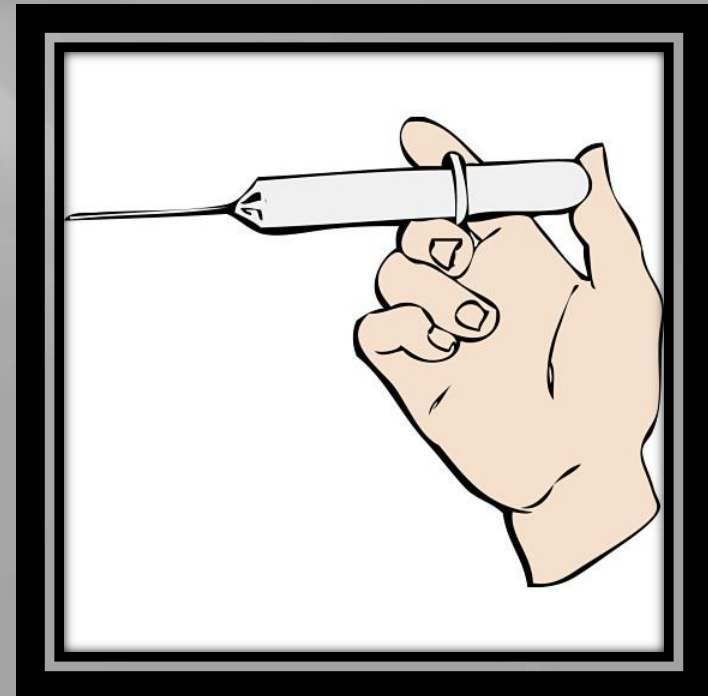
Medications

Timing of entry, pre-race status and post-race testing affects care

Standardized dosing + ever changing testing
= what was safe becomes a positive

Wrong horse/wrong medication

Compounded Medications – concentration
– legality



Horses??



CA POSITIVES

Intentional or Inadvertent

Class 1, 2 or 3 Violations FY 09-10

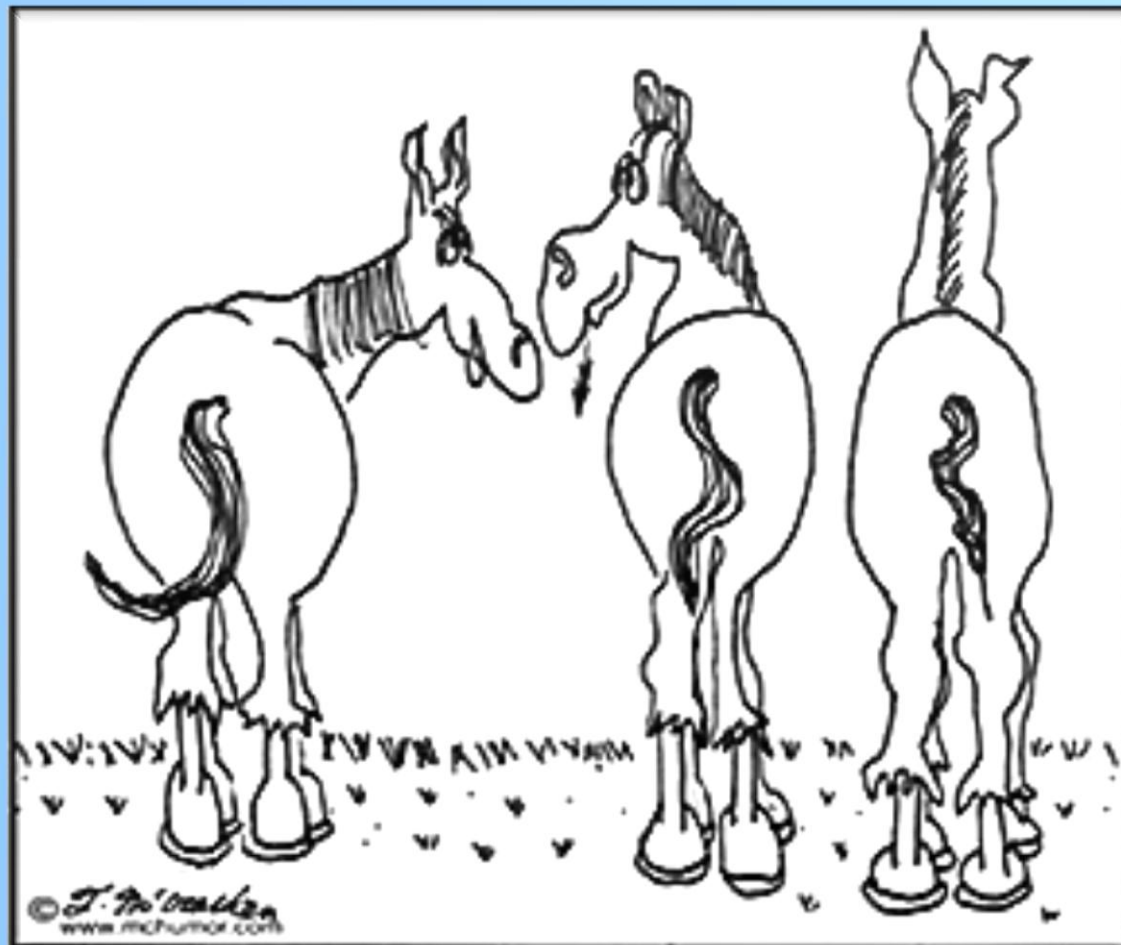
Drug	SoCal TB's	Norcal TB's	Fairs	Cal Expo	Los Al	Total
TCO2				3		3
Gabapentin			1		1	2
Trenbolone	1					1
Clenbuterol	2		1		4	7
Ractopamine			1		2	3
Acepromazine					1	1
Indomethacin	1					1
Lidocaine					1	1
Total	4	0	3	3	9	19

Class IV Violations FY 09-10

Dexamethasone	13
Flumethasone	1
Flunixin	16
Ketoprofen	1
Methocarbamol	11
Methylprednisolone	2
Phenylbutazone	51

88 horses total including 1 horse with 3 Class IV drugs & 4 horses with 2 Class IV drugs. There were 77 different trainers for the 88 violations.

Rumors Of Drugging Have Been Around For A Long Time



"Pegasus used steroids. Pass it on."

McKinsey report -- Page 2:

“Public confidence in the industry’s integrity may be eroding due to adverse publicity generated by inconsistent positive calls for all types of drugs – ranging from a minute trace of a therapeutic drug administered several days prior to a race to a clear case of drugging with a substance having no accepted medical use in the animal.”

Source: E-ponies blog

**“Here’s what I make of all this -
EVERYONE IS CHEATING.”**

**The problem has obviously gotten so pervasive
that if you don’t cheat, you can’t stay competitive.**

**These trainers are the industry’s best. If they
have to cheat to win, imagine how serious the
problem must be.”**

<http://e-ponies.com/blog/index.php/trouble-in-the-horse-racing-business/5417>

TWENTY YEARS AGO THE WORD “BLOG” DIDN'T EXIST

Unfortunately, this same public opinion did.

Advances in testing protocols and an attempt to implement much of the McKinsey Report has not lead to a shift in public opinion.

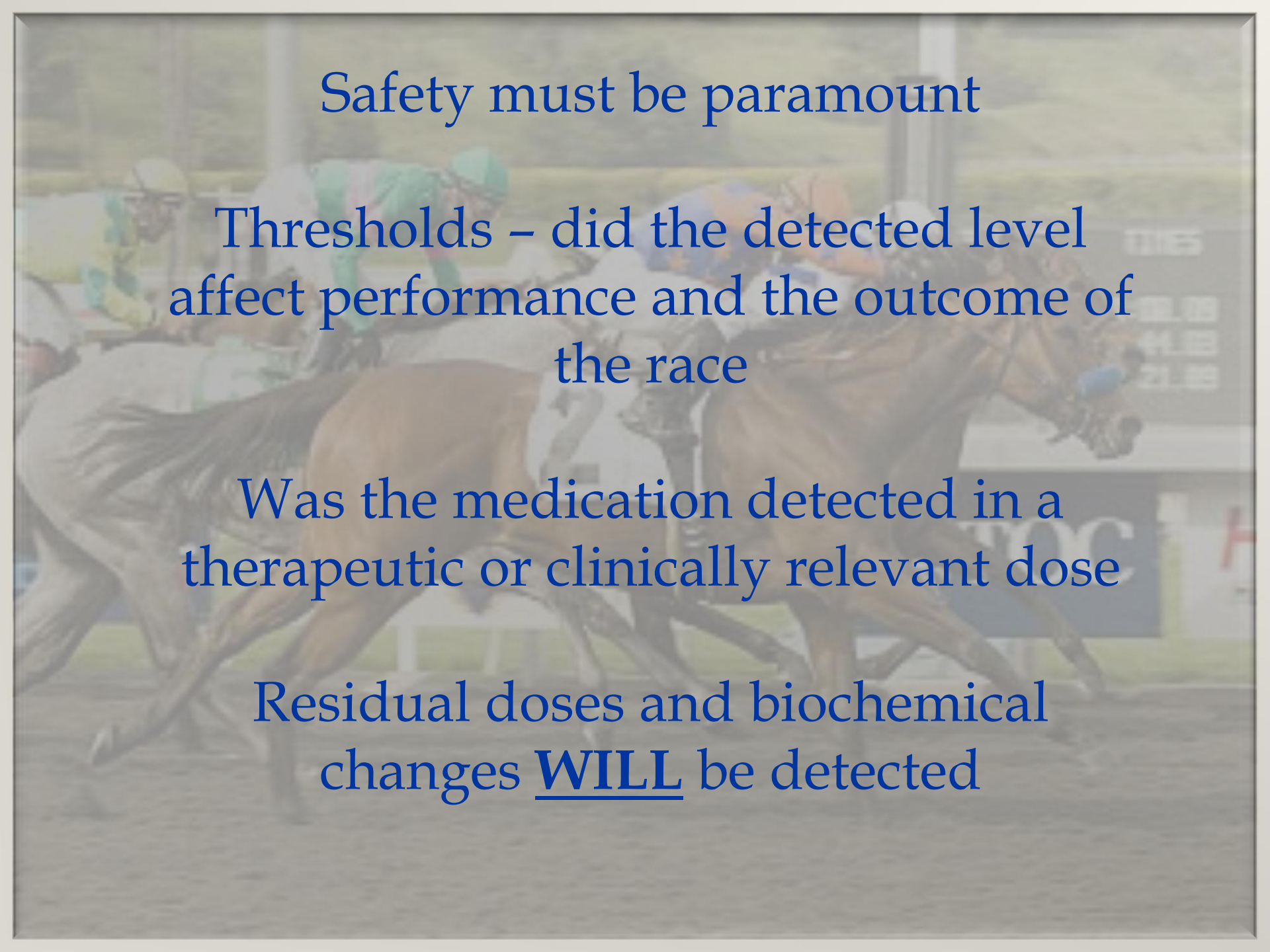
We need to do more, but something different.

Are medication rules to be based on scientific facts and medical knowledge or the pressures of public opinion?

No correct answer...we don't operate in a vacuum

We are not entitled to a fan base, we are no longer the sole source of gaming.

We must earn our fans, entice our fans, grow our fans and gain the trust of our fans with every single day of racing.

A background image of a horse race. Several horses and jockeys are visible, competing on a track. The image is slightly faded to allow the text to be read clearly.

Safety must be paramount

Thresholds – did the detected level
affect performance and the outcome of
the race

Was the medication detected in a
therapeutic or clinically relevant dose

Residual doses and biochemical
changes WILL be detected

Testing Has Come A Long Way



We now routinely test for nanogram quantities (parts per billion)

- ▣ One part per billion (**ppb**) denotes one part per 1,000,000,000 parts and a value of 1×10^{-9} .
- ▣ This is equivalent to one drop of water diluted into 250 chemical drums (**13,750 gallons**), or **about three seconds out of a century**.

BUTE AS AN EXAMPLE

Hypothesis: the current allowable level of 5 ug/ml interferes with pre-race exams

Therefore Bute is dangerous

Lowering the allowable post-race level should lead to improved safety, but may lead to more bad PR through inadvertent positives

Dr. Keegan's study -- 2008

“...there is scant objective evidence that a combination treatment with phenylbutazone and flunixin meglumine allows horses with lameness to perform as if they were sound such that veterinary inspection is compromised...”

Discussing study horses with lameness grades of 1 – 3 that were treated with PBZ alone or with PBZ + Banamine and the level of PBZ ranged from .28 – 8.58 ug/ml (mean 3.6 ug/ml).

“...neither treatment regimen was successful at completely masking lameness.” In fact, “ Five horses had an increase in lameness after both NSAID treatment regimens.”

Phenylbutazone: Minimum Therapeutic Level



➤ 7 ug/ml Dr. Eduardo Jenny 1979
Journal of Veterinary Pharmacology and Therapeutics

➤ Effective PC 4.44 – 11.25 ug/ml
based on calculations by Dr. Toutain EVJ 34 (3) 2002

➤ 5 ug/ml Dr. Scott Stanley 2010
Comment at CHRB Medication Committee Meeting
(Discussing the level at which analgesia begins)

➤ CT Duration 14 – 16 hours
Toutain et al J Vet Pharmacol Ther 1994

Are High PBZ Levels a Problem in California?

- More than 80% of California horses have $< 2 \text{ ug/ml}$ of PBZ in the post-race sample.
- More than 90% have $< 3 \text{ ug/ml}$.
- The current 5 ug/ml PBZ rule established an allowable level that is below any stated analgesic threshold of PBZ so that horses are not racing on pain-killing dosages. This level provides a safety margin to avoid inadvertent positives.

Twenty horses - 2 g of Bute IV

At 24 hours – mean level was .955 ug/ml

Highest concentration 1.65 ug/ml

Standard deviation .358 ug/ml

Regulatory level - highest concentration + 3x the standard deviation = 2.7 ug/ml.

My interpretation - Bute should no longer be considered an approved 24 hour medication

Dr. Scot Waterman, RMTC Executive Director

From members of our industry you will hear statements like:

90% of horses suffering CMI have a chronic component to the injury.

Why are our regulatory veterinarians missing these chronic conditions?



“The clinical signs preceding fracture development may be subtle and difficult to detect.”

Dr. Sue Stover 's Testimony for The U.S. House of Representatives , Subcommittee on Commerce, Trade, and Consumer Protection , June 19, 2008



“Consequently, a decrease in performance is usually apparent instead of a distinct unilateral limb lameness.”

STRESS FRACTURES IN ATHLETIC HORSES: A CAUSE OF CATASTROPHIC INJURY
Susan M. Stover, DVM, PhD, Dipl ACVS

Do Regulatory Veterinarians Actually Identify Pre-existing Conditions?



Dr. Cohen's studies in Kentucky demonstrated the effectiveness of pre-race exams:

- Injured horses are 5.3X more likely to be identified as being in the high risk group during pre-race exams.
- Regulatory veterinarians identified areas of concern on far more horses than were actually injured during the study period – *exams demonstrate sensitivity, but not time specificity.*
- Overall injury rate was 4.4/1,000 starts
- 834 horses at greater risk made 1,614 starts and 26 were injured – 16.1/1,000 starts -- 4X the overall rate.
- Horses found to have fetlock, suspensory or tendon abnormalities were 2.4, 3.4 and 15 times more likely to be injured than normal horses.

Can Anyone Predict When An Injury Will Actually Occur?



So Why The Change

No one can ever say that using less Bute will cause MORE interference with pre-race exams.

If this decision will improve the safety of racing and/or improve the public opinion of racing, then we should all stand firmly behind it.

But we need to be honest, we need to understand why we do what we do. We have to stop saying these changes are based in science.

We MUST be aware of the unintended consequences of our actions such as inadvertent positives.

NASCAR Too Safe



NSAID's clearly not part of the WADA
prohibited medication list

Utilize clear medical guidelines for use of
corticosteroids and beta-2 agonists
(asthma meds - bronchodilators)

Salbutamol = Albuterol

Salmeterol = Serevent

Salbutamol (maximum 1600 micrograms over 24 hours)
and Salmeterol when taken by inhalation in accordance
with the manufacturers' recommended therapeutic
regime.

<http://www.fei.org/veterinary/fei-nsaid-congress-day-1/martial-saugy>

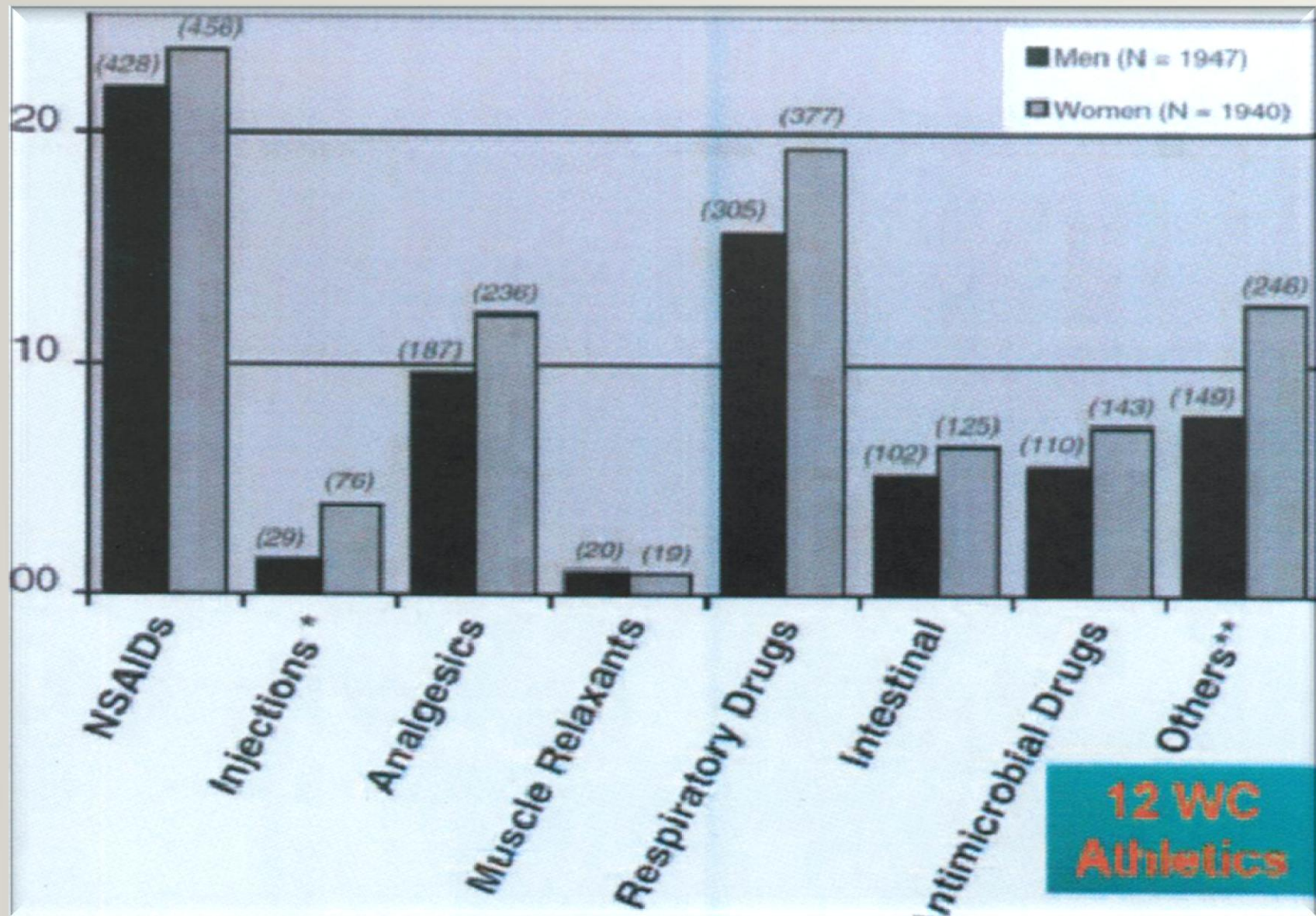




Figure 1 Prescribed medication during FIFA World Cup 2002 and 2006

Percentage of Athletes in each Sport taking Asthma Medications

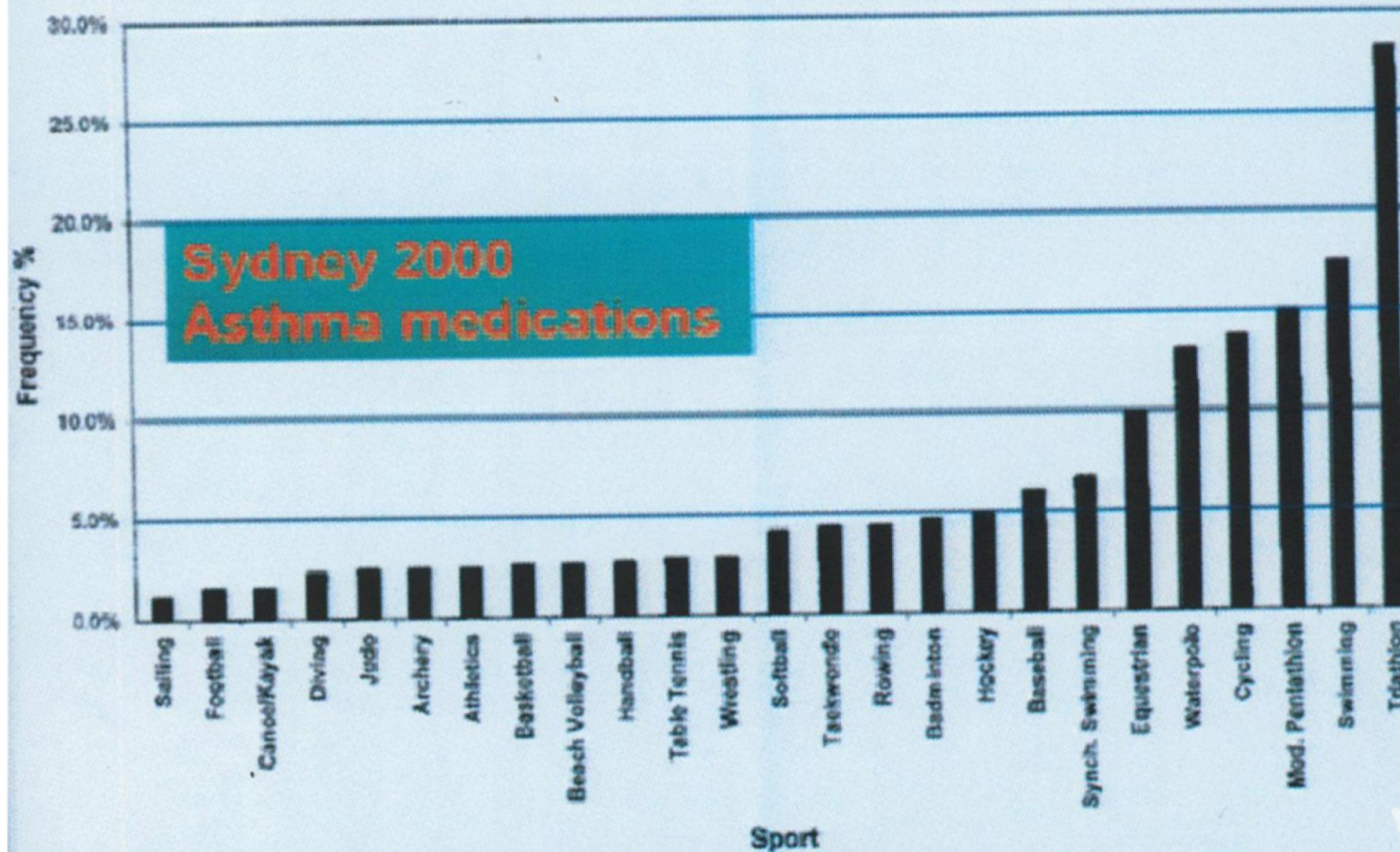
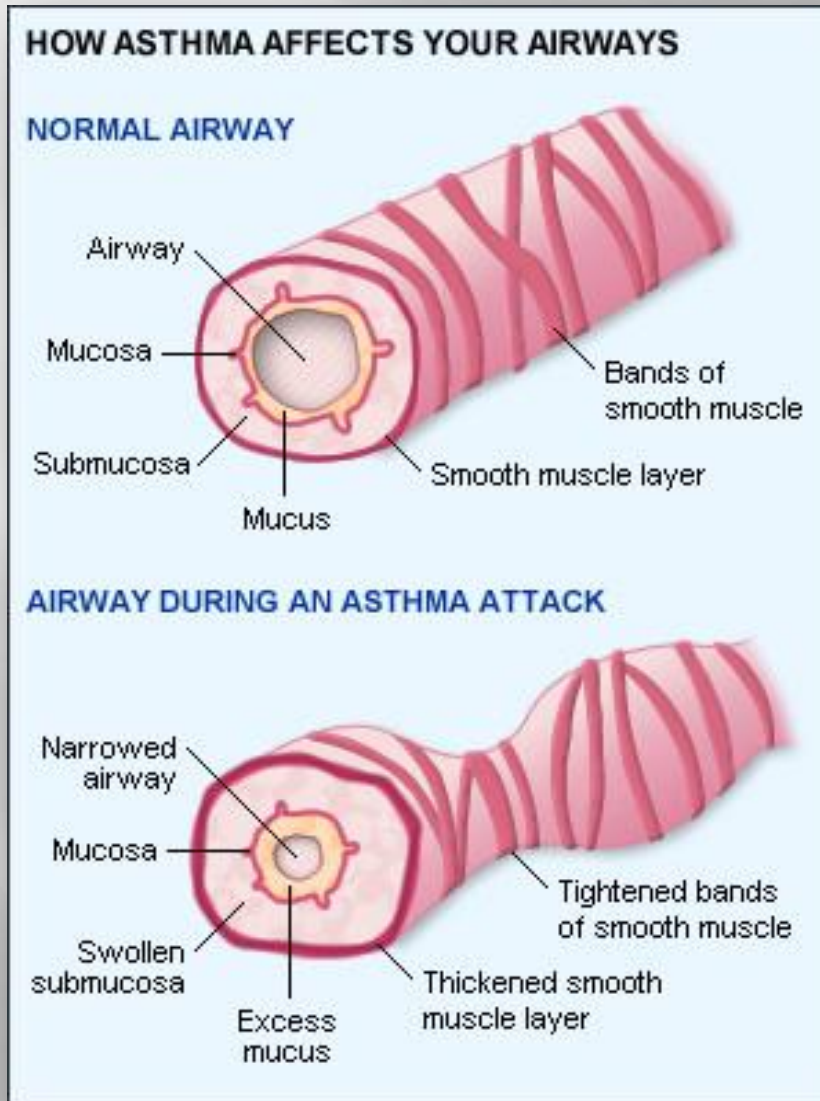


FIG. 3. Number of athletes in each sport declaring asthma medication expressed as a percentage of athletes in each sport.

What other conditions might we treat close to a race?



Asthma

Muscle Soreness

Foot Pain

Spasmodic Colic

Skin Disease

Cough

Public Opinion

Can the public distinguish between inadvertent positives and illegal drugging - an intentional attempt at enhancing performance?

NO! ...or at least not always.

The large number of medications shown to be utilized by human athletes during the highest levels of competition do not result in regulatory action.

Are our PR problems self-inflicted?

Adversarial relationship between regulators and industry participants. Do they catch 'Bad' guys or inadvertent positives?

Dr. Scott Stanley

“Forensic equine drug testing has...(a) sensitivity of parts per trillion for many analytes.

This highly sensitive testing has provided a strong deterrent to and increased the integrity of the racing industry.

The coinciding detection of equally small amounts of therapeutic drugs, however, has resulted in numerous violations that previously would have been undetected.”

- One part per trillion is equivalent to one drop of water diluted into 20 Olympic-size swimming pools.
- Or about three seconds out of every hundred thousand years.

Racing is on a precipice.
We MUST look before we leap!!
Every decision matters.



Targeted Policing

Better testing has NOT improved public opinion.

I seriously doubt if uniform rules and standardized penalties will help our PR.

What else can we try?

When are the medications causing most positives administered?

Sequester the animals prior to this time -- utilize 24-48 hour detention barns/stalls with guards, video surveillance. All persons entering are subject to search. All medications to be administered must be checked in or administered by regulatory veterinarians (liability issues).

Summary of the McKinsey Report

1. Improve racing's appeal in the marketplace
2. Improve the economic conditions for owners, breeders and race tracks
3. Contain costs associated with combating drug abuse
4. Improve the results gained from these expenditures to increase the systems effectiveness
5. Improve the discovery of illegal drug usage
6. Standardize rules and how penalties are applied to improve deterrent capabilities

What Do We Do??

Back to the beginning -- Page 1 of the McKinsey Report:

Concentrate on the issues YOU can control or at least actively contribute to.

- Improve appeal in the marketplace.
- Improve economic conditions for owners, breeders and tracks.

New Sources of Income

- It's YOUR product – you can't wait for racetrack management to solve your problems
- Leagues and TV revenue
- Sports Books -- state and federal lobbyists
- Internet and Social Media Campaigns
- Jockey Club Study

We Can't Afford To Be Left Behind



What we can do and what we
should do simply don't matter.

What we choose to do
is everything.

We must choose well.