Epilepsy and Driving
The Argument Against Mandatory Provider Reporting
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Disclosure

• Voluntary Medical Review Board
  – Arizona MVD (non-compensated)
    • Advise on Driving Law Policy
    • Review Occasional Individual Appeals

• First reported car crash due to seizure, shortly thereafter PWE restricted from driving. (1906) Thalwitzer
Potential Consequences

- Criminal:

- Civil:

- Personal:
Mandatory Provider Reporting

- **USA**
  - CA, OR, NJ, NV, PA, DE
- **Canada**
  - Approx. 8 provinces
- **EU**
  - CZ, Norway, Sweden
    - UK +/- others?
- **Japan**
- **Others**
  - Note: still countries that do not allow driving after a single seizure: e.g.
  - India law passed 1939
Driving Laws are Heterogeneous! (1)

- Canada
- Europe
- USA
- Oceana
- Asia
- South America…

- Know your local laws……
  - Epilepsy Foundation Website-USA

1 Fisher, Epilepsia, 2005
Presumed Goal of Driving Laws: Public Safety.

Is the PWE a more dangerous Driver?

- Some say **YES**: Perhaps 2 X’s the risk. \((2,3,4)\)
  - Same risk factors for any crash
    - Male, drug/alcohol user, unmarried, <25 y/o
    - Some people are **POOR** Drivers

- Some say **NO**: \((5-10)\)
  - “women with epilepsy less risk than males without epilepsy” \((11,12)\)

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Medically (Epilepsy) Related Crashes: Who Cares?

• The Public/Driving Authorities
• The Person with Epilepsy…..
  • Number one issue concerning PWE
    – (Gilliam et.al. Epilepsia 1997;38: 233-236)
  • Lack of Driving Impairs QOL (13)
  • PWE NOT truthful: fear of loosing driving priv. (14)
• The Practitioner
  – Primary Concern: The PWE vs. Public Safety

13 Fisher RS, Epilepsy Behav 2000; 14 Salinsky MC, Epilepsia, May-June 1992
How Big is the Issue?

• **NTSA (USA) facts** (15):
  - Miles Driven 2,926 (billion)
  - Crash Injuries- 2,346,000
  - Deaths from MVA- 37,261 (2008)

• **PWE Involved Crashes**: 11% due to szr. (16)

• **Epilepsy Caused Crashes**: 0.01- 0.1% (17-18)

• **Fatalities due to Crash**: NTSA (15)
  - 0.7% “passed out/blackout” (likely inc. Szr)
  - “Sleepiness”: 1-3% → 2-4 X’s higher
  - Alcohol: 38% → 54 X’s higher

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Crash Risk in PWE vs. “Other medical conditions”

• “Medical” Conditions with comparable or higher Estimated Crash Risk (19-26)
  – Age: <25 and > 74; but really >85 years
  – Sleep Apnea
  – Abnormal Vision
  – Cardiac Arrhythmia
  – Parkinson’s Disease
  – Dementia
  – Diabetes
  – Being MALE! ……others

Driving Laws for PWE

Role of the Practitioner?
– Providers become “Lawyers”: Quality measures
– How good are we at counseling?
  • What we tell them:
    – ER (Shareef, Draz, Epilepsy Behav 2009)
    – Neurologist 66%; Other practitioners <15%
  • PWE: What they hear.
    – Epilepsy Clinic: New Pt’s (Draz, Neiman, Epilepsy Behav 2010)
    – Reporting State (NJ) vs. Non-Reporting State (AZ)
      » Az 52% vs. NJ 35% previous counseling
    – Approx. 10% (AZ) vs. 4% NJ continue to drive AMA
    – PWE: 2/3rds Felt they were “safe to drive”
  • New onset seizure: 19% correct advice
    – (Edmondstone WM, JR Coll Physicians Lond 1995)
– Would a driving Bureaucrat be better?
Specific Studies

• “Impact of Mandatory Physician Reporting on Accident Risk in Epilepsy.”
  McLachlan et. al. Epilepsia 2007; 48:1500-1505
  • Increased # of PWE “known to driving authorities”.
  • NOT reduce crash rate or improve public Safety

• Impairs Physician-Patient relationship.
  • Salinsky et. Al. (neuro) (Epilepsia May-Jun 1992)
  • Dickey et. Al. (neuro) (J R Soc Med 1993)
  • Dalrymple et. Al. (GP) (BMJ 2000)
  • Taylor et. al. all above ER (QJM 2005)
  • Krumholz A. et al. #1 (JAMA, 1991)

• More Crashes from suboptimal care? ……
Opposed to Mandatory Reporting

- Epilepsy Foundation of America (EFA)
- American Academy of Neurology (AAN)
- American Epilepsy Society (AES)
- European Driving Consortium (EDC)

Caveat: reporting with immunity should be allowed, if the patient is felt to be **endangering public safety** by driving.
Stigmata in Epilepsy

Stigmatizing Laws for PWE: 1960’s (30)

- marriage and sterilization Laws: 14 states

- U.S. Immigration laws prohibited entrance to “Aliens afflicted with psychopathic personality, EPILEPSY and Mental Defect”.

- Eight states w/ mandatory reporting driving
  • CA, Conn, Del, MT, Indiana, NJ, NV, OR

30 Livingston S, Arch Environ Health 1965
Progress?

• …”there still remain restrictive measures which are definitely **unjustifiable** and should be considered **discriminatory**, since they are not based upon **sound medical principles or current medical knowledge.**”

– Samuel Livingston MD, Johns Hopkins Epilepsy Clinic. Arch, Environmental Health Vol. 10 march 1965
Conclusions
Mandatory Reporting Laws

• Encourages
  – Adversarial Patient-Doctor relationship

• Ineffective:
  – Impairs Patient Care + Safety

• Conflict with recommendations
  – AES, AAN, EFA and EDC

• Discriminatory:
  – others w/ comparable or higher risk: allowed to drive!

• Antiquated

• EDC: “It is a very Bad Rule.”
Rebuttal ......
A casino worker blacks out in Atlantic City NJ. He is evaluated in a local ER. (“mandatory reporting” state).
An Old Idea……

• “All that may come to my knowledge in the exercise of my profession or in daily commerce with men, which ought not to be spread abroad, I will keep secret and will never reveal.”

– Hippocrates
Stay Safe out there!

- Reminder to Nonmembers: Please sign up at the registration booth or online to become an AES member.