



Raising Standards in UK Policy Evaluations with RCTs

HM Treasury, 6 October 2008



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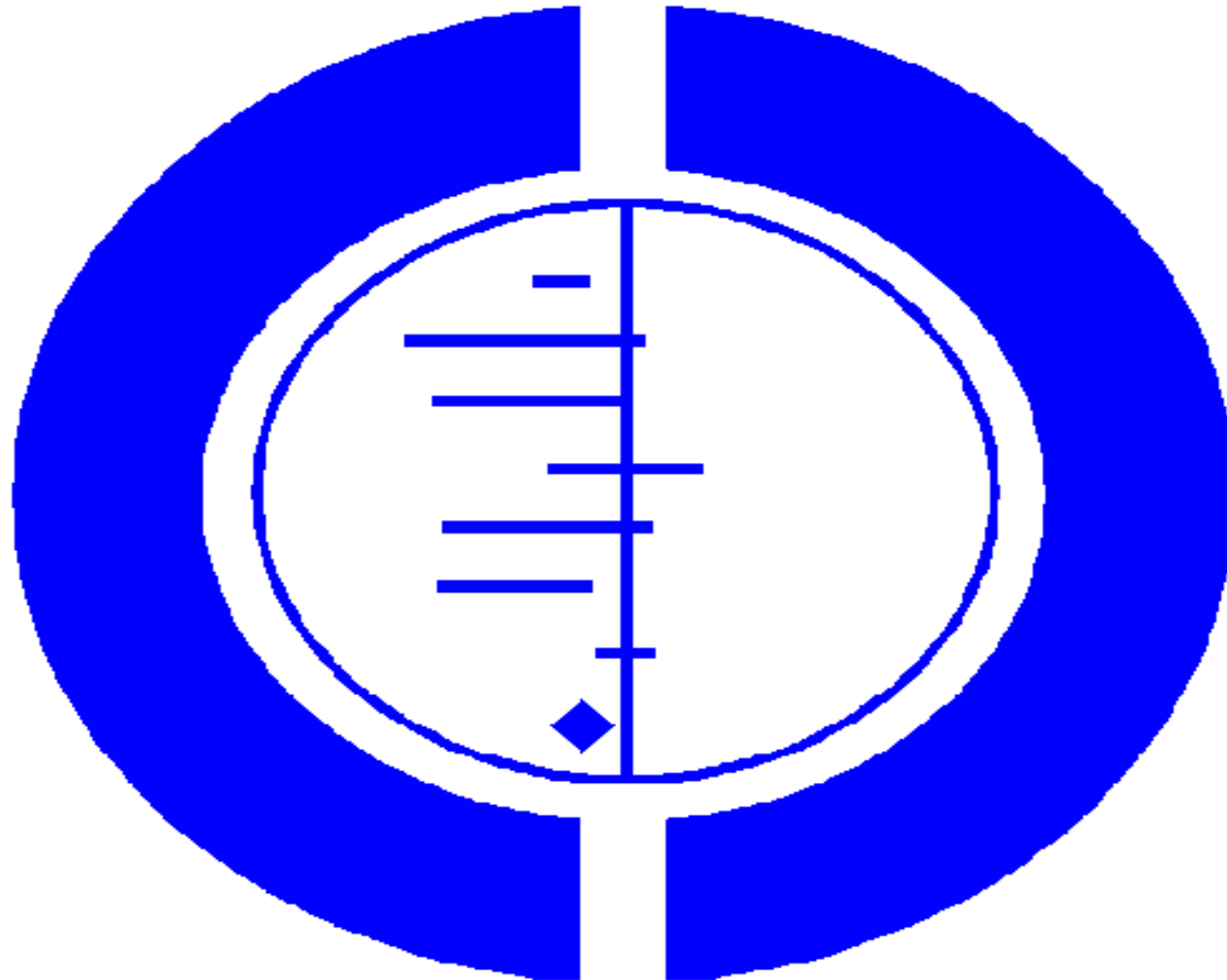


Yes We Can!

- Do RCTs in UK policy
- Criminal Justice
- After 30 year hiatus
- Prospective Meta-Analysis
- Research Synthesis

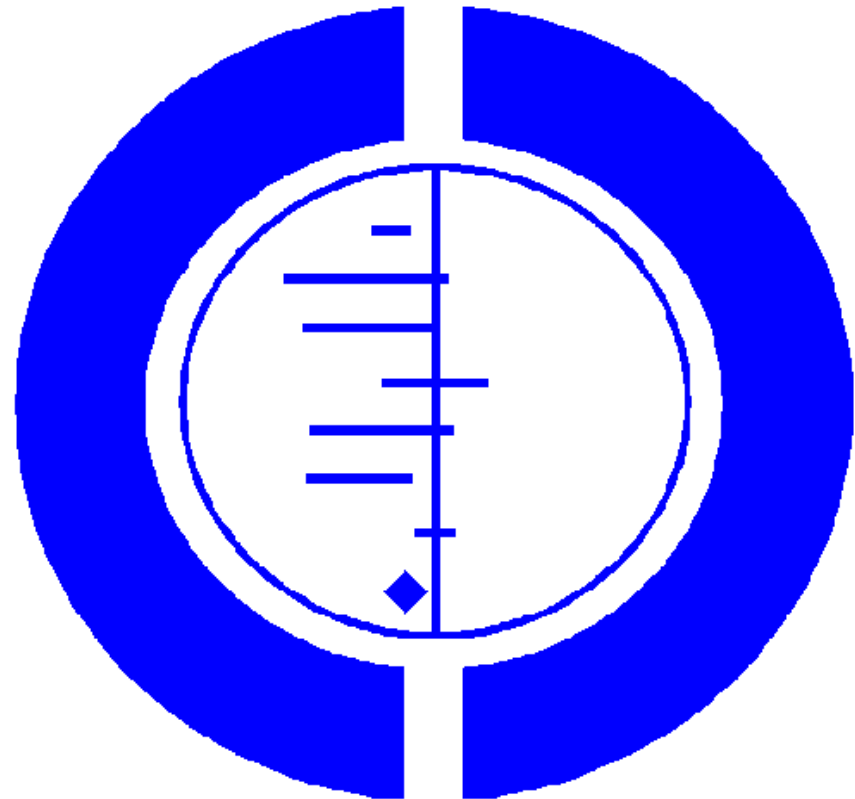


7 Randomized Controlled Trials (RCTs) of Infant Mortality Drug

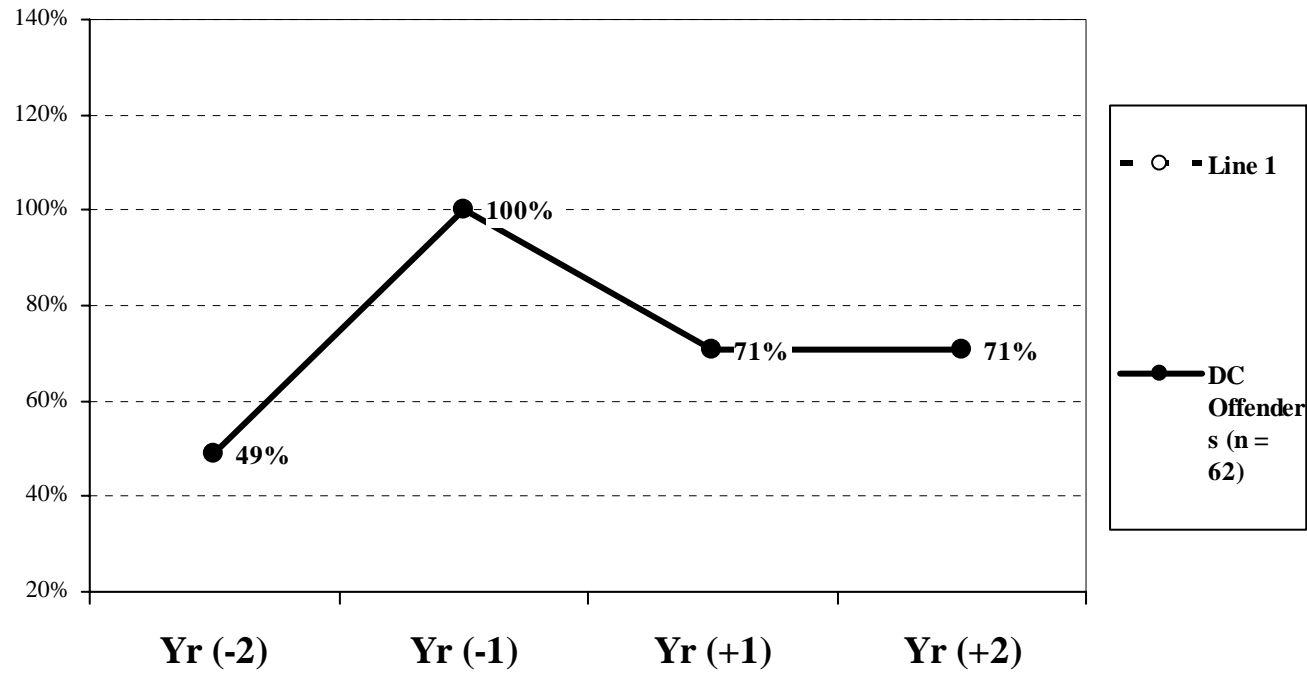


Cochrane Collaboration Logo: Average Effects Across All RCTs

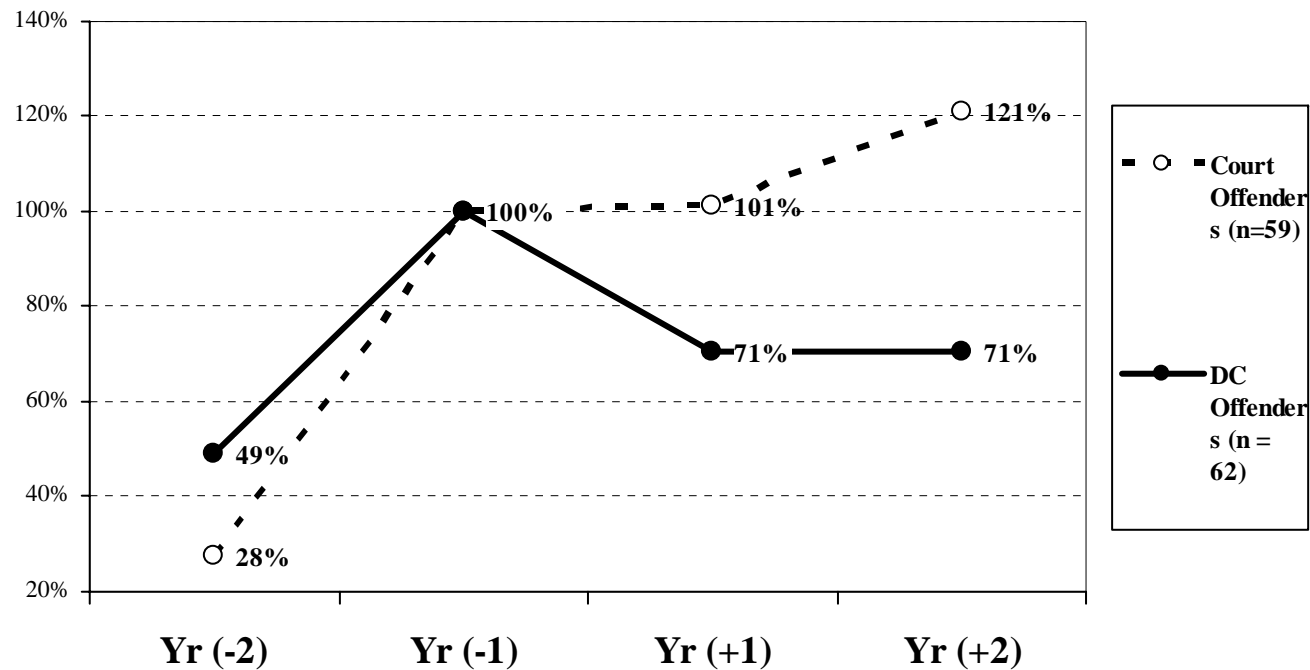
- Each horizontal line represents the results of one trial (the shorter the line, the more certain the result)...the diamond [at the bottom] represents their combined results.... The position of the diamond to the *left* of the vertical line indicates that the treatment studied is beneficial....a diamond to the *right* of the line would show that the treatment did more harm than good.
- The diamond in this forest plot shows that corticosteroids reduce the odds of ***babies*** dying from the complications of premature birth by **30 to 50** per cent.



Did Program Cause Crime Drop?



Randomized Controlled Trial RCT: COMPARISON or *NET* difference



Treasury Demanded RCTs for Restorative Justice in 2001

- Standard format
- Victim
- Offender
- Family
- Friends
- 2-3 hours

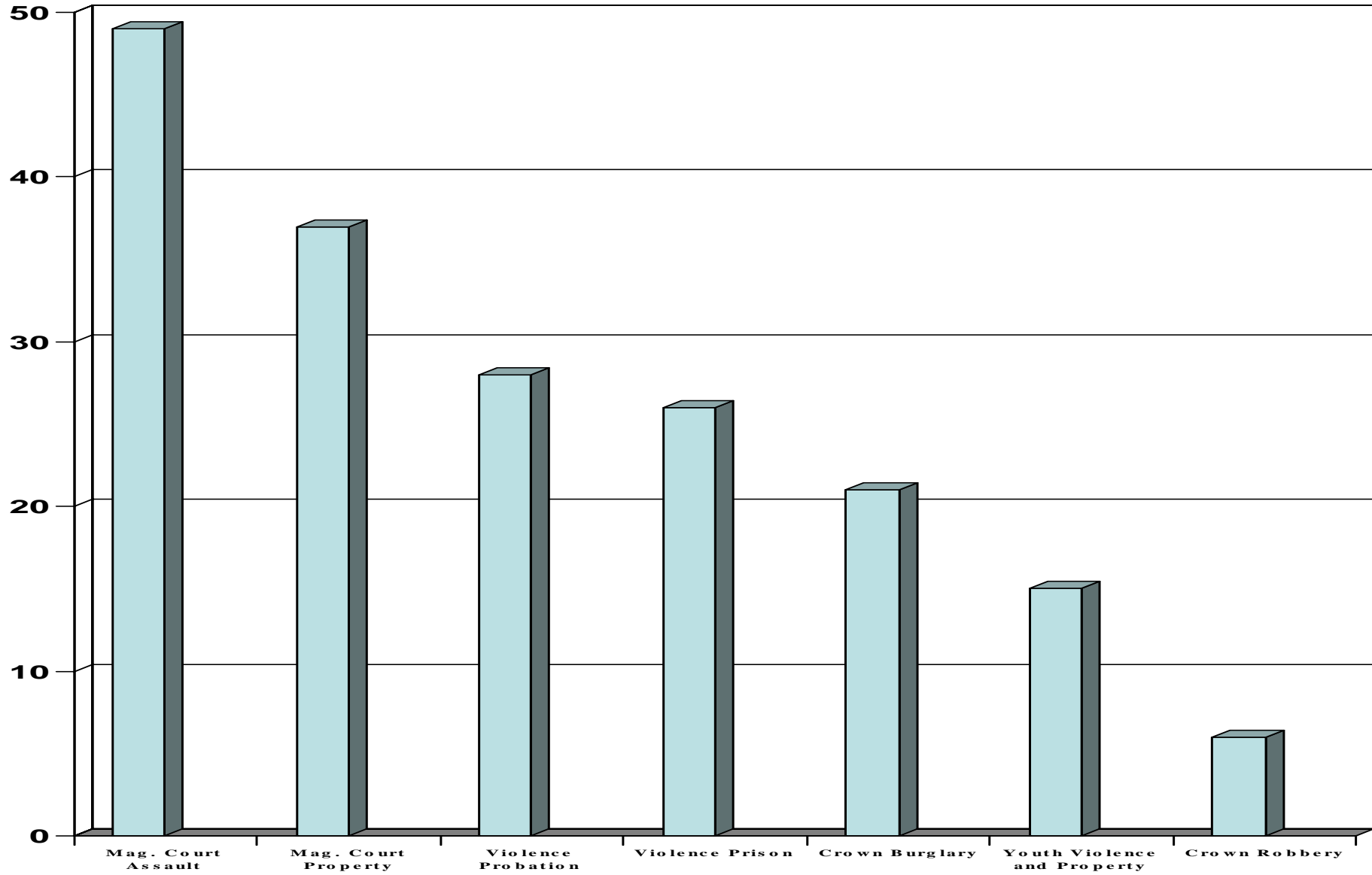


HM TREASURY

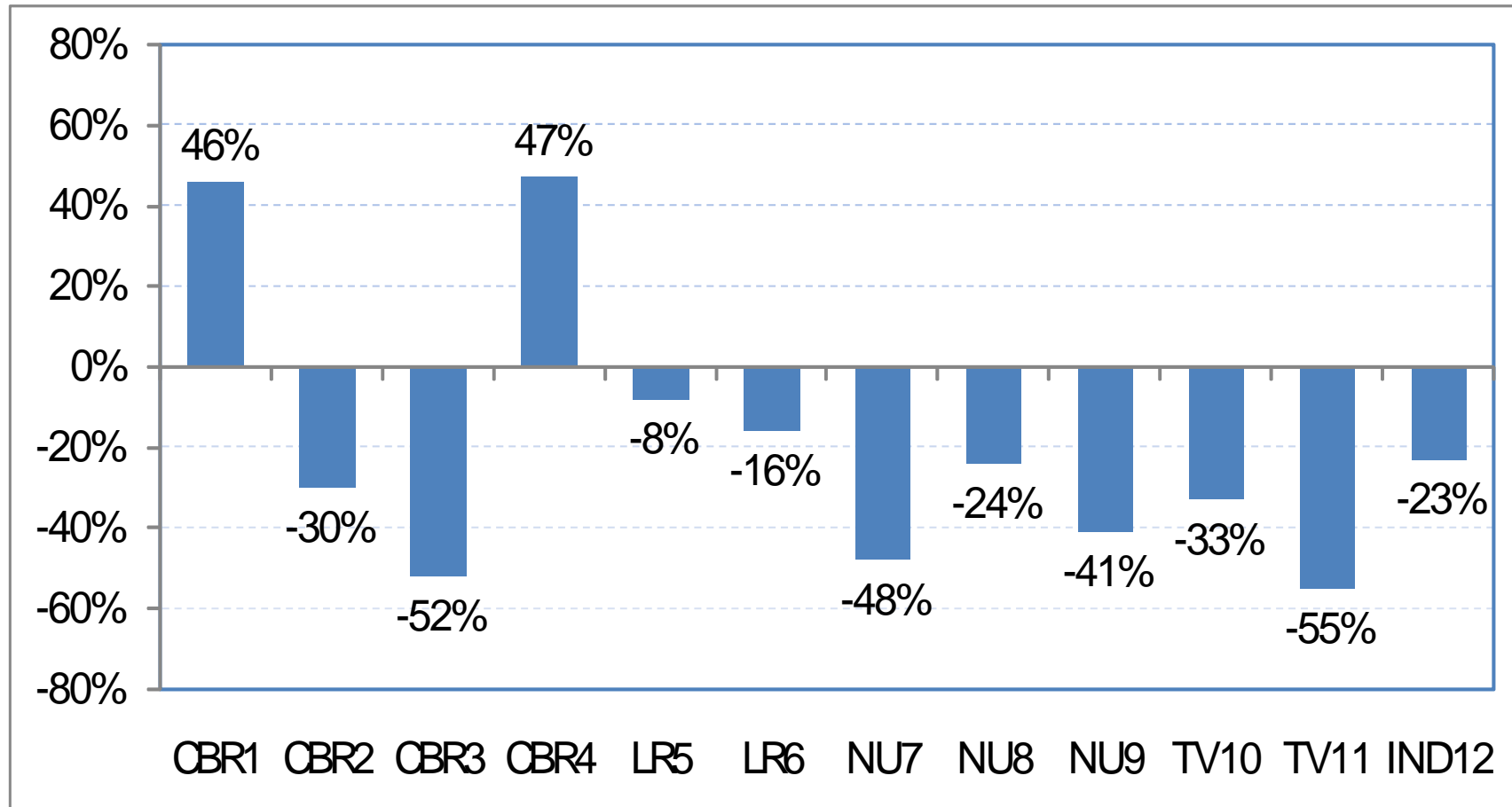
Truth, Apology
Reconciliation



Crimes Per Year Prevented Each RJ Conference (convictions x 39)



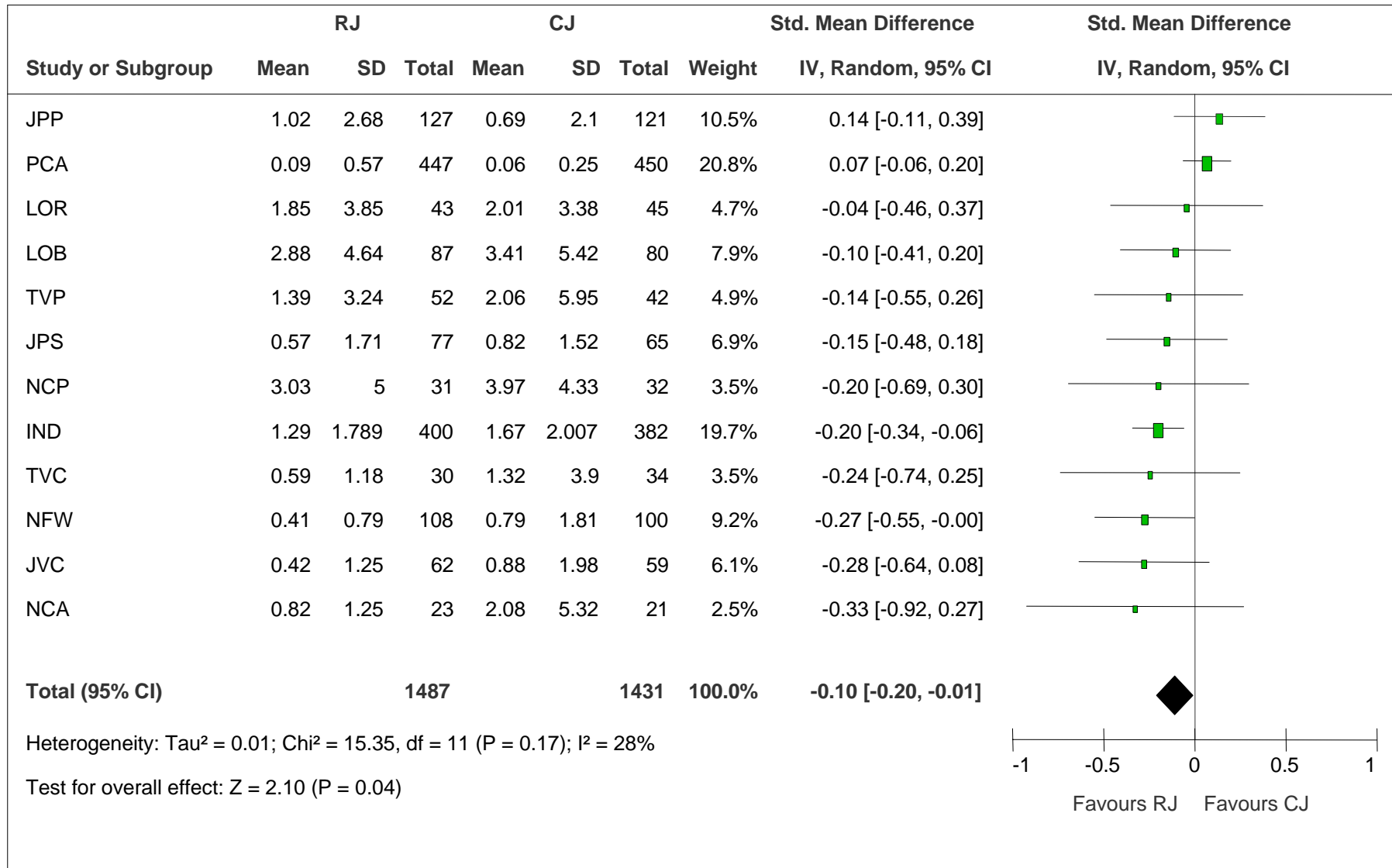
Percent Difference,* Reconviction Frequency, 12 RCTs



*per person, RJ Group compared with Control Group

**Probation RCT = reduction of 55%

Frequency of Reconvictions – 12 RCTs of RJ in UK, US, Australia



Cost-Effectiveness

Table 4.8: Value for money calculations, comparing the cost of running the scheme with the benefit from any decreased reconviction, over the running period, all to 2004/5 prices

| | Method 1 benefit £ | Method 2 benefit £ | Method 3 benefit £ | Cost of whole site £ | Cost for restorative justice group cases £ |
|--------------------|-----------------------|-----------------------|-----------------------|-------------------------|---|
| CONNECT | -421,295 | -642,740 | -363,405 | 163,325 | 163,325 |
| JRC London | 5,559,212 | 2,214,811 | 8,261,028 | 847,149 | 598,848 |
| JRC Northumbria | -826,120 | 1,414,953 | 320,125 | 540,988 | 275,411 |
| JRC Thames Valley | 1,321,701 | 1,808,952 | 461,455 | 361,958 | 222,463 |
| REMEDI adult cases | -1,016,738 | -531,991 | -1,182,309 | 101,084 | 101,084 |
| REMEDI youth cases | -757,925 | -120,435 | -388,500 | 75,619 | 75,619 |
| REMEDI total | -1,795,266 | -647,658 | -1,470,612 | 176,703 | 176,703 |

Note: * All the figures above assume that the cost per case over the RJ period or CJ period is the same as the cost per case in the running period. Relative costs of Northumbria and Thames Valley cases have been estimated from times taken on London cases. Relative costs of REMEDI cases have been estimated from times taken on CONNECT cases. Negative figures for benefits are net costs, rather than benefits.

Cost-Benefit Ratios —RJ Arm Only

| <u>SITE</u> | <u>RJ COST</u> | <u>CJ Benefit*</u> | <u>Total Benefit</u> | <u>CJ Ratio</u> | <u>Total Ratio</u> |
|------------------|----------------|--------------------|----------------------|----------------------|--------------------|
| London | 598,848 | 1,817,426 | 8,261,028 | 1:3 | 1:14 |
| N'Umbria | 275,411 | 70,42 | 320,125 | <u>1:0.26</u> | 1:1.2 |
| Thames Valley | 222,463 | 101,520 | 461,455 | <u>1:0.46</u> | 1:2 |
| Total | 1,096,722 | 1,989,734 | 9,042,608 | 1:1.8 | <u>1:8</u> |

*CJ benefit estimated at average 22% of total costs of crime

Freq of Reconvictions – Violence Exps

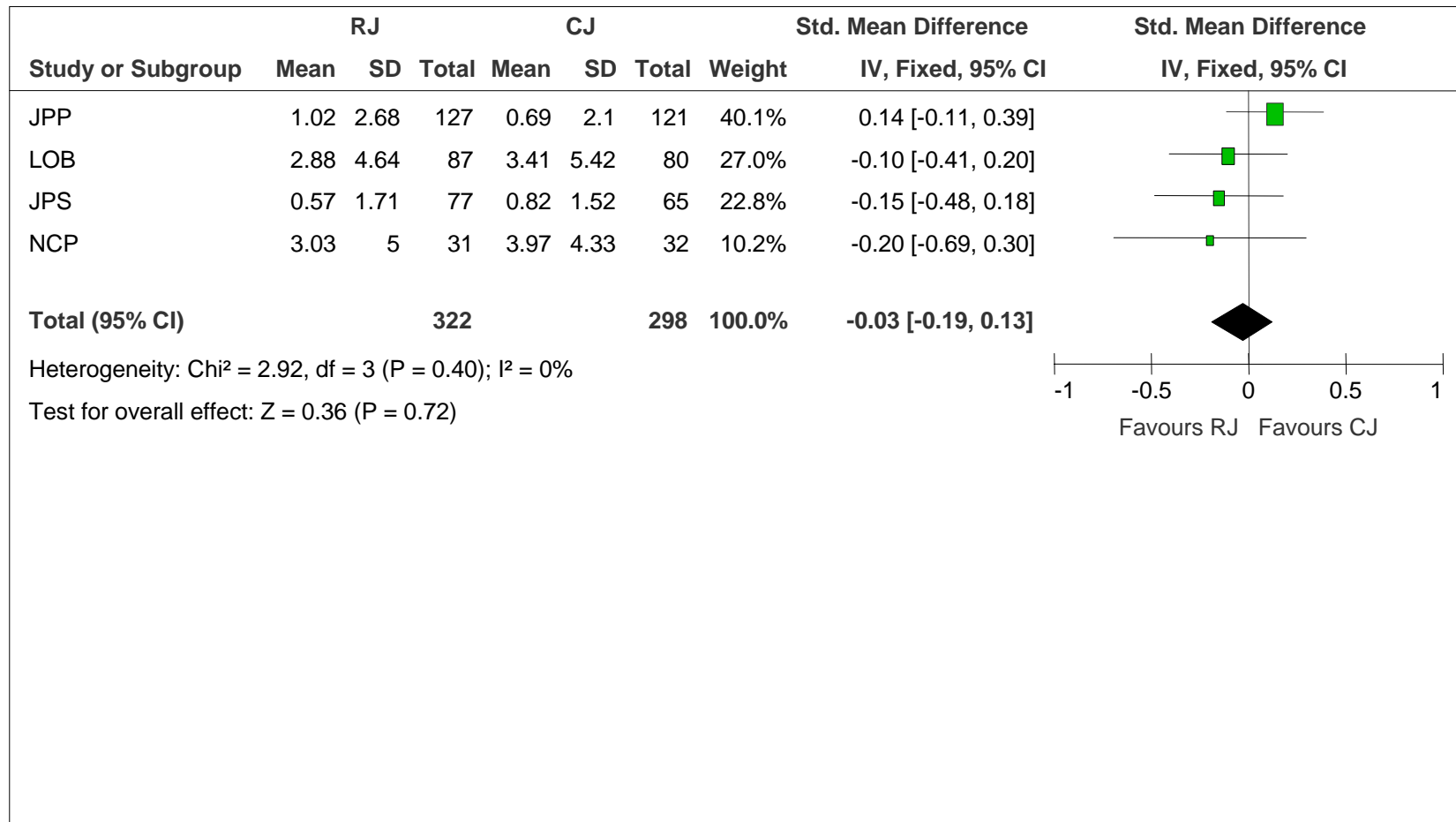
| Study or Subgroup | RJ | | | CJ | | | Weight | Std. Mean Difference | | Std. Mean Difference | |
|-----------------------|------|------|------------|------|------|------------|---------------|-----------------------------|-------------------|----------------------|--|
| | Mean | SD | Total | Mean | SD | Total | | IV, Fixed, 95% CI | IV, Fixed, 95% CI | | |
| LOR | 1.85 | 3.85 | 43 | 2.01 | 3.38 | 45 | 21.6% | -0.04 [-0.46, 0.37] | | | |
| TVP | 1.39 | 3.24 | 52 | 2.06 | 5.95 | 42 | 22.8% | -0.14 [-0.55, 0.26] | | | |
| TVC | 0.59 | 1.18 | 30 | 1.32 | 3.9 | 34 | 15.5% | -0.24 [-0.74, 0.25] | | | |
| JVC | 0.42 | 1.25 | 62 | 0.88 | 1.98 | 59 | 29.4% | -0.28 [-0.64, 0.08] | | | |
| NCA | 0.82 | 1.25 | 23 | 2.08 | 5.32 | 21 | 10.6% | -0.33 [-0.92, 0.27] | | | |
| Total (95% CI) | | | 210 | | | 201 | 100.0% | -0.20 [-0.39, -0.00] | | | |

Heterogeneity: $\text{Chi}^2 = 1.00$, $\text{df} = 4$ ($P = 0.91$); $I^2 = 0\%$


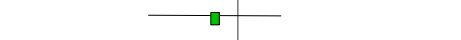







Test for overall effect: $Z = 1.98$ ($P = 0.05$)

Favours RJ Favours CJ

Freq of Reconvictions – Property Exps



Freq of Reconvictions – Add-on Exps

| Study or Subgroup | RJ | | | CJ | | | Weight | Std. Mean Difference | Std. Mean Difference |
|-----------------------|------|-------|------------|------|-------|------------|---------------|-----------------------------|--|
| | Mean | SD | Total | Mean | SD | Total | | IV, Fixed, 95% CI | IV, Fixed, 95% CI |
| LOR | 1.85 | 3.85 | 43 | 2.01 | 3.38 | 45 | 5.9% | -0.04 [-0.46, 0.37] |  |
| LOB | 2.88 | 4.64 | 87 | 3.41 | 5.42 | 80 | 11.1% | -0.10 [-0.41, 0.20] |  |
| TVP | 1.39 | 3.24 | 52 | 2.06 | 5.95 | 42 | 6.2% | -0.14 [-0.55, 0.26] |  |
| NCP | 3.03 | 5 | 31 | 3.97 | 4.33 | 32 | 4.2% | -0.20 [-0.69, 0.30] |  |
| IND | 1.29 | 1.789 | 400 | 1.67 | 2.007 | 382 | 51.9% | -0.20 [-0.34, -0.06] |  |
| TVC | 0.59 | 1.18 | 30 | 1.32 | 3.9 | 34 | 4.2% | -0.24 [-0.74, 0.25] |  |
| NFW | 0.41 | 0.79 | 108 | 0.79 | 1.81 | 100 | 13.7% | -0.27 [-0.55, -0.00] |  |
| NCA | 0.82 | 1.25 | 23 | 2.08 | 5.32 | 21 | 2.9% | -0.33 [-0.92, 0.27] |  |
| Total (95% CI) | | | 774 | | | 736 | 100.0% | -0.19 [-0.29, -0.09] |  |

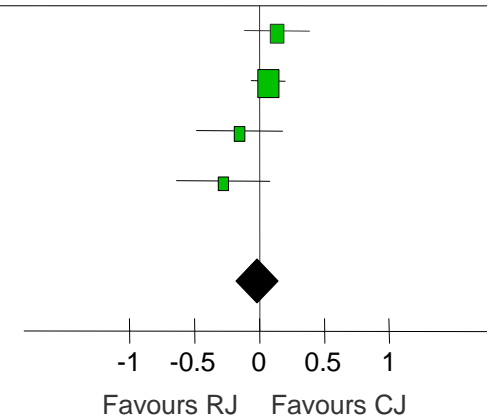
Heterogeneity: Chi² = 1.46, df = 7 (P = 0.98); I² = 0%

Test for overall effect: Z = 3.73 (P = 0.0002)

-1 -0.5 0 0.5 1
Favours RJ Favours CJ

Freq of Reconvictions – Substitution Exps

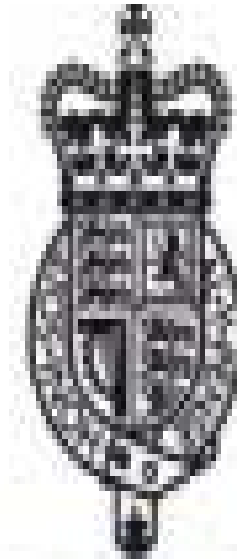
| Study or Subgroup | RJ | | | CJ | | | Weight | Std. Mean Difference | Std. Mean Difference |
|--|------|------|------------|------|------|------------|---------------|----------------------------|----------------------|
| | Mean | SD | Total | Mean | SD | Total | | IV, Random, 95% CI | IV, Random, 95% CI |
| JPP | 1.02 | 2.68 | 127 | 0.69 | 2.1 | 121 | 24.6% | 0.14 [-0.11, 0.39] | |
| PCA | 0.09 | 0.57 | 447 | 0.06 | 0.25 | 450 | 43.6% | 0.07 [-0.06, 0.20] | |
| JPS | 0.57 | 1.71 | 77 | 0.82 | 1.52 | 65 | 16.9% | -0.15 [-0.48, 0.18] | |
| JVC | 0.42 | 1.25 | 62 | 0.88 | 1.98 | 59 | 15.0% | -0.28 [-0.64, 0.08] | |
| Total (95% CI) | | | 713 | | | 695 | 100.0% | -0.00 [-0.16, 0.16] | |
| Heterogeneity: Tau ² = 0.01; Chi ² = 5.03, df = 3 (P = 0.17); I ² = 40% | | | | | | | | | |
| Test for overall effect: Z = 0.05 (P = 0.96) | | | | | | | | | |



Delivery to Government



Ministry of
JUSTICE



Home Office

But RJ Is Just One Example

- Many missed opportunities
- Bad Designs in RCT clothing
- Quick Response to Urgent Problems

Missed Opportunity: Police Community Support Officers

- Introduced 2002
- 16,000 now employed
- 10% of public police
- Could have been tested with RCT
- Place-Based Design
- Descriptive evaluation
- No effect on crime?
- Cost-effective?

<http://www.homeoffice.gov.uk/rds/pdfs06/hors297.pdf>



Missed Opportunity: Early Release From Prison



Fortune-Tellers

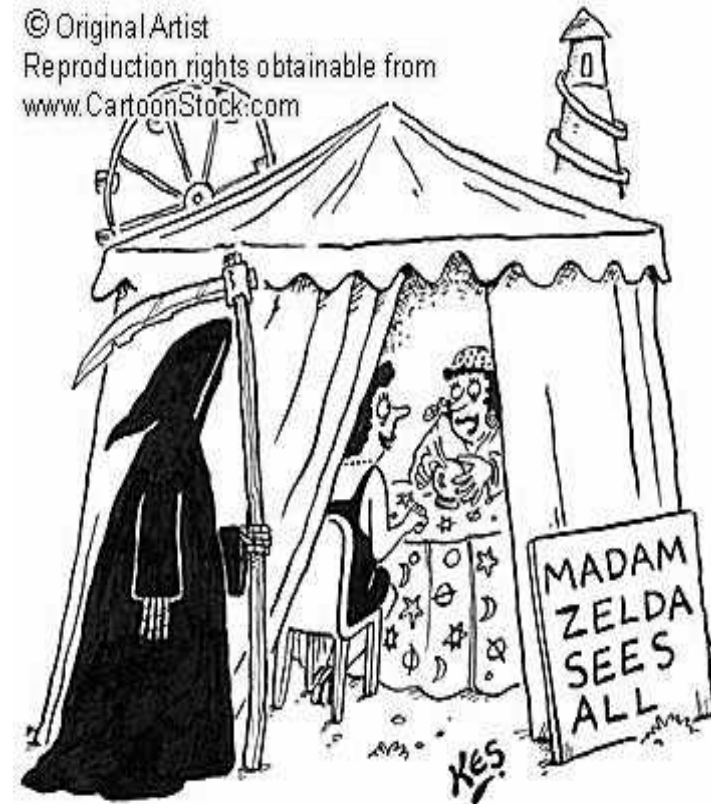
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" You're going to meet a tall, dark stranger."

Fortune-Tellers

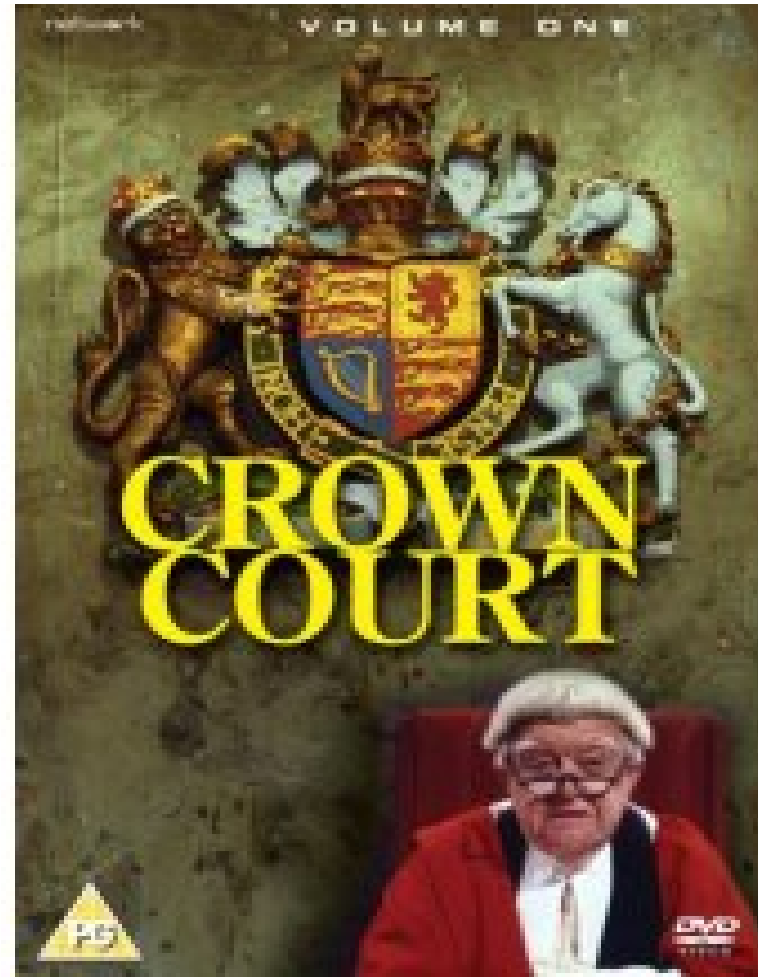
“Not Experimentally
Proven”



" You're going to meet a tall, dark
stranger."

Crown Court Sentences

“Not Experimentally Proven”



That's Not Change

- That's More of the Same
- Businesses have to prove effectiveness
- Government is exempt?



Bad Design in RCT Clothing

- RCT of 6 Areas
- HMP RCT of surveys, not PNC followup
- Both could be rescued by redesign
- Scarcity and Lottery



Quick-Time RCTs

High volume: cases and outcome rates

1. Early prison release
2. Knife Crime in London

Reducing Knife Crime: London Stop & Search



- 22,000 since 12 July
- No Complaints
- Youth murder drop $\frac{3}{4}$
- 24 from 1/1 to 12/7
- 3 from 12/7 to 1/10
- Place-Based Design?
- Fast?
- RCT by boro-nights?

Reducing Knife Crime: Home Visits



- Knife-carrying arrest
- Surprise visit
- Zero Tolerance Message
- 2,000 arrests
- £100,000
- RCT?

Key To Success: Social Capital



And More Social Capital



Commitment



Building RCTs to Last



Creating Demand in Budget Process

- Treasury is the last hope
- No government wants unbiased evidence
- Separate evidence from government
- Policy of 5% set-aside for testing policies
- Even using RCTs as part of roll-out
- Introduce new policies with control groups

Now *THAT'S* Change!

- RCTs
- Systematic Review
- Synthesis
- Cost-effectiveness





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