



The Business Case for Using Forensic DNA to Solve No Suspect Sexual Assaults –

Excerpt from Article Ray Wickenheiser, Lab Director, Acadiana Crime Lab (337) 365-6671 24Oct03

Executive Summary

Use of forensic DNA technology to associate individuals with crimes has produced a revolution in the way crimes are solved. Forensic DNA now has the ability to conclusively eliminate or implicate an individual as the perpetrator of a crime even when the suspect is unknown to the victim. Previous to the advent of forensic DNA, crimes with unknown suspects, such as sexual assaults committed by a stranger to the victim, have been very difficult, if not impossible to solve. Crime laboratories historically see a small percentage of reported sexual assaults, particularly those committed by strangers. A two-pronged approach including the broad application of crime scene DNA to a large known offender DNA database has shown the potential to solve and prevent many crimes of sexual assault.

The estimated cost to analyze all of the 366,460 reported sexual assault occurring in the U.S. per year is \$366 Million. This represents an increase of \$310 Million over the estimated current spending level. The estimated savings resulting from apprehending serial offenders early in their “careers” and thereby preventing future crimes is \$12.9 Billion. This figure does not include investigative, legal, justice system, and preventative savings associated with the prevented sexual assaults. The savings is 35.2 times the investment.

An expanded U.S. DNA offender database is required to reach the same 3.5% of the total population needed to achieve the same 42% success rate now attained by the Forensic Science Service of Britain. The DNA database now has 1.3 Million offender samples. The total expense of processing an additional 8.85 million known DNA samples for an expanded U.S. DNA database is estimated at \$265 Million.

A comparison with other forms of social spending, such as AIDS research, Cancer research, and Heart Disease and Stroke research demonstrates the high relative worth of an additional investment in forensic DNA. A straightforward forensic DNA case costs \$1000, compared with annual research spending of \$68,998 (AIDS), \$3524 (Cancer), and \$3792 (Heart and Stroke) per incidence of the respective condition. With these investments in crime scene DNA and an expanded U.S. DNA database, an estimated 40% of future sexual assaults by strangers could be prevented by earlier apprehension of serial offenders.

366,460 sexual assaults are reported each per year in the U.S. (1992-2000 average) (1)

X

34% of sexual assaults are committed by a stranger (termed a “no suspect” sexual assault) (2)

(therefore these cases are not normally solved without DNA (both crime scene and database DNA working together))

= 124,596 reported “no suspect” sexual assaults

X

2/3 of the offenders are repeat offenders (3,4)

= 83,056 of no suspect sexual assaults are committed by repeat offenders

X

7 offenses per serial sexual offender are now preventable with crime scene DNA done on every case and a current DNA database (8 offenses per serial sexual offender, minus the first offense to risk getting caught) (3,4)

= 581,392 future sexual assaults that are preventable

X

47.58 % crime scene DNA success rate (% of cases where sperm is found and a DNA profile is generated) (Survey of U.S. Crime Labs (5))

= 276,626 unnecessary victims of preventable sexual assaults

X

42% DNA database success rate (% of cases where a hit is made to a known offender (6))

= 116,183 estimated sexual assaults solved

X

\$111,238 cost of crime per offense committed, adjusted from 1995 study to 2003 dollars (7,8)

= \$12,924,000,000.00 or over \$12.9 Billion saved cost

At an estimated cost of \$1000 per straightforward forensic DNA sexual assault case, an estimated \$58 Million is being spent in the U.S. on no suspect DNA cases nationally, while the cost to perform all of these cases is estimated at approximately \$366 Million (5). The return on this investment is **\$35.3 saved for every \$1 spent** on performing crime scene DNA on every no suspect sexual assault.

99% of forcible rapes and 94% of all sexual assaults were against females (2).

2/3 (67%) of all victims of sexual assault reported to law enforcement agencies were juveniles (under the age of 18 at the time of the crime) (8).

Over half the juvenile victims were under 12, and 1 out of 7 (14%) of victims were under the age of 6 (8).

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