



Efficiency and value derived from science led investigation of sexual crimes

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Your  
participation is  
valued

## DNA Symposium

**Robert Green**

Please use this chat, to feedback any thoughts you have on how to improve the effectiveness of DNA profiling in GBV in South Africa. Your comments are anonymous.



By scanning the code with your mobile device, you **can add your thoughts** on any aspect of the presentation, anonymously. This may be helpful to generate ideas for the panel discussion or beyond

# Introduction

- During my time at the Home Office – I initiated a programme of work in early 2004 named Operation Advance
- World first approach to conducting cold case reviews
- Overall aim was to encourage all forces to engage in a comprehensive forensic review of all undetected historic sex crimes
- Home Office provided funding and facility to centrally track all reviewed cases at a national level



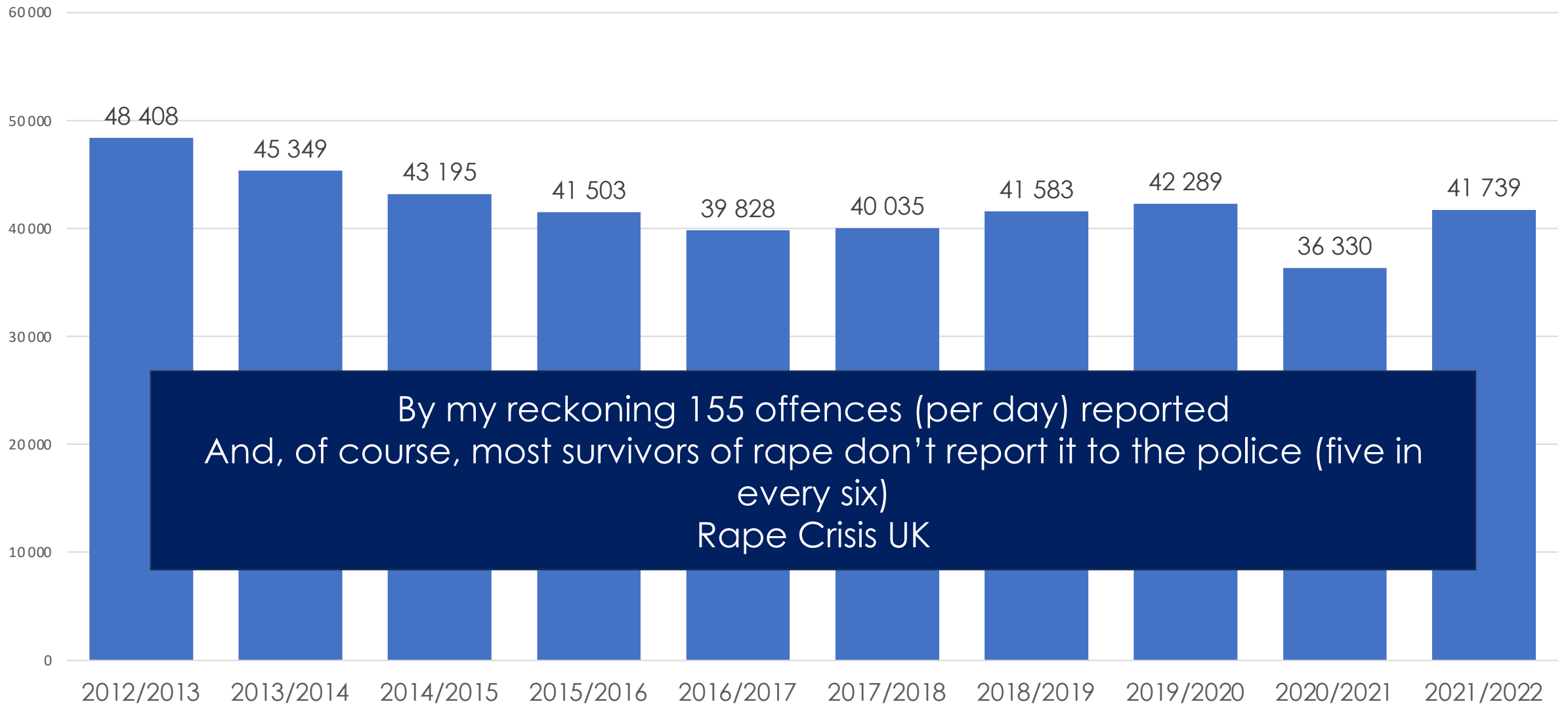




# The distressing truth, 2023

1. If you are raped in Britain today, your chances of seeing justice are slim
2. Enormous court backlogs present a serious and fundamental challenge to our justice system
3. Dame Vera Baird (Victims Commissioner for England & Wales)
4. Only one in 100 rapes, recorded by police in 2021 resulted in a charge that same year (let alone a conviction)
5. **And, to think, we 'sold' the benefits of DNA on the basis of crime reduction.**

# Reported Rape Offences SA



DNA & the  
Active Criminal  
Population  
Leary & Pease  
2002

Emphasise the importance of taking criminal justice samples at the first available opportunity.



There is no strong sign of diminishing returns in rates of match as the number of submitted samples increases.



There is thus no case, other than the economic, for limiting submission of crime scene sample.

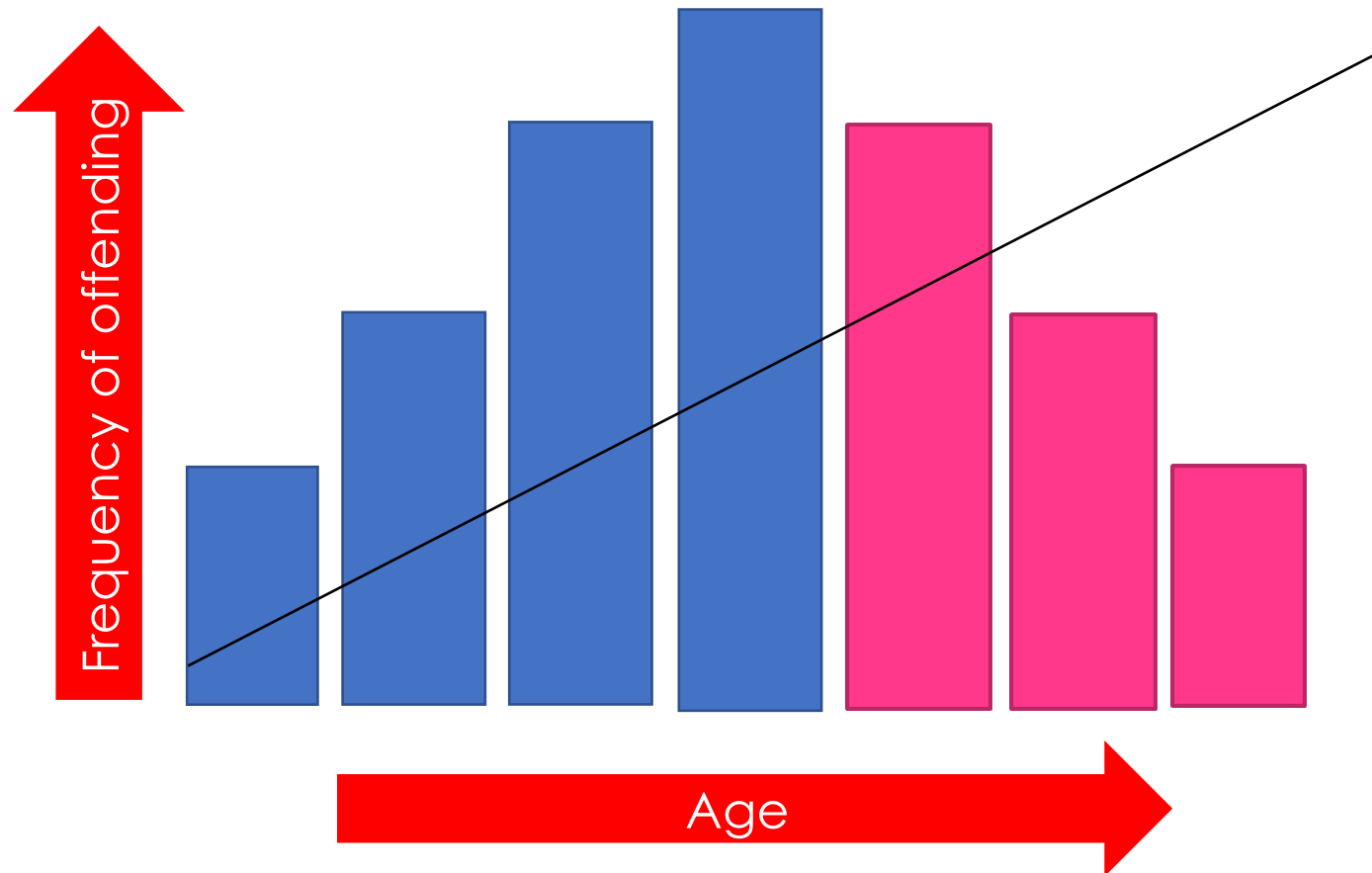
# Ineffectiveness is not rooted in the science



1. There is a match rate of nearly 70% for all previously unsolved cases successfully linked to individuals and 30% link to another crime
2. Ray A. Wickenheiser
3. DOI: 10.1016/j.fsisyn.2022.100226
4. Publication: Forensic Sci Int Synerg. 2022; 4: 100226.
5. Published: 2022

Would it follow that a 70% return would provide investigative leads (at very least) in around 81 of the 115 offences committed daily?

# Patterns of offending (why bother)





# Patterns of offending & risk



Violent & Sex Offenders

Opportunity

More victims & > risk



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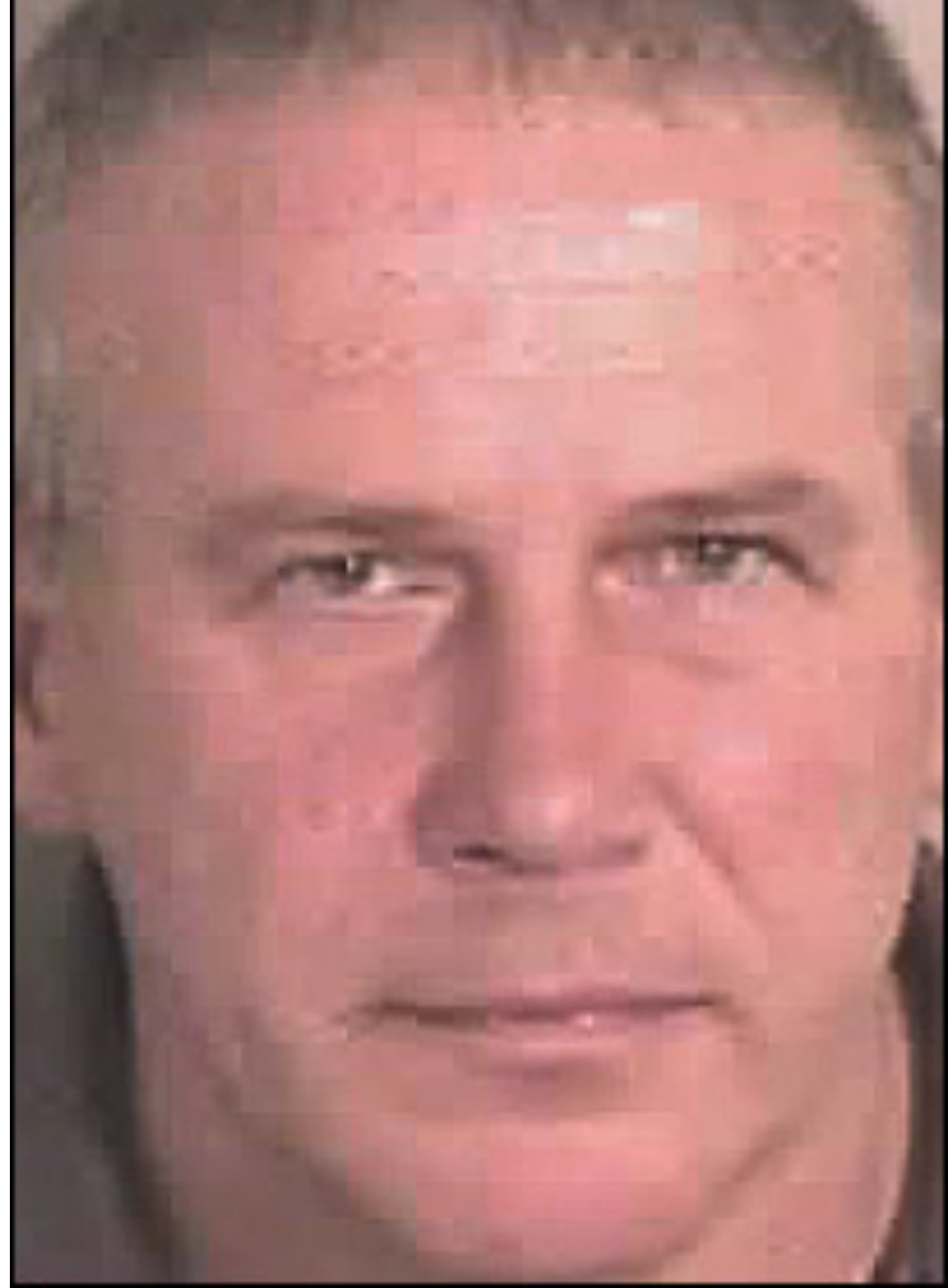
# Why bother

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1. The MacLeod-Grove Theory of Offending (2003) uses evidence to state that the **interventions that increase the efficiency of arrest and conviction (of which DNA testing is one) are more likely to reduce crime than incarceration or reducing re-offending interventions.**
2. The operating efficiency of biometric databases is now rather well established **(lets try modelling what it might mean in Africa)**
3. There is no strong sign of diminishing returns in rates of match as the number of submitted samples increases. **There is thus no case, other than the economic, for limiting submission of crime scene sample (Pease and Leary 2002).**
4. The more we can exploit appropriate sampling – will lead to additional outcome (Pease and Leary 2002).

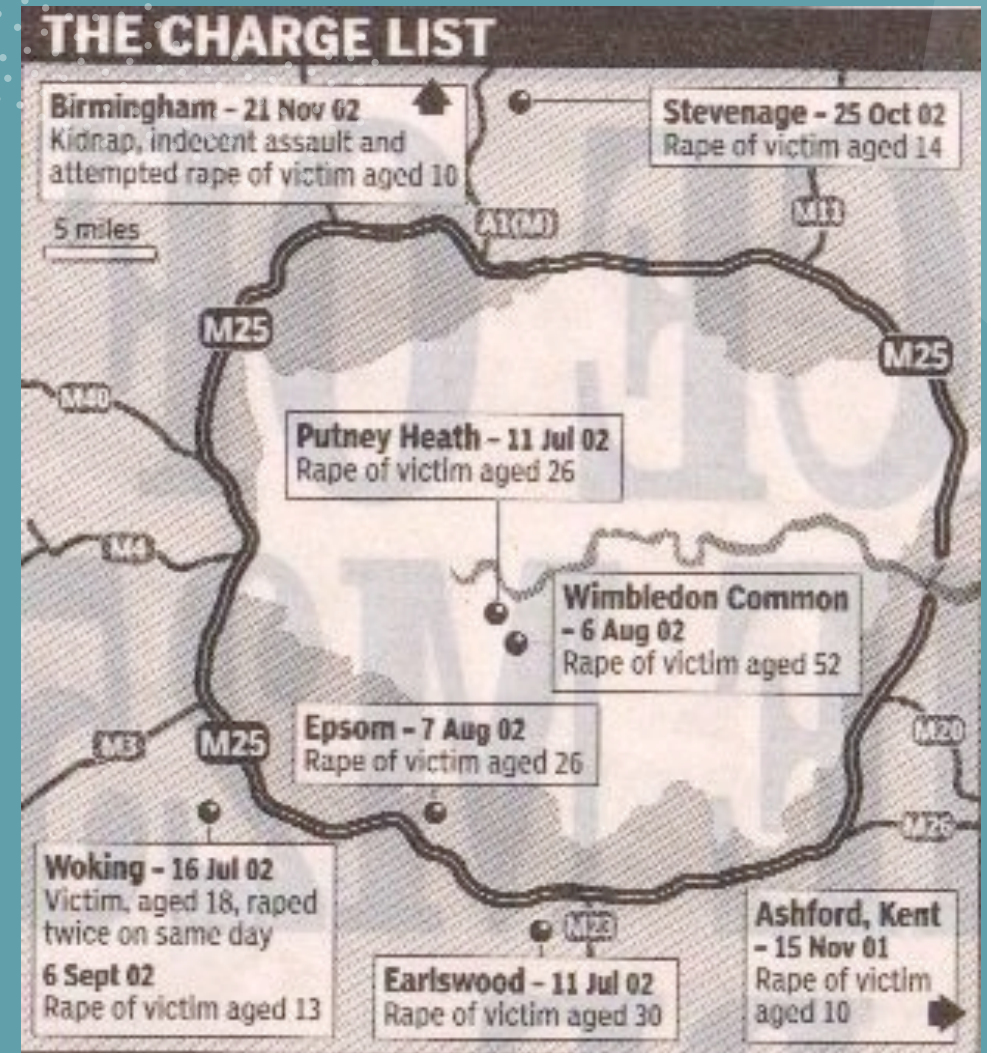
# Case Study

1. ANTONI IMIELA 49 years, married man with step-daughter
2. Serial rapist trapped by DNA evidence
3. Antoni was convicted of seven rapes, and the kidnap, indecent assault and attempted rape of a 10-year-old girl in Birmingham during 2001 and 2002.
4. He was given 7 life sentences in March 2004.
5. He had a violent past and previous convictions for armed robberies, **if his DNA had been taken earlier, he would have been caught immediately.**



# Antoni Imiela – what are the lessons?

- The attacks began in November 2001 when railway worker, Imiela, abducted a ten-year-old girl in Ashford, Kent
- Thankfully this offender was captured – but is it all good news





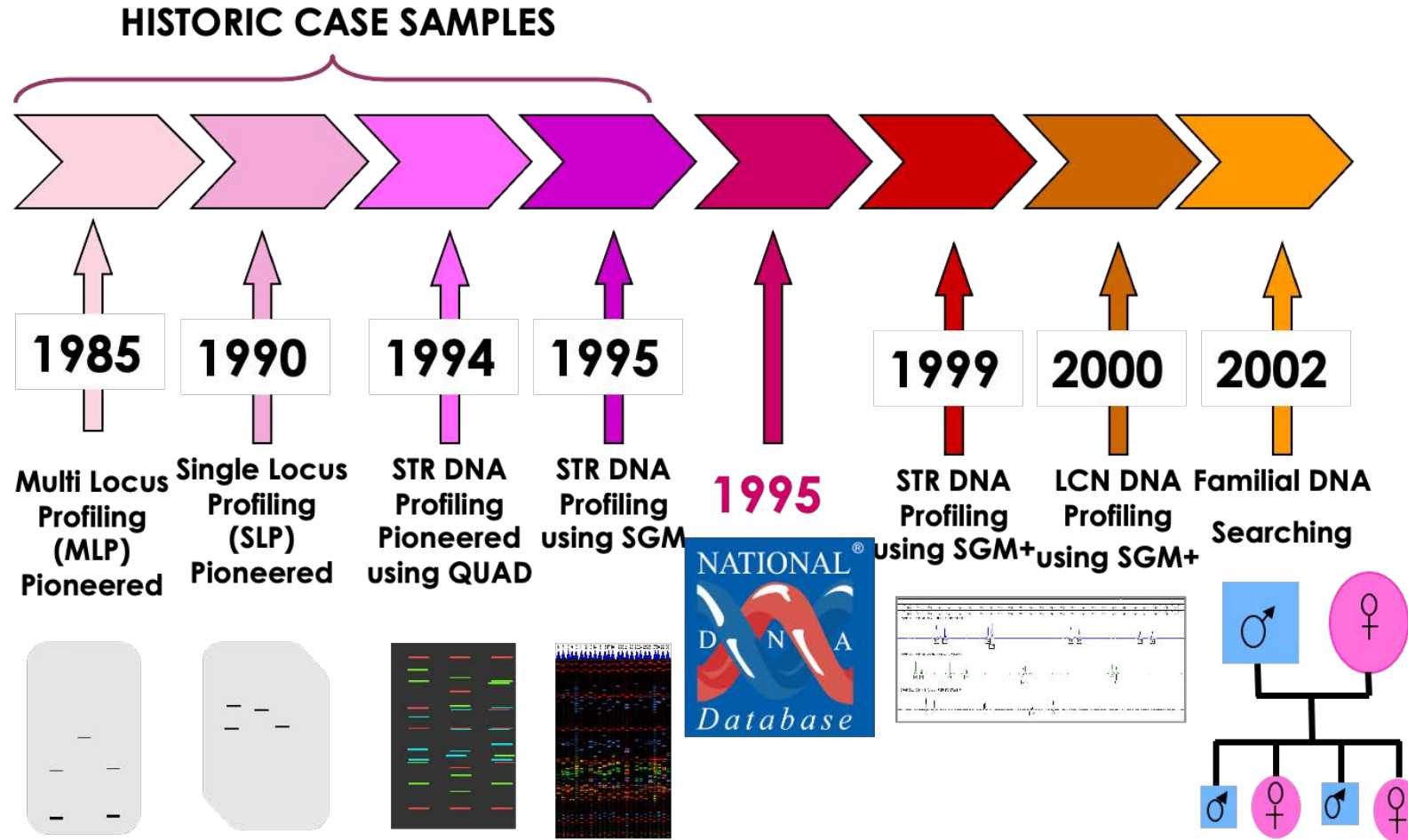
# Implications?

1. What are the implications of missed opportunities?
2. Possible litigation?
3. Lowering the effectiveness of databases?
4. Our experiences.

Date	Duration Between Offence (Days)	Location	Distance From Home	Travelling Time	Offence	Offence	Offence	Age Victim
15-Nov-01		Ashford	0	0	Rape			10
11-Jul-02	238	Putney Heath	59	1.45	Rape			26
11-Jul-02	0	Earlswood	54	1	Rape			30
16-Jul-02	5	Woking	74	1.25	Rape			18
6-Aug-02	21	Wimbledon Common	68	1.25	Rape			52
7-Aug-02	1	Epsom	60	1	Rape			26
6-Sep-02	30	Woking	74	1.25	Rape			13
25-Oct-02	49	Stevenage	92	1.5	Rape			14
21-Nov-02	27	Birmingham	186	3	Kidnap	Indecent Assault	Attempted Rape	10
Mean =	46		83	1				24
High =	238		186	3				52
Low =	0		54	1				10



# Key Stages in Forensic DNA



# Operation Advance

Operation Advance ran for around five years

National forensic review of historic undetected rape & sexual assault cases

Offences occurred between 1989 and 1999 (mainly prior to set up of NDNAD)

Up to then, 15,000 cases were initially reviewed and 500 scientifically re-analysed

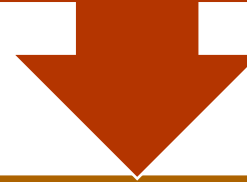
# Scientific Progress

1. Once cases identified for re-analysis majority of samples re-worked using the latest DNA profiling technique
2. Searchable profiles loaded onto the database
3. Matches handed over to the relevant agencies and tracked through the Criminal Justice System
- 4. 1 in 3 cases scientifically re-analysed are producing a match on the database (Op Advance I)**
- 5. What might these results look like for Africa?**

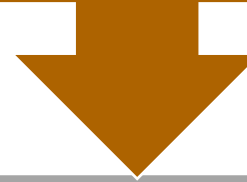


# Process design

The aim was to upgrade selected SLP crime stains to obtain usable DNA profiles



215 such cases were identified



148 cases were progressed, the 67 cases dropped were due to:

Case had since been detected

No remaining exhibits from the case

1 exhibit was located with low levels of DNA, it was decided to wait for future DNA techniques

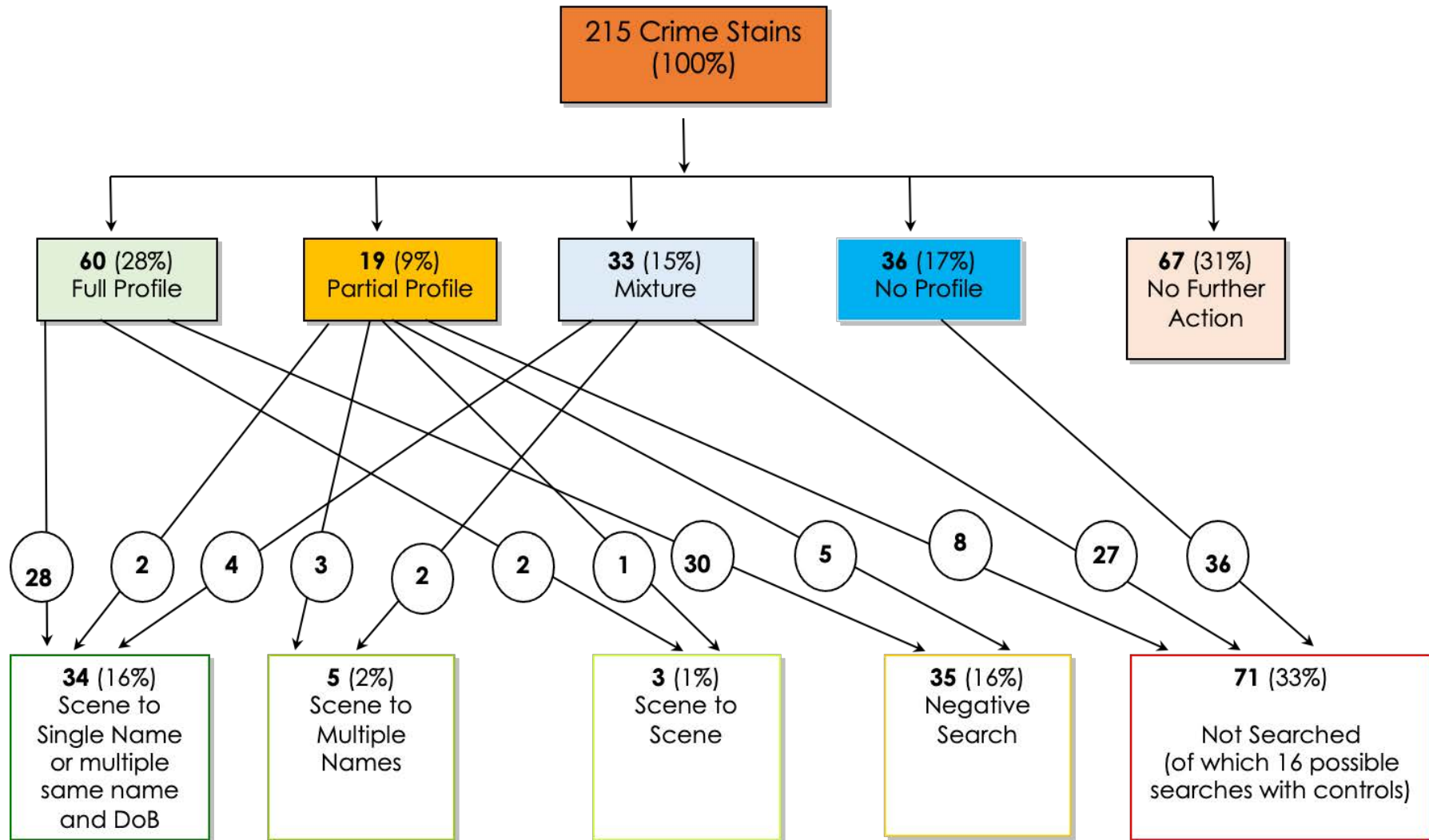


# — What material

- *Historic DNA Extracts*
- These are the remains of previous DNA tests, some dating back as far as the late 1980s. They include extracts from crime stains, and also possibly reference samples obtained from victims, suspects and witnesses.
- *Original exhibits*
- In some cases the forensic science provider may have retained frozen perishable items such as intimate swabs and reference samples indefinitely.
- *Microscope slides*
- During the examination of an item for semen any potential stains are sampled
- Pieces of fabric. Occasionally the original scientist will have retained a piece of stained fabric.
- *Tapings (fibre lifts)*
- Clothing items relating to 'stranger' attacks are routinely taped.
- AP Tests?



# So, what did we find?



# Good Practice

Announce an amnesty to all staff in an effort to locate files and exhibits

Committed staff may have in their possession files of evidence for matters which they had a personal involvement in

Never accept what you are told as fact for example 'the file has been destroyed' - the only way to be 100% certain is to carry out a physical search

Pocket book entries - found to be a significant help in this area

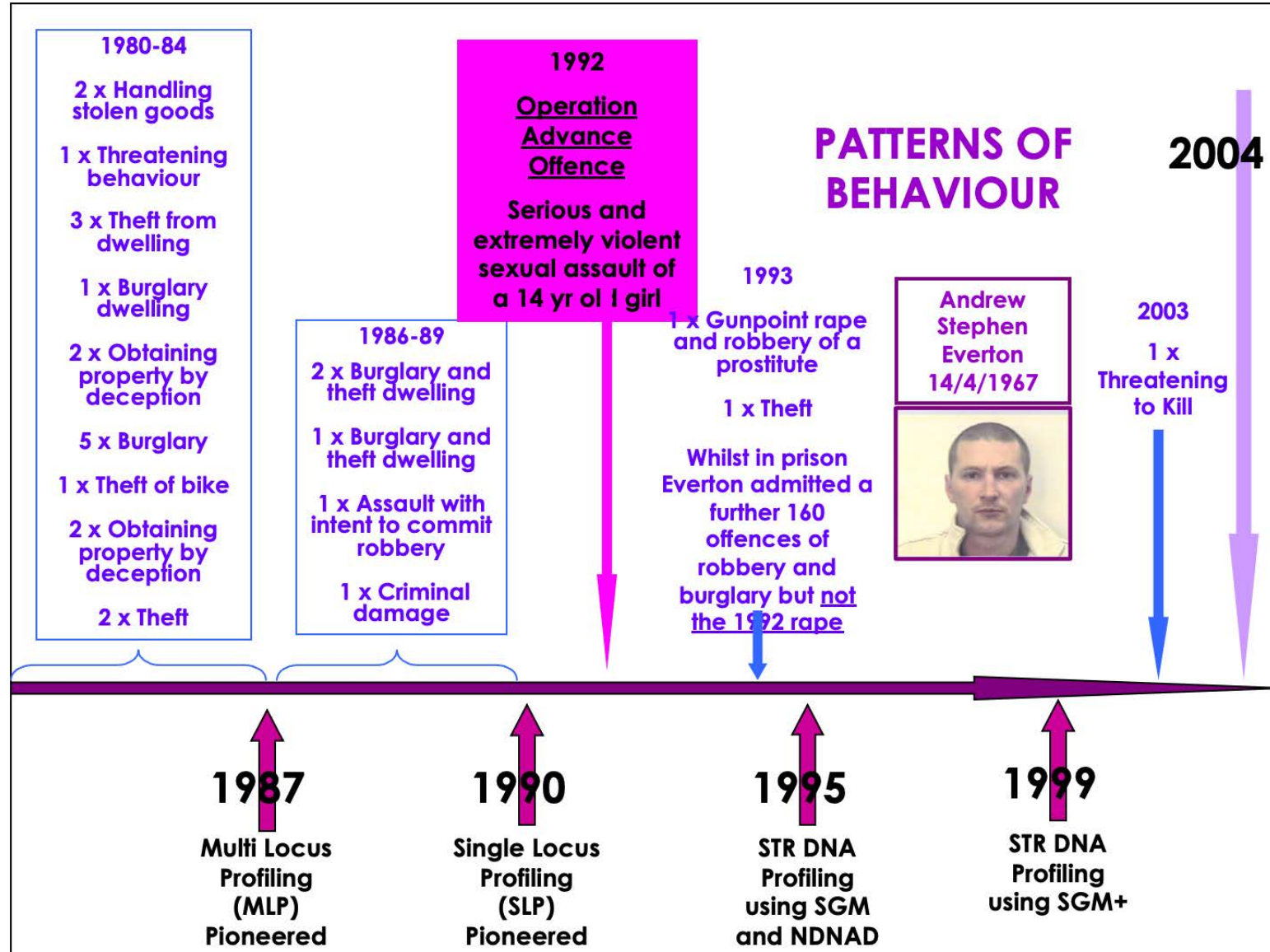
Retired officers who are often delighted to help

Archive and storage areas (official & unofficial)



# Convictions

1. 38 CONVICTIONS
2. 5 awaiting trial/sentence
3. 5 life sentences
4. Over 200 years in non-life sentences
5. 2 offenders identified via familial DNA
6. All of these, and more – sitting in the freezer, waiting to be processed (or destroyed)





# History of offending (our programme)

**01**

72% offenders had convictions pre Advance rape

**02**

90% offenders continued to re-offend post Advance rape

**03**

average no. of convictions/offender was 10

**04**

average no. of offences/offender was 22

**05**

39% of all offences were for theft



# Advance Convictions

72% offenders had convictions pre Advance rape

90% offenders continued to re-offend post Advance rape

average no. of convictions/offender was **10**

average no. of offences/offender was **22**

39% of all offences were for theft

**THESE ARE PROLIFIC & PERSISTENT OFFENDERS WITH A CRIMINAL CAREERS SPANNING AN AVERAGE OF 20 YEARS**



# Benefits



Improved service to  
victim – closure

Strong public  
reassurance message

Bringing offenders to  
justice linked with  
publicity

Offenders becoming  
increasingly aware  
that scientific  
technology is catching  
up with them

Prevention of crime

Increasing size of  
NDNAD - (Tickets for  
the future)

Many of the  
Operation Advance  
offenders pleaded  
guilty, saving court  
time

# Conclusions

Old offence does not equal old offending

Can you afford not to act?

Victims haven't 'moved on'

Justice delayed = justice denied

# Publications

The work led to two publications (guides)

1. Good practice guide (2005)

- *Cold Case Reviews of Rape and Serious Sexual Assault*

2. Tactical Advice (2006)

- *Using Familial DNA Intelligence Products in Serious Crime Investigations*





Thank you for listening

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