



Non-prescriptive approaches to Fatigue Management

How alternate compliance models
were developed and implemented
in Australia 1995-2002



Historical issues

- Recognition that HOS rules lacked scientific basis
- Reluctance to develop complex regulatory rules that
 - reduced operational flexibility
 - Increased regulatory costs
 - Did not improve safety
- Realization that we needed to reduce risk not just fatigue



Strategic Plan

- Shift from an adversarial labor relations model to a 'neutral' Occupational Health and Safety model
 - Fatigue is viewed as an 'identified work place hazard' under OH&S legislation
 - All employees should be fit-for-work. Fatigue seen as a source of impairment same status as drugs and alcohol
 - Safety is a 'shared responsibility'
 - Safety is not negotiable



Strategic plan

- Decision to trade improved flexibility for improved safety. The 'Safety Case' model
 - Recognition that different operators have different risks
 - Recognition that a one-size-fits-all solution is unlikely to be practical
 - Responsibility for employer to demonstrate a 'safe system of work'
 - Responsibility of the regulator to define a safe system of work



Strategic Plan

- Decision that unilateral change was unlikely to be successful so a bi-lateral exchange strategy was proposed
 - Safe but not permitted was exchanged for
 - Unsafe but currently permitted



Strategic Plan

- Shift away from managing fatigue to managing the risks associated with fatigue
 - Traditional approach - Fatigue reduction
 - Additional approach - Fatigue -proofing



Methodology

- A consortium of operators, labor unions and researchers was formed to develop enabling technologies and policy
- The goal was to answer two questions-
 - How tired are our staff?
 - Incidence, prevalence of fatigue
 - How tired is too tired
 - To undertake a specific task



Outcomes

- A policy framework for alternate compliance to current HOS regulation
 - Within current HOS
 - Use current guidelines, no additional requirements
 - Outside current HOS
 - Show auditable fatigue management policies and programs in place that provide an equivalent or better level of safety than is currently in place under current HOS



Outcomes

- Training and education program for **all** relevant staff who work, or are responsible for, shift workers
 - ANTA accredited
 - Competency-based curricula delivered by TAFE certified trainers
 - Train-the-trainer model using peer support
 - Video/Workbook methodology and/or
 - On-line web-based module



Outcomes [how tired?]

- Quantitative, auditable modeling software to estimate the work-related fatigue associated with a given schedule
 - Any schedule that produced a fatigue 'compliance score' below threshold was considered acceptable
 - Regulator monitored both 'scheduled' and 'actual' work schedules where timetabling was in place



Outcomes [is too tired?]

- Risk guidelines on what level of fatigue was acceptable
 - Consistent with AS 4360 Risk management guidelines for likelihood and consequence
 - Disaggregated view of tasks
 - Consultative
 - Consistent with best scientific advice
 - Scientific Advisory panel
 - Initial simulator studies in freight and transit
 - Linkage of fatigue models with on-road performance data
 - Linkage with on-road accident and incident data



Outcomes

- Industry wide agreement on how fatigue management should operate
- Basis of safety case for introduction of
 - Aggregate wage/hourly pay rates
 - Extended shifts to reduce re-crew rate
 - Relay van work across Melbourne, Adelaide - Perth corridor [2500k]



Questions?
