

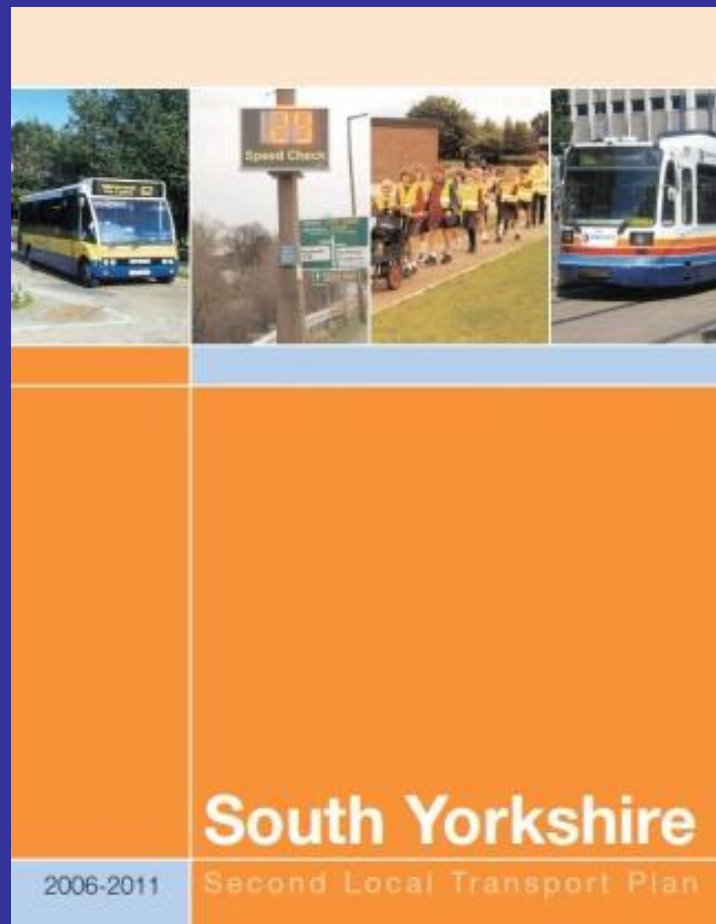
# Predicting Causes Maximising Interventions

## The South Yorkshire Approach

Stuart Walne, Chief Inspector Roads Policing  
Ken Wheat, Safer Roads Partnership Manager

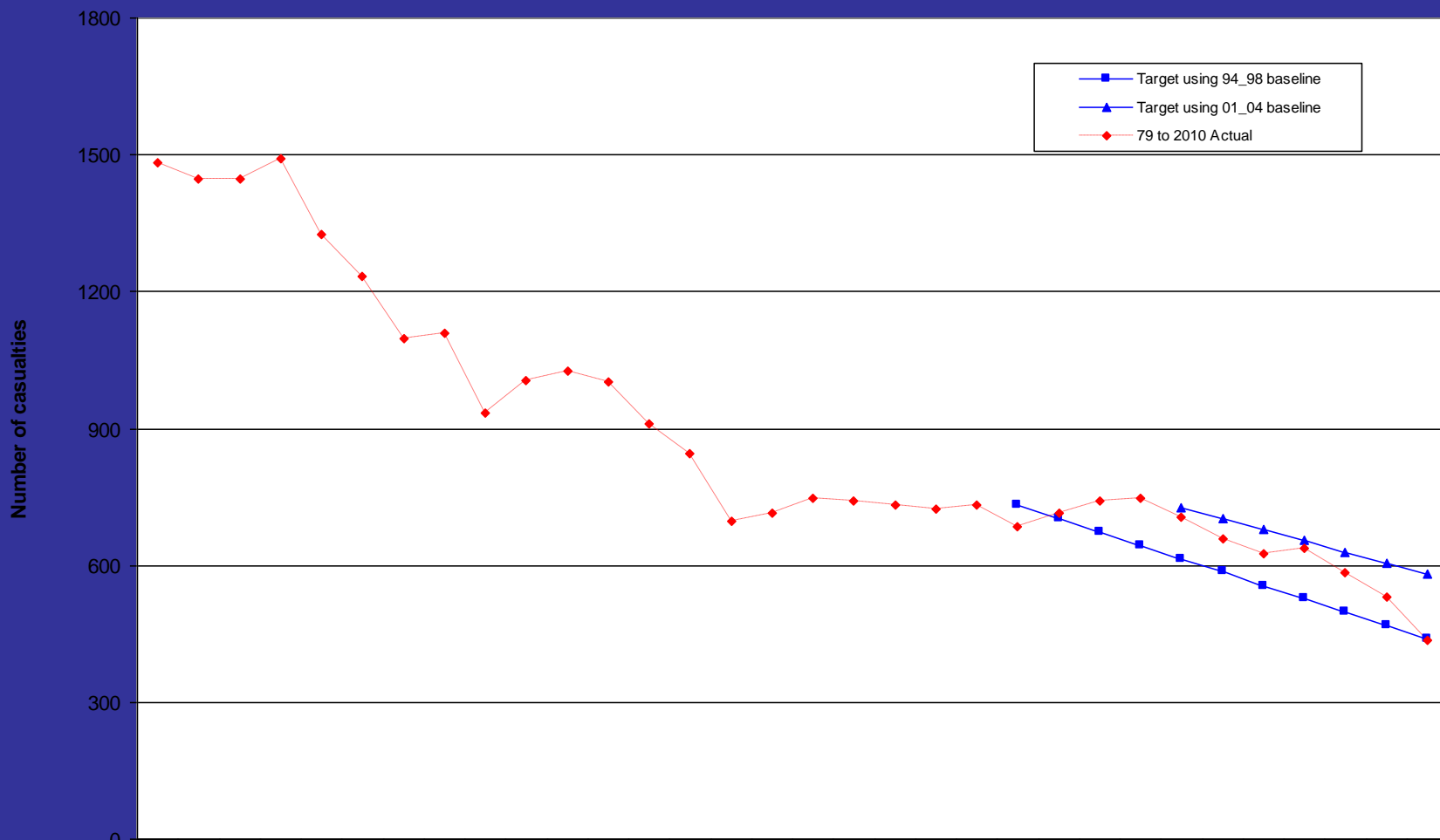
- ◆ Statutory responsibility
- ◆ Prevent future collisions
  - Learn from current success
  - Apply Problem solving
- ◆ Findings that led to current research
- ◆ Outputs and the future

- ◆ Crime Problem Solving Approach to Safer Roads
- ◆ Road Safety Statutory Duty lies with Local Authorities
- ◆ Funding through Local Transport Plan and variety of revenue sources
- ◆ Coordination of activity across Engineering, Education and Enforcement



## South Yorkshire Context

- ◆ Large Metropolitan area at heart of Country
- ◆ 1 major city, 3 large towns but rural roads and Peak District National Park
- ◆ Significant lengths of heavily trafficked Motorways
- ◆ East/West Trans-Pennine and Humber Ports Traffic
- ◆ Objective 1 status in 2001: Recovering economy
- ◆ Significant areas with high indices of multiple deprivation
- ◆ Strong, vigorous Safer Roads Partnership



	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Target using 94_98 baseline																						732	703	673	644	615	586	556	527	498	468	439
Target using 01_04 baseline																										727	703	679	654	630	606	582
79 to 2010 Actual	1482	1446	1447	1493	1326	1234	1098	1108	935	1004	1025	1002	909	845	696	715	746	742	731	725	733	686	715	740	748	705	658	626	639	585	530	435

## Safer Roads Partnership

- ◆ Reinforced - Partnership approach, visibility & commitment
- ◆ Restructured - Strategic – Operational - Tactical – Levels
  - Gold - SRP - Aligned SRP to Crime & Disorder Structures
  - Silver – Tactical Group – Managing Delivery
  - Bronze – Delivery of Tactic (e.g. Safety Cameras, Engineering Groups, Educational Practitioners)

**What's missing?**

## Safer Roads Partnership

- ◆ Incomplete analytical profile ?
- ◆ Gold SRP strategy not fully informed ?
- ◆ Silver Tactical Group - resource targeting not fully informed:
  - Focus on location/time & victim
  - Imbalanced approach to Education, Engineering & Enforcement
  - Best use of resources?
  - Predictive capability
  - Insufficient analysis

## Assess Proven Crime Reduction

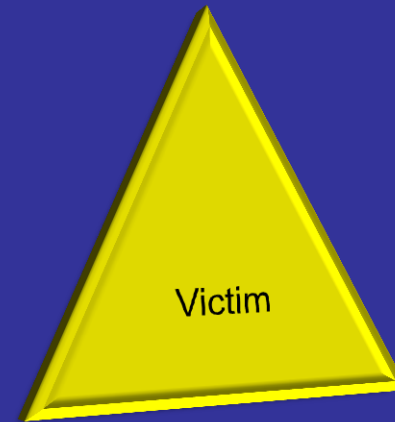
### Processes & Products

- ◆ Problem Solving Triangle
- ◆ Core elements for KSIs
- ◆ Data Collection
- ◆ Data Analysis
- ◆ Causation Factors
- ◆ Predictive Capability
- ◆ Better targeted resources
- ◆ Safer Roads?



## Over Focus - Victim

- ◆ Age
- ◆ Medical
- ◆ Activity at time of collision



- ❖ which innocent party is most vulnerable ?



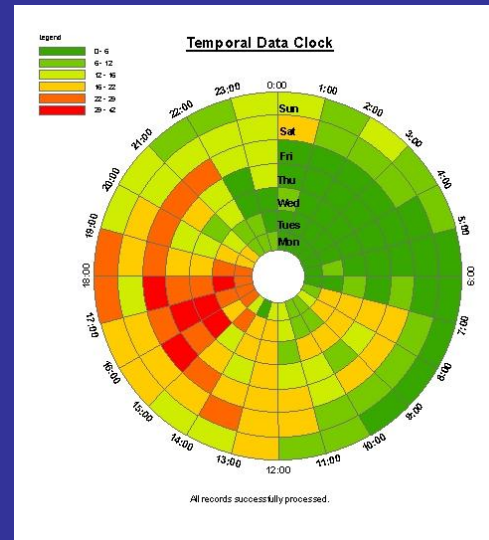
## Over Focus – Location

- ◆ *'Its not the trees fault ! '*
- ◆ *Incomplete data*
- ❖ identify hazards

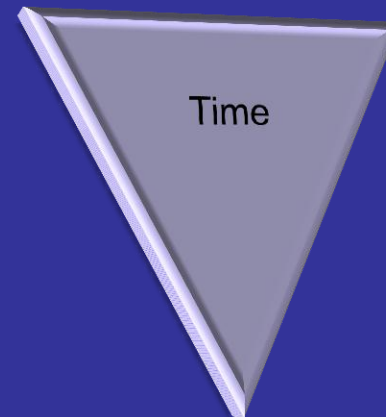


## Over Focus – Time

- ◆ Time of day
- ◆ Day of week
- ◆ Month of year



When is the risk highest ?



## Under Focus – RTC Perpetrator(s)

- ◆ Behavioural profiling
- ◆ Driver profiling
- ◆ Offender Profiling
- ◆ Criminal Profiling

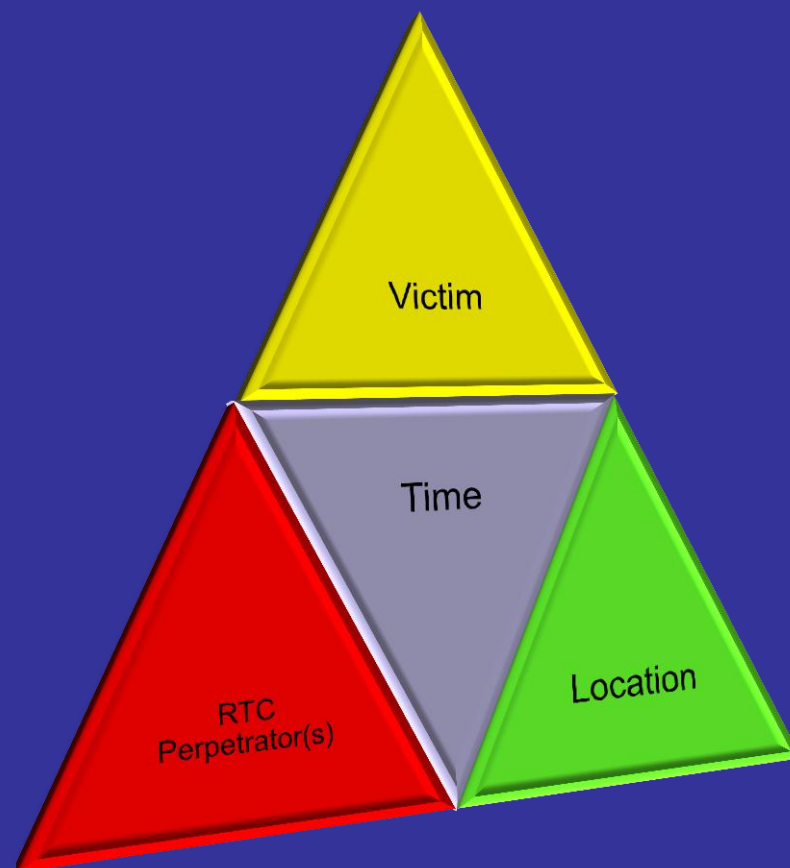
**Predictable ?**

RTC  
Perpetrator(s)



## Bringing it all Back Together

- ◆ Missed opportunities
- ◆ Incorrect intervention
- ◆ Reduced outcome?



## CASE STUDY : 1.

**Reference:** K / 1538 / 2008.

**Date :** 29/08/2008. **Time :** 01:54.

**Location :** Abbey Lane, Sheffield. (Single Carriageway).

### Collision Circumstances:

Black VW Golf travelling at speed along Abbey Lane. For unknown reason vehicle has gone onto offside of carriageway (wrong side of bollards), hit a kerb then a tree, rotated, finally hitting another tree and ejecting 2 passengers. Third passenger remained in rear of vehicle. Driver and front seat passenger fled scene.

### Collision Outcome:

VW Golf (Hire Car).

### Driver Arrested for :

Death by Dangerous Driving.  
FTS / FTR Accident.  
Driving Otherwise in  
Accordance with Dr. Lic.  
No Insurance.

### VEHICLE / DRIVER :

- DRIVING LICENCE.
- INSURANCE.

### ABBREVIATED PNC RECORD:

**MARKERS:**  
FIREARMS / WEAPONS DRUGS /  
ESCAPER / VIOLENT.

**Since Dec 1994:**  
55 Offences.  
14 Convictions.  
5 Cautions.

**Offences:**  
Att MURDER. / FIREARMS.  
DRUGS. / Agg. BURGLARY.  
THEFT. / ASSAULT.  
BREACH of ORDER.

**Traffic Offences:**  
FT Provide (x5) / No INS (x1) /  
Disqualified Driving (x2) / OPL.

### Collision Outcome:

### CASUALTIES:

- 1) Rear Pass. : F 22 yrs.  
FATAL.
- 2) Rear Pass. : F 22 yrs.  
L/Threatening.
- 3) Rear Pass. : M 30 yrs.  
L/Threatening.

### ABBREVIATED PNC RECORD:

- 1) None.
- 2) Theft (03) / Wounding (05) - NFA.
- 3) Weapon in Public (90) : Caution.  
Murder (94) Guilty : Released (07).

### Post Collision :

Hire Car Company confirmed hire contract/insurance not to driver involved in RTC.

Nominal fled scene after collision & remained in hiding for 3 months.

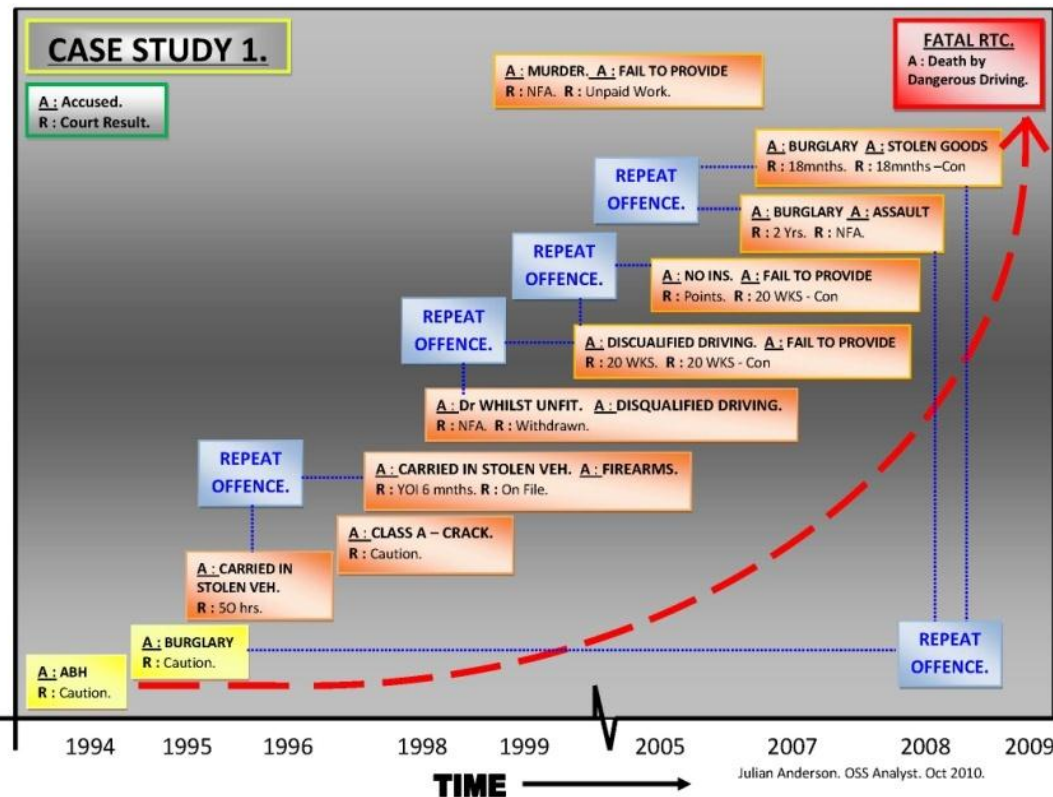
Subsequent time-consuming investigation led to apprehension & successful conviction of subject.

Vehicle scrapped.

## CASE STUDY 1.

A : Accused.  
R : Court Result.

OFFENCE



## CASE STUDY : 3.

**Reference:** K / 2589 / 2010.

**Date :** 29/09/2010. **Time :** 22:25.

**Location :** Hemsworth Rd, Norton, Sheffield. (Single Carriageway).

### Collision Circumstances:

Mercedes taken from father's car lot to go drinking. Nissan Micra and Mercedes (Dr: Male 35 yrs) travel along Hemsworth Road. Harley Davidson (Rider: Male 51yrs) travelling in opposite direction. Mercedes overtakes Micra and whilst on wrong side of road, collides with Harley Davidson causing FATAL injuries to rider.

### Collision Outcome:

Mercedes C200  
Driver : OPL at Scene.

**Arrested for :**  
Death by Dangerous Driving.  
OPL.  
Expired Prov. Driving Lic.  
No Insurance.  
(TWOC).

### VEHICLE / DRIVER:

- DRIVING LICENCE.
- INSURANCE.

### ABBREVIATED PNC RECORD:

#### MARKERS:

DRUGS / Offences on Bail.

**Since August 1994:**

15 Offences.  
8 Convictions.

#### Offences:

DRUGS

(Amphetamine / Cannabis)  
Abusive Behaviour  
Failing to Surrender  
Breach of Community Order

#### Traffic Offences:

OPL (x2) / No INS (x2) /  
Disqualified Driving / TWOC.

### Collision Outcome:

Harley Davidson

Rider : Pronounced Dead at Scene.

### VEHICLE / DRIVER:

- DRIVING LICENCE.
- INSURANCE.

### ABBREVIATED PNC RECORD:

None.

### 2008 Incident:

Vehicle taken from father's car lot.

Vehicle stopped and Driver Arrested for:

- OPL.
- Provisional Driving Licence.
- No Insurance.
- TWOC.

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## CASE STUDY 3.

A: Accused.  
R: Court Result.

ALMOST IDENTICAL INCIDENT/ARRESTS OTHER THAN RTC.

FATAL RTC.  
A: Death by Dangerous Driving.

A: OPL.  
R: Disq. 16mths.  
A: NO INS.  
R: Nothing.

A: Dr. Lic. Off.  
R: Dr. Lic. End.  
A: TWOC.  
R: Nothing.

A: Disq. Dr.  
R: Lic. End.  
A: Breach Or.  
R: Fine.

REPEAT OFFENCE.

A: NO INS.  
R: Lic. End.  
A: Poss. Class B.  
R: Community Or.

REPEAT OFFENCE.

REPEAT OFFENCE.

A: OPL.  
R: Disq. 12mths.

REPEAT OFFENCE.

A: Poss. Class B.  
R: Discharge.

A: Poss. Class B [x3].  
R: Fines x3.

1994

1995

1996

2008

2010

TIME

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## Initial Findings, Fatal collisions 2005-7

- ◆ 85% of drivers involved in fatal RTCs are male
- ◆ 60% of motorcyclists had an intelligence entry, as did:
  - ◆ 55% of drivers in collisions involving pedestrians
  - ◆ 46% of drivers deemed to be at fault
  - ◆ 33% of driver fatalities
- ◆ You are 50% more likely to kill/be killed if involved in criminality
- ◆ Results support research for Fatal collisions
- ◆ Entries on PNC ranged from murder to disqualified driving

**A Regional Overview of  
Fatal RTC's  
2005 – 2007.**

**Version 1. RESTRICTED.**



Requesting Officer – Chief Inspector Bint, RPG - South Yorkshire Police.

Mr Julian Anderson, Intelligence Analyst – OSS Analyst.

**Please Note:**  
This report contains un-audited data and figures. ANY onward dissemination must be authorised by SYP – Chief Inspector RPG.

## Outputs and Outcomes

- ◆ A tool to record relevant data
- ◆ Academic resilience and statistical rigour
- ◆ Predictive Analysis > Strategic Assessment > Preventative Tactical Plans
- ◆ Identifying interventions
- ◆ Effective use of resources
- ◆ Reduced Casualties/Safer Communities
- ◆ Savings (cash and resources)
- ◆ Reducing criminality?

# Questions?

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