

Use of the Psychomotor Vigilance Test (PVT) to Assess Alertness/Impairment

Energy lives here™

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Psychomotor Impairment: Multiple Causes, Same Results

The 4 Ds

Drugged



Drunk



Drowsy



Diseased



Fitness for Work: Importance of Making the Right Call

- Allowing an unfit employee to continue safety sensitive work may put the employee and others at risk
- Preventing a fit employee from continuing safety sensitive work may:
 - Needlessly impact careers
 - Impact management's ability to staff critical roles
- The Psychomotor Vigilance Test can help get it right

What is Psychomotor Vigilance Testing (PVT)

- **A validated process to assess alertness**
- **Measures reaction time**
- **Sensitive to all factors that degrade alertness**
- **Does not determine cause of impairment**

PVT



PVT

217

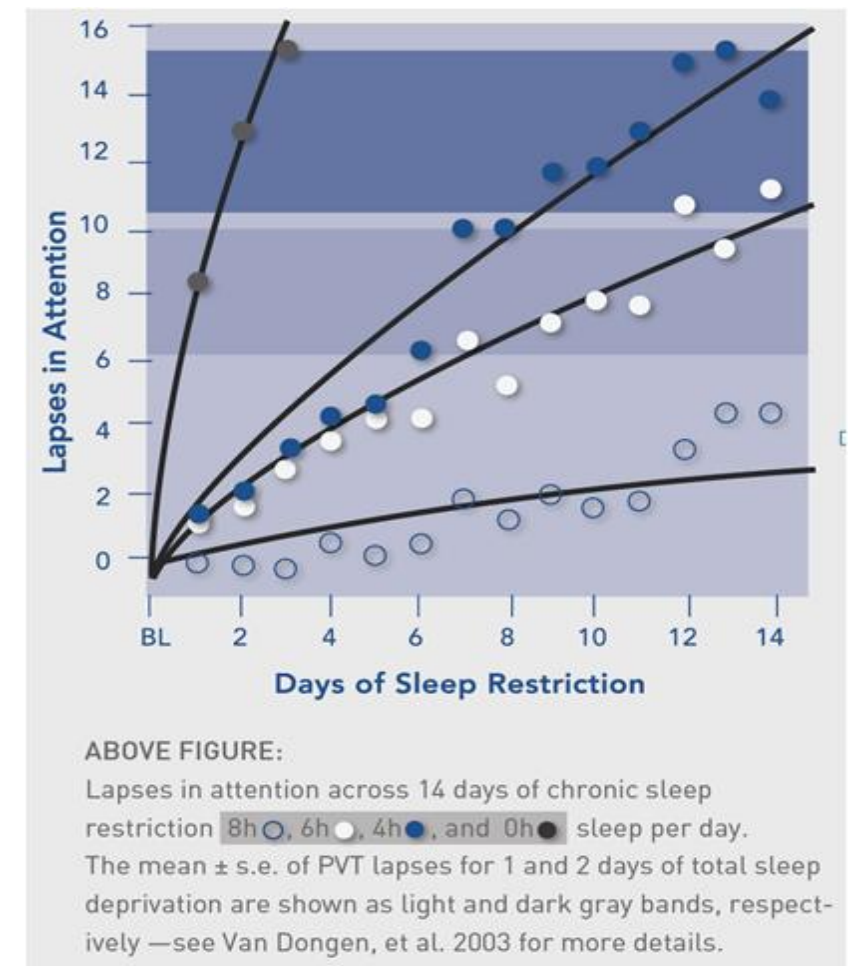
PVT



False start

Fitness for Work Threshold

- Deficits in the range of 8-12 lapses result from:
 - BAC = 0.04
 - 17 hrs of continuous wakefulness
 - 5 days of 4 hrs of sleep/night
- Stratify results into 3 tiers based on # errors:
 - 0 – 7 errors
 - ✓ Encourage efforts to remain alert
 - 8 – 11 errors:
 - ✓ Consider need for limitations
 - ✓ Counsel about techniques to maximize alertness
 - ✓ Consider need for further evaluation to identify and remediate issues impacting alertness
 - 12 or more errors:
 - ✓ Strongly consider issuing work limitations
 - ✓ Counsel employee about techniques to maximize alertness
 - ✓ Recommend further evaluation to identify and remediate issues impacting alertness



PVT Pilot: February – June, 2016

Population:

- 95 Employees in Safety Sensitive Positions during Mandatory Medical Examinations

Results:

- Clinic staff reported some usability issues, most resolved during the pilot
 - ✓ Some require modification of the App
 - ✓ Some can be addressed by enhanced training of clinic staff
- Acceptance among all stakeholders (employees, clinicians, management) high
- 3 employees deemed unfit for period ranging from 1 day to ~60 days
 - ✓ 1 underlying illness, 2 employees situational issues

Conclusions and Proposed Next Steps*

Conclusions

- The use of the PVT is feasible in an Occupational Health clinic setting
 - Modifications to the app and additional training would enhance usability and decrease time needed
- The results of the testing enhanced clinical decision-making
 - Identified fitness for work concerns
 - Led to identification of root causes resulting in
 - ✓ Return to full duty
 - ✓ Enhanced health & wellbeing

Next Steps

- Working with vendor to modify app to address usability concerns
- Enhance training for Clinic staff regarding administration and interpretation of the test
- Implement a phased deployment of this technology