



# The Role of Forensic Evidence in Arrest and Prosecution of Sexual Assault Cases

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## **Study 1: Police Founding & Arrest**

- Sample
  - Statewide random sample of medical exams sent to police
  - 2008 – 2010
  - Child and adult cases
  - N=528
- Data: Medical exam, crime lab reports, police reports

## **Study 2: Prosecution & Conviction**

- Sample
  - Single county sample (same state) of cases referred for prosecution
  - 2005 – 2010
  - Victims age 12 and older
  - N=257
- Data: Medical exam, crime lab reports, and prosecutor files
- Interviews with 8 Assistant District Attorneys



## Victim Characteristics

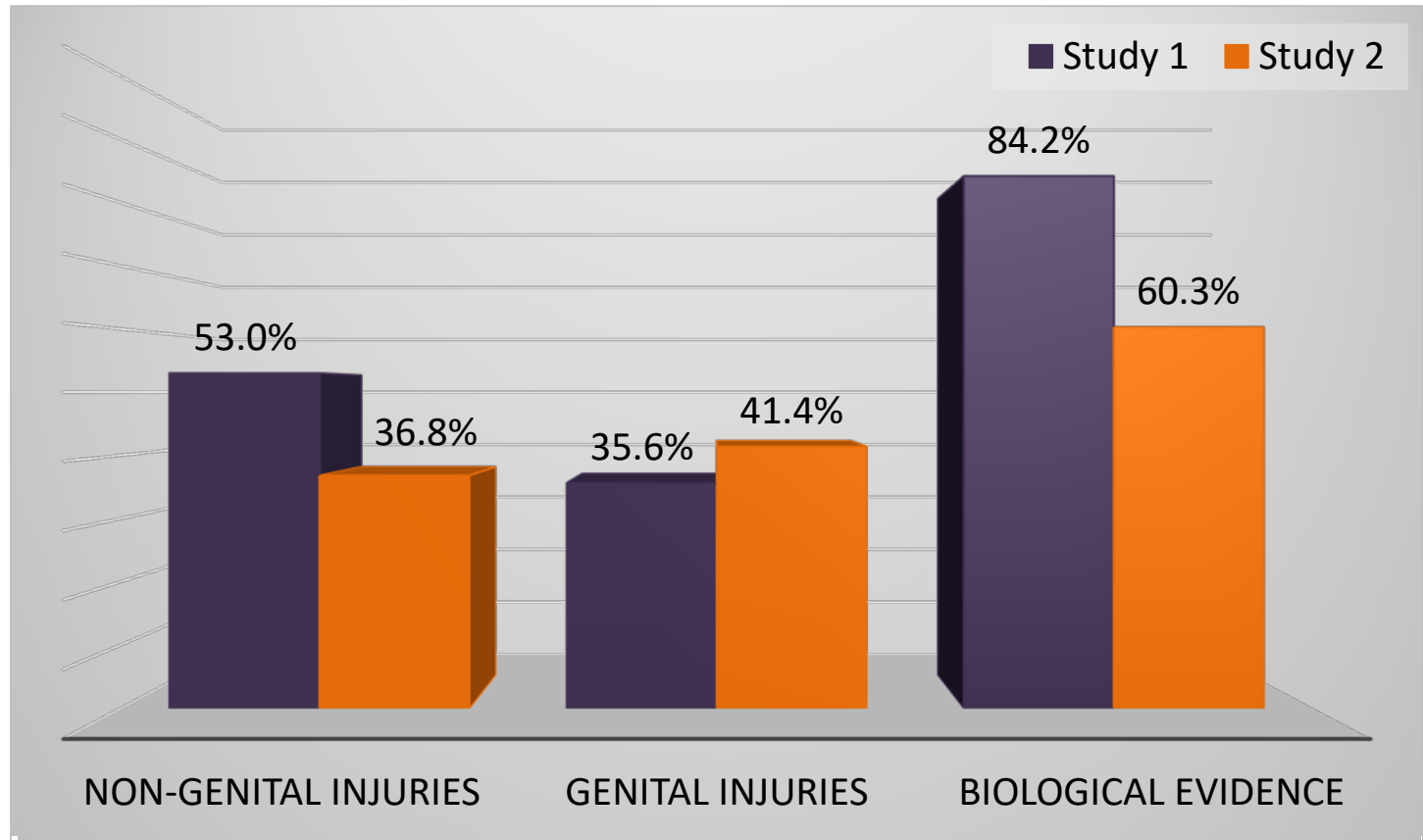
Characteristic	Study 1	Study 2
Female	95.9%	95.9%
Median Age (years)	23	25
White	68.6%	41.8%
Hispanic	17.1%	20.1%
Black	9.1%	32.5%
Known assailant	68.2%	64.0%

Study 1: Statewide sample.

Study 2: Large urban county.



# Prevalence of Injury and Biological Evidence

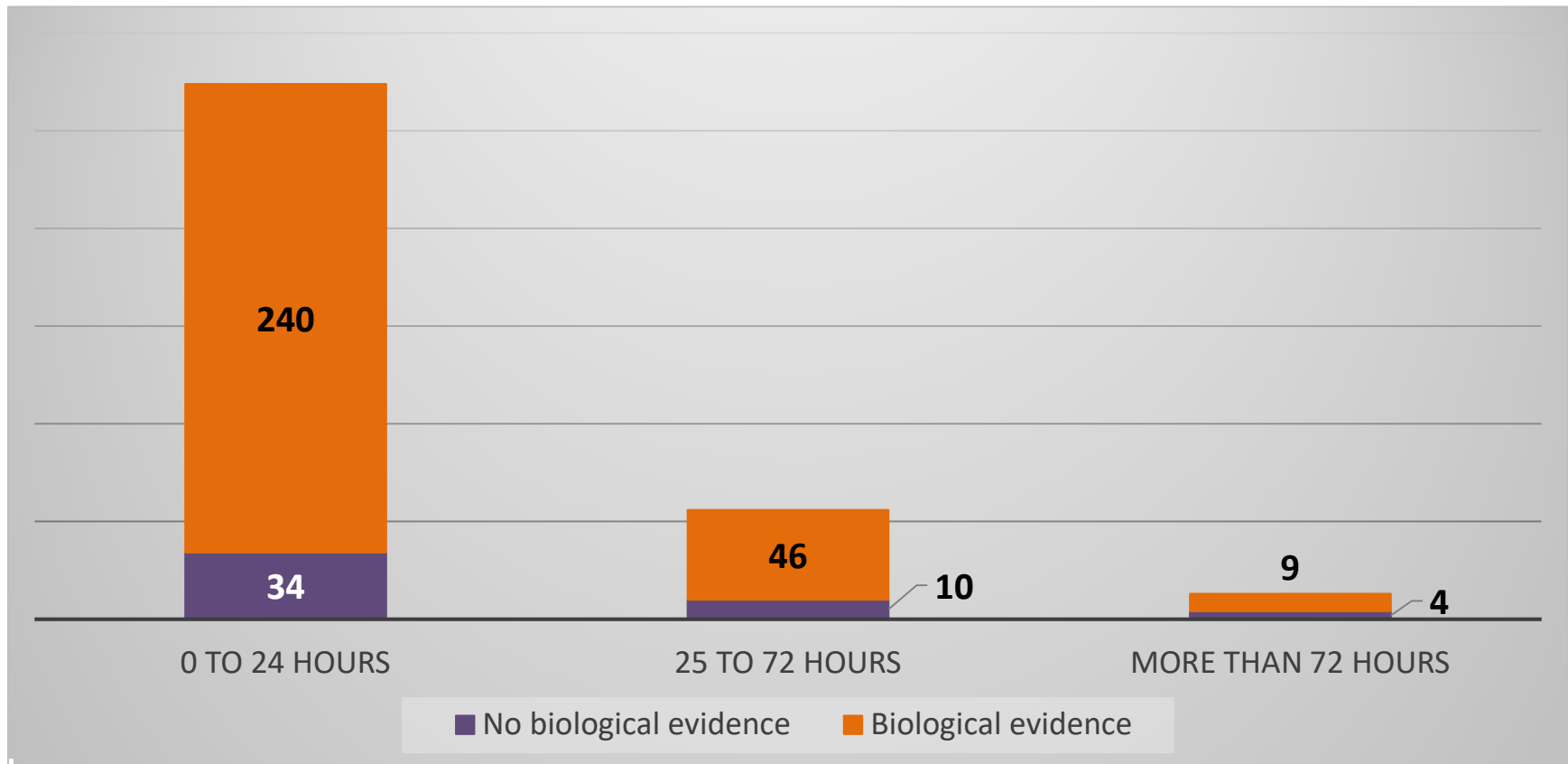


Study 1: Statewide sample.

Study 2: Large urban county.

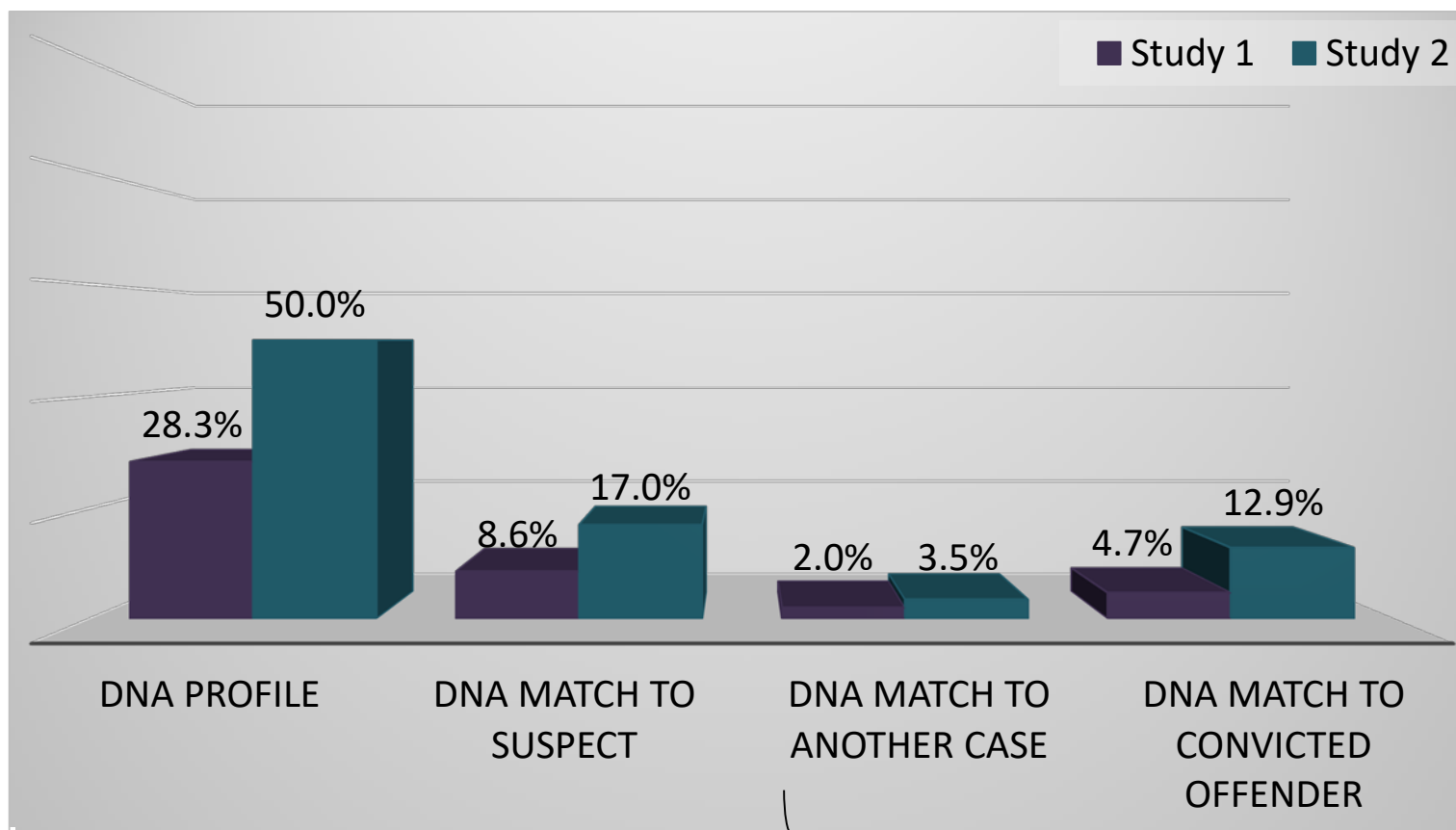


Some indication that evidence can be **found** more than 72 hours after the incident.





## Presence of DNA Evidence



Study 1: Statewide sample.

Study 2: Large urban county.

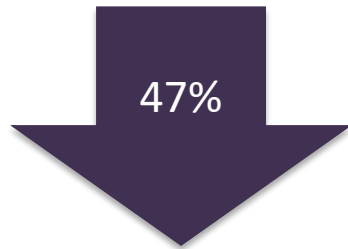
CODIS



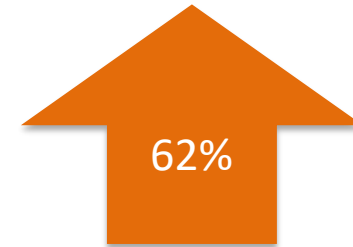
# **STUDY 1: FOUNDING AND ARREST**

# Three factors associated with unfounding:

Penetration\*



Exam after 24 hours<sup>+</sup>



Physical force\*



\* $p \leq .05$

<sup>+</sup>  $p = .06$



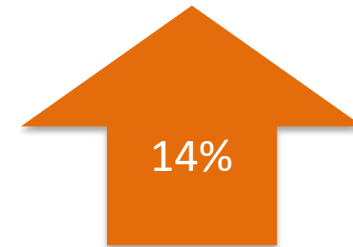


# Three factors associated with arrest:

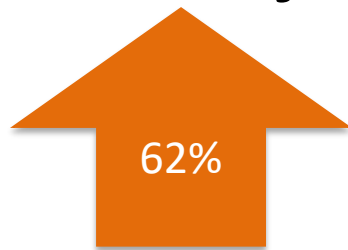
Exam after 24 hours\*



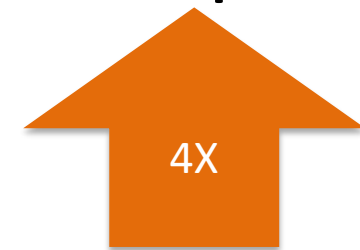
Acquaintance\*



Genital injury\*



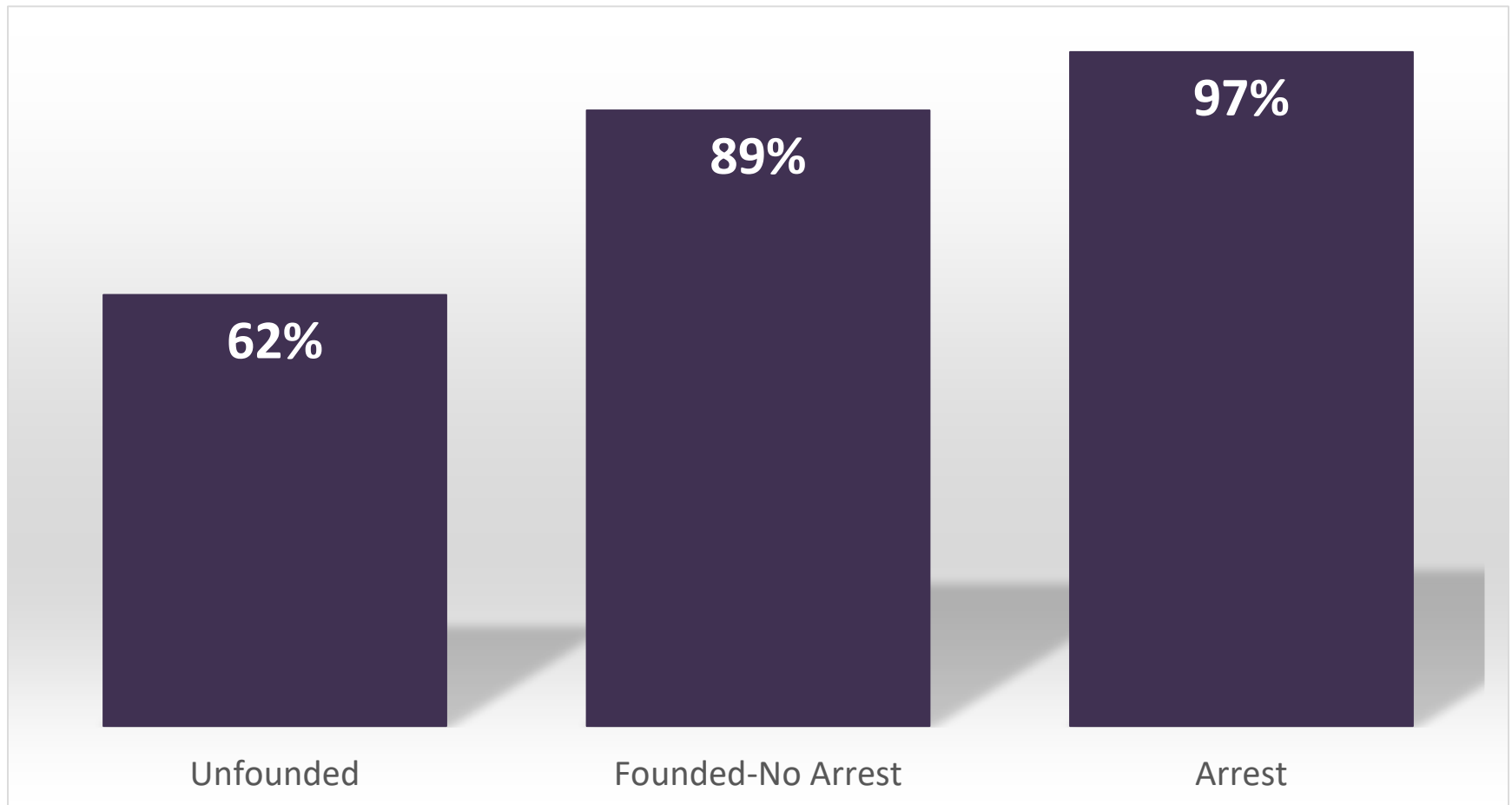
Intimate partner\*



\* $p \leq .05$

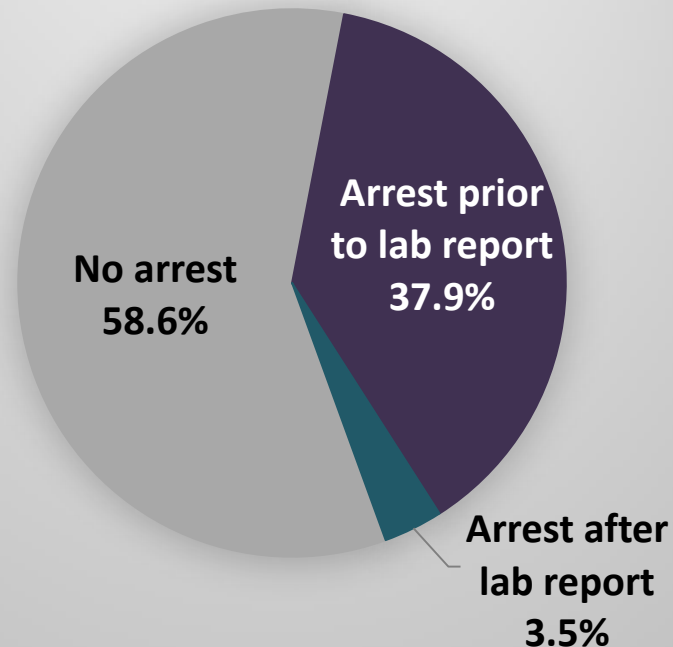
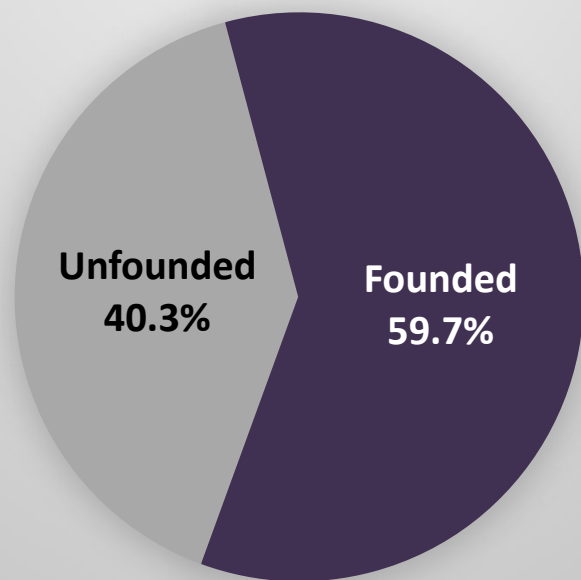


Kit testing was associated with founding and arrest.



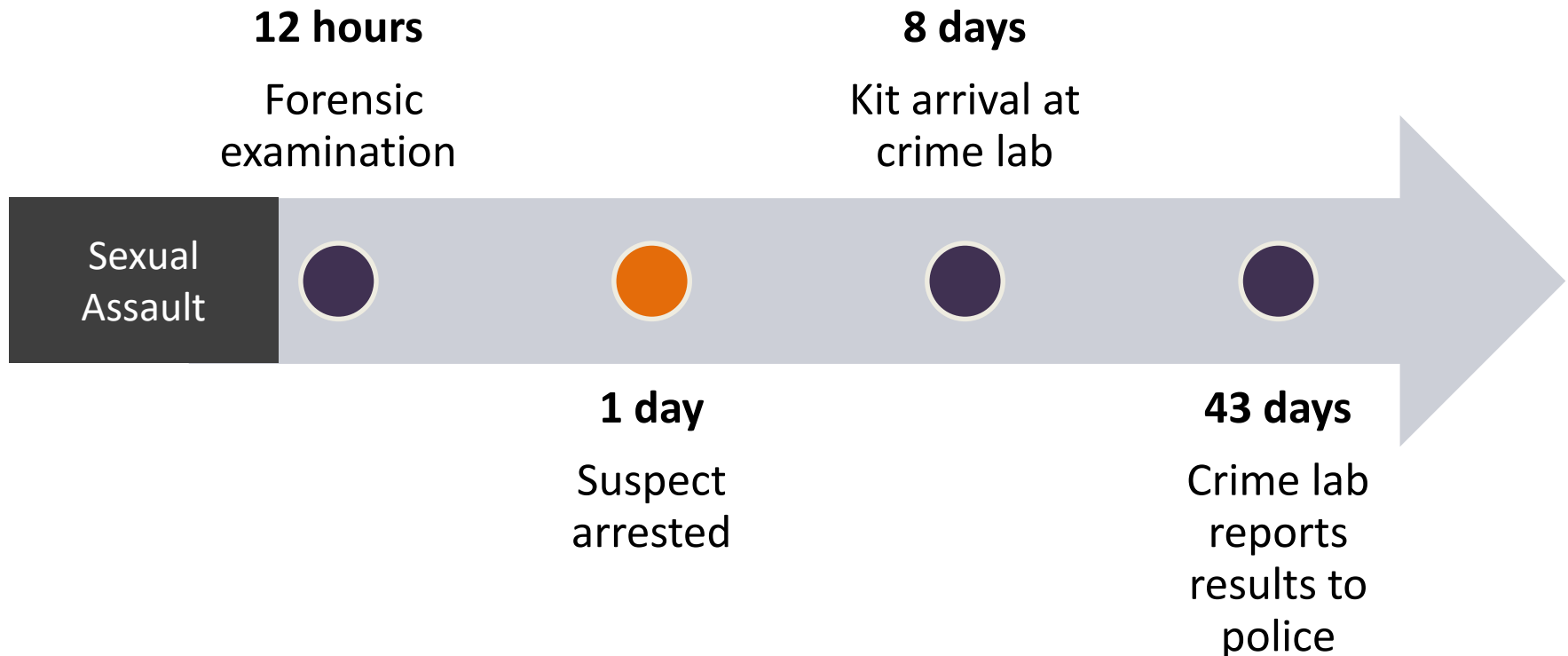


Biological evidence is only a factor in police arrest decisions in a **small number** of cases.





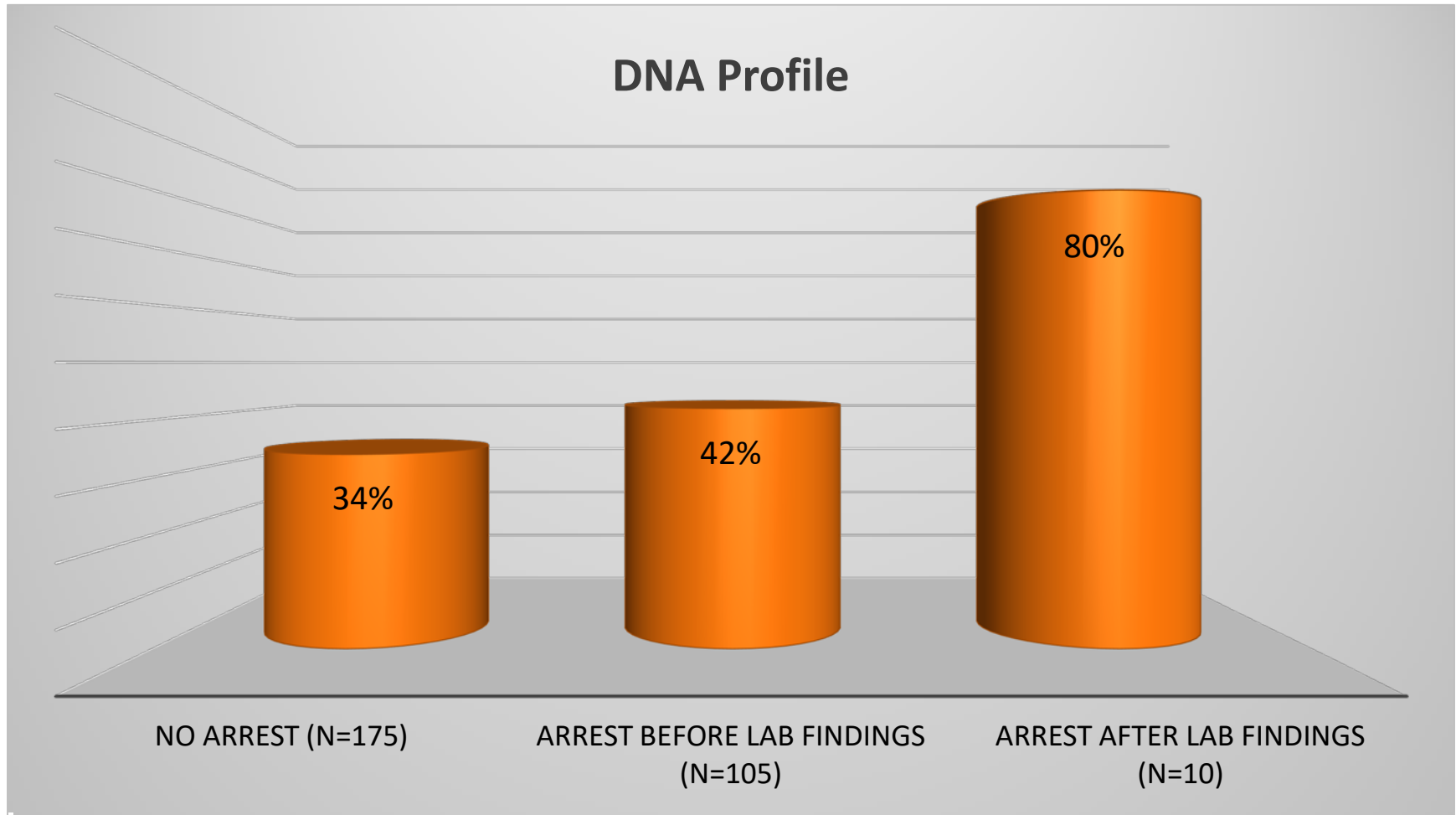
Most arrests occur **well before** crime lab analysis and reporting.



Based on median times.

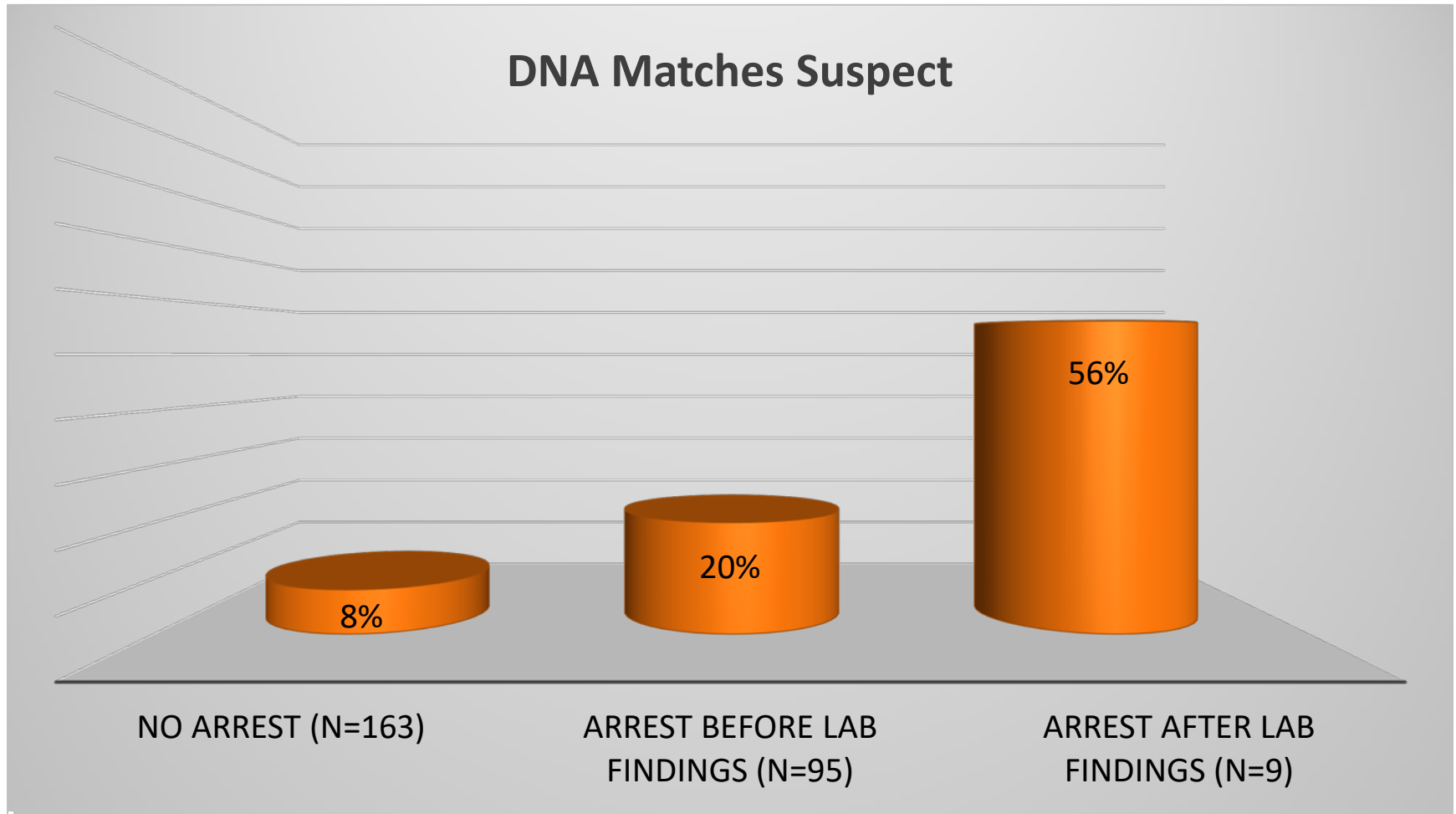


When an arrest occurs after lab findings, it is **more likely** to have a DNA profile generated.



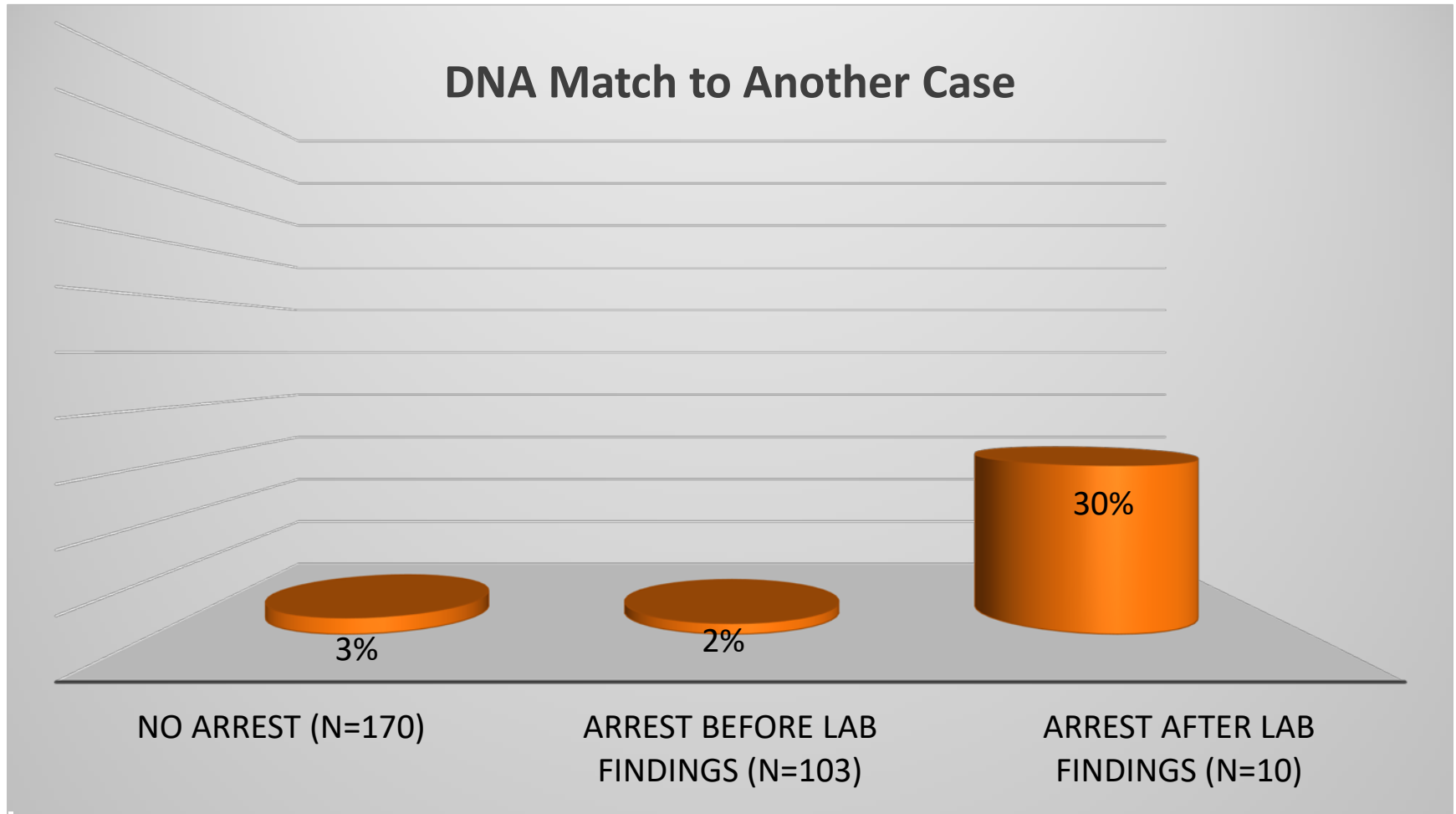


Arrests after lab findings are also **more likely** to have a DNA match to the suspect.





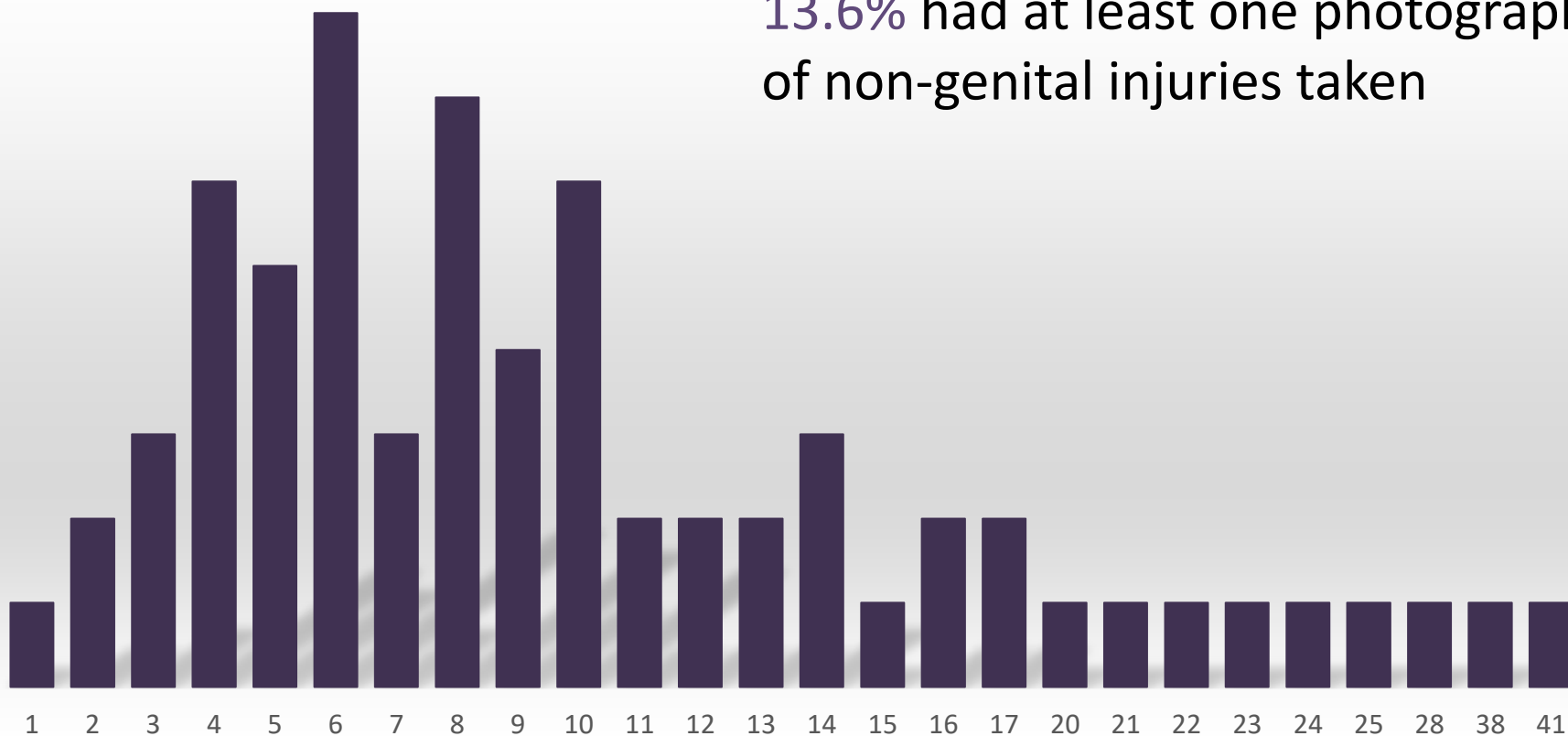
DNA matches to another case are also **more likely** when the arrest occurs after lab results.





# SANE nurses took significantly more photographs than non-SANE.

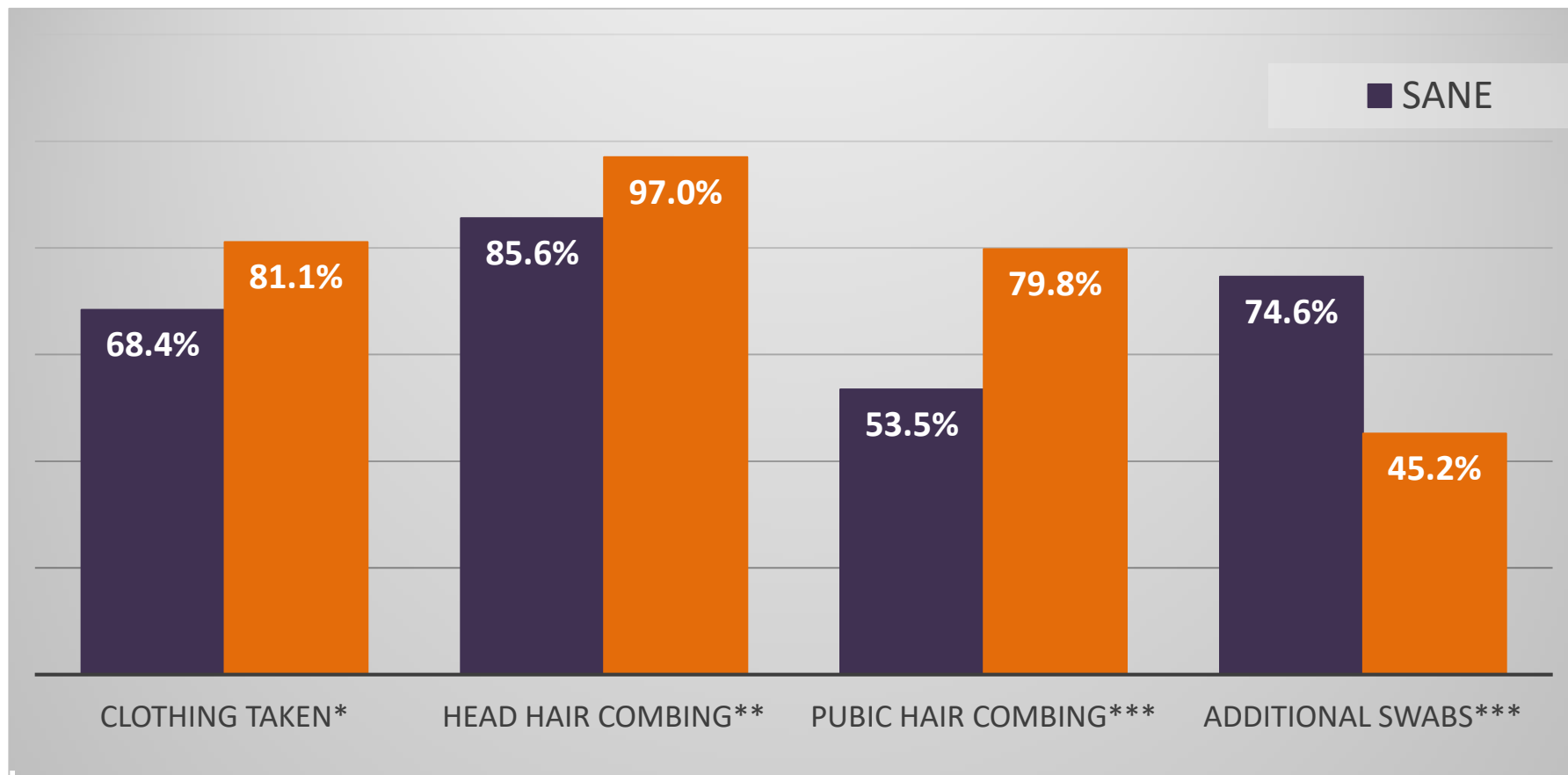
13.6% had at least one photograph of non-genital injuries taken







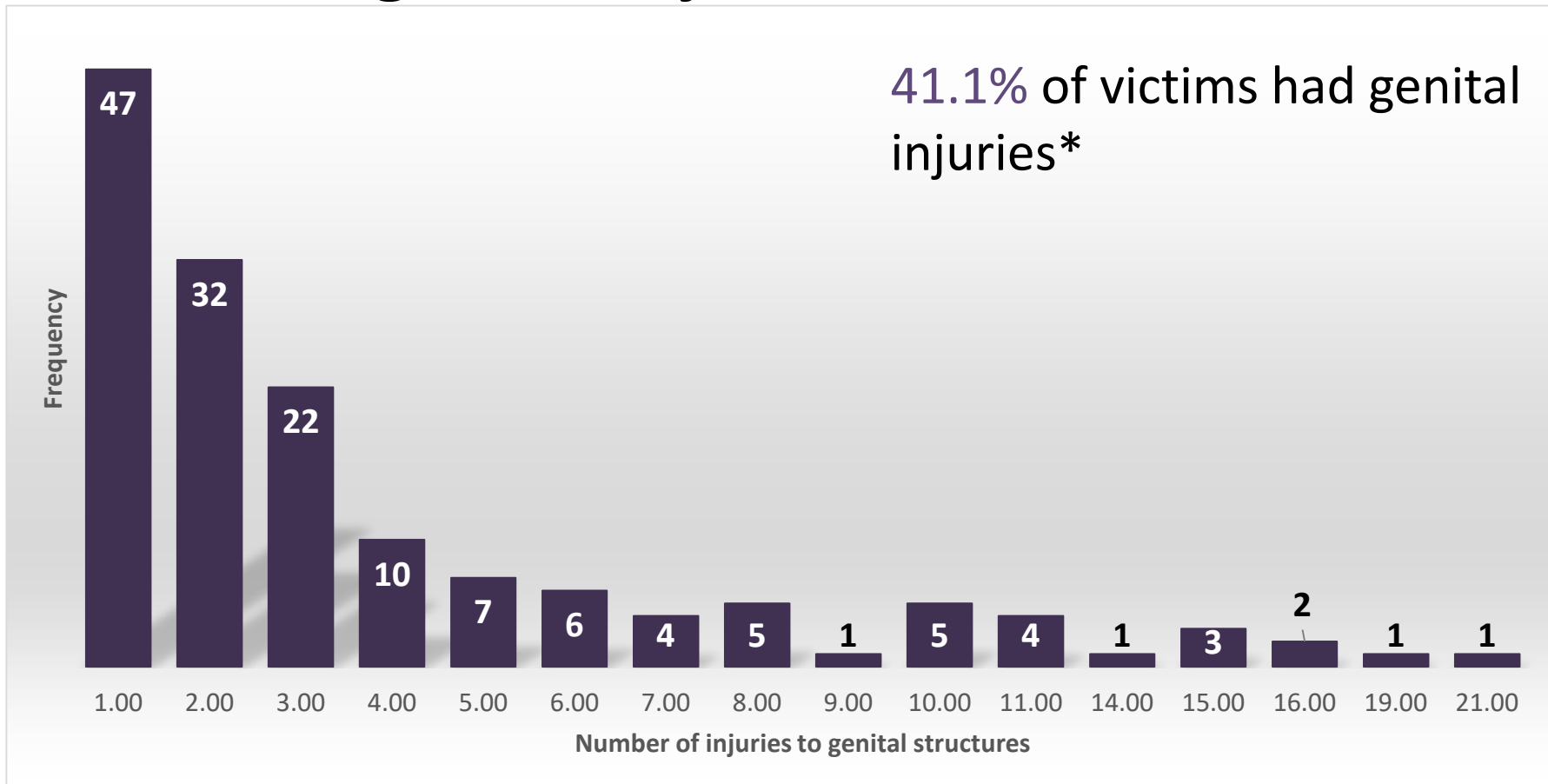
# SANEs were more likely to do additional swabbing than non-SANE.



\*  $p = \leq .05$ ; \*\*  $p = \leq .01$ ; \*\*\*  $p = \leq .001$



# SANE examiners identified significantly more genital injuries than non-SANE



\*Includes: Swelling, redness, abrasion, or tearing to any genital structure



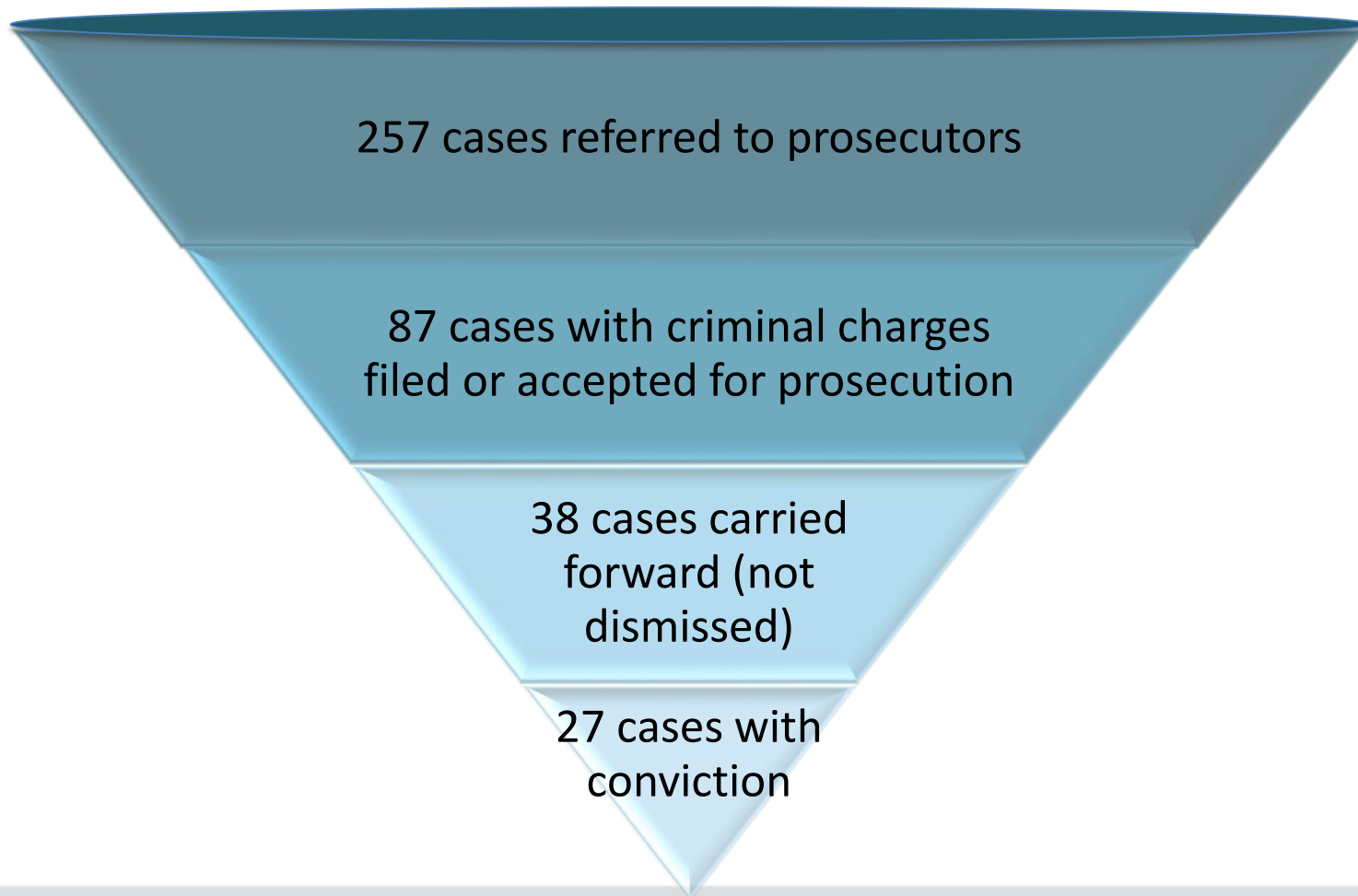
# Study 1: Summary of Findings

- Case attrition occurs **early**.
- Forensic results **rarely** precede arrests.
- Case founding decisions **reflect “real” rapes**: penetration and force.
- Arrests associated with **known offenders, injuries, and timely reporting**.
- SANEs were **more likely** to take photographs, do additional swabbing, and identify genital injuries.

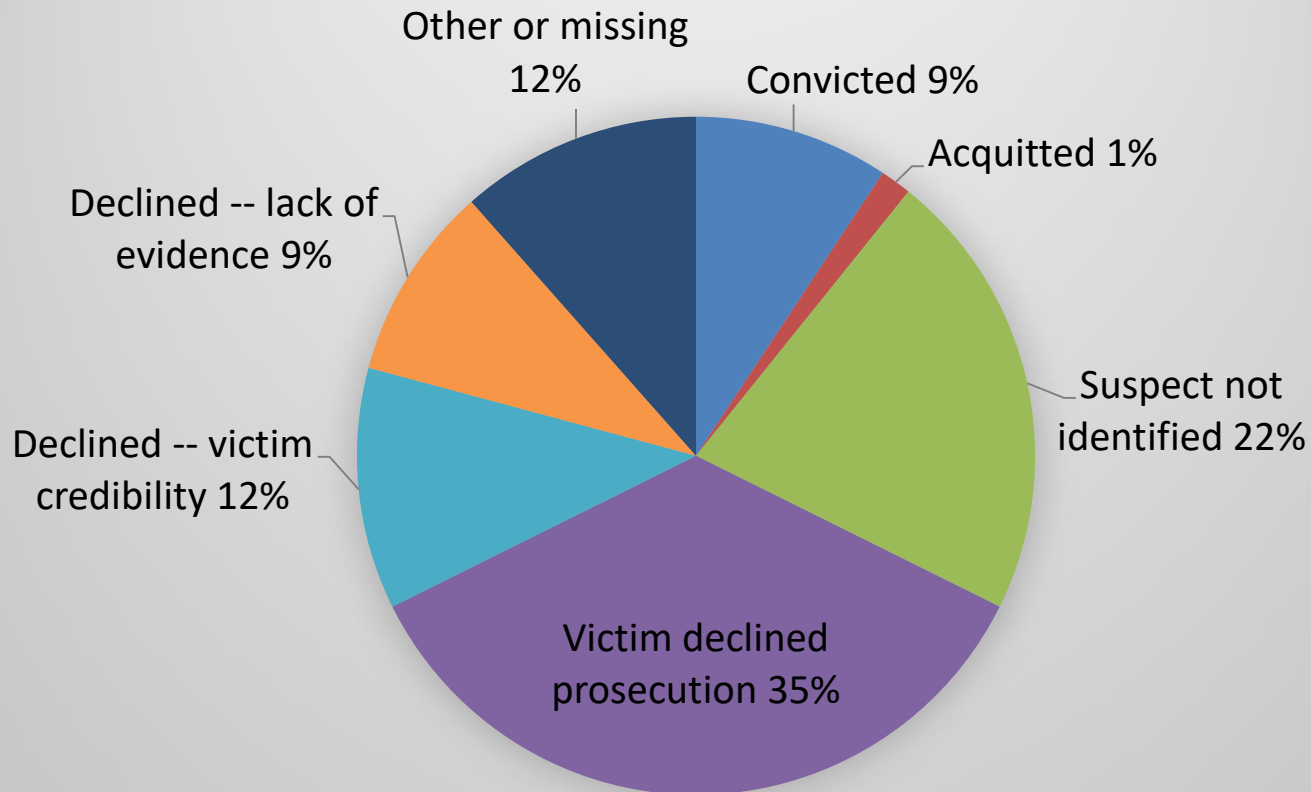


# **STUDY 2: PROSECUTION AND CONVICTION**

## Most cases fall out because no charges are filed or the case is dismissed

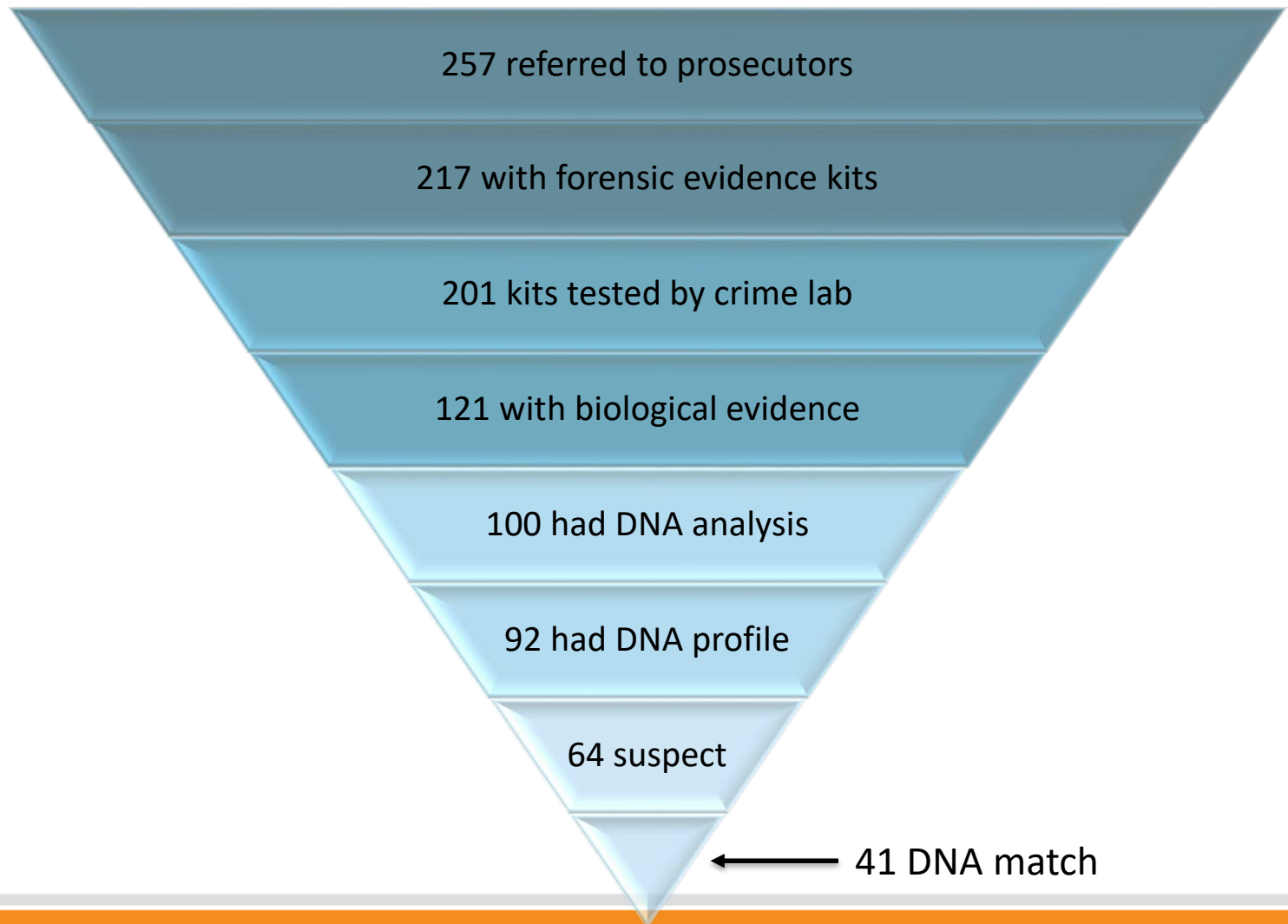


35% of cases the victim declined prosecution.





## Few cases had a DNA match to the suspect.





DNA match to the suspect was associated with filing, no dismissal, and conviction.

Evidence Variable	Summary of Results
Non-genital injury	No effect; more analysis needed
Genital injury	No effect, more analysis needed
Semen/sperm	No effect
Saliva	No effect
Any biological evidence	No effect
DNA match to suspect	Significantly related to... <ul style="list-style-type: none"> <li>• Filing criminal charges</li> <li>• Carrying cases forward w/o dismissal</li> <li>• Conviction</li> </ul>

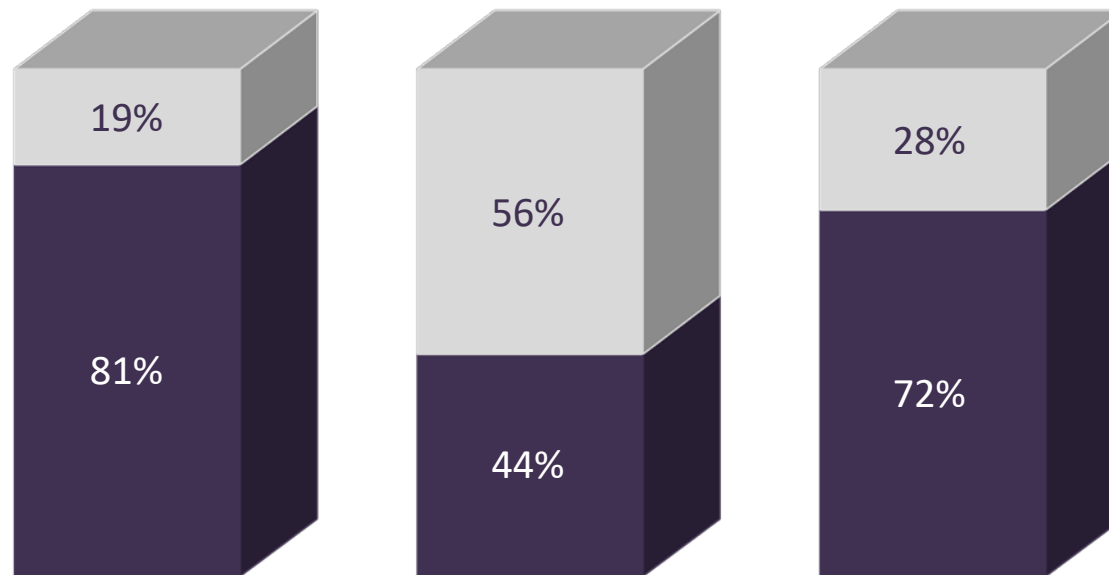
**IS DNA MATCH TO SUSPECT A CAUSE OR EFFECT OF PROSECUTOR ACTIONS?**





In 29.4% of cases the lab reports were available **before** charges were filed.

■ Criminal Charges or Accepted for Prosecution    ■ No Criminal Charges



DNA MATCH TO  
SUSPECT

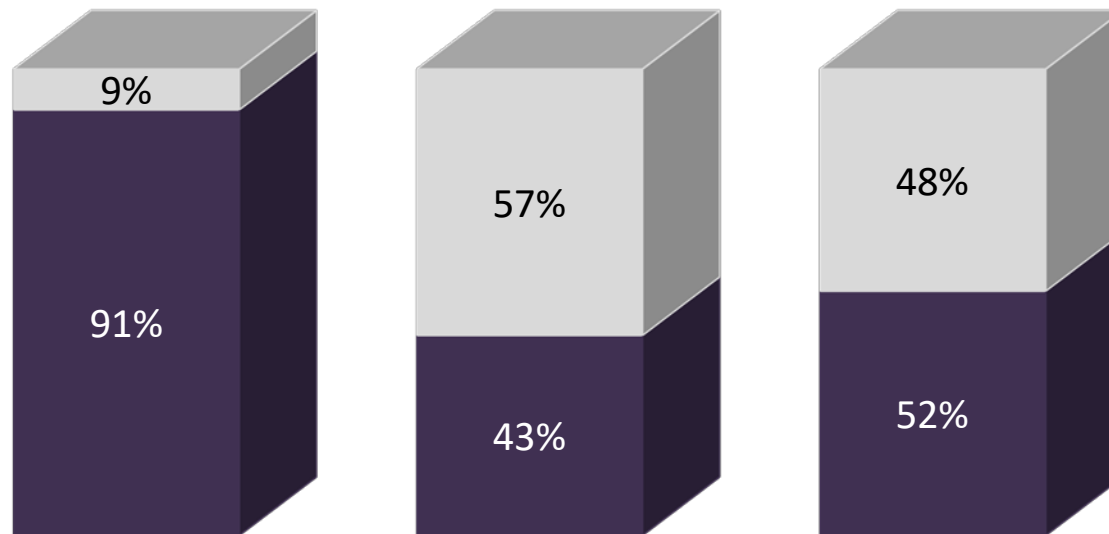
KIT PROCESSED BUT NO  
MATCH

NO KIT OR KIT NOT  
PROCESSED



# Cases with a DNA match to the suspect were **less likely** to be dismissed.

■ Carried forward to guilty plea or trial    ■ Dismissed



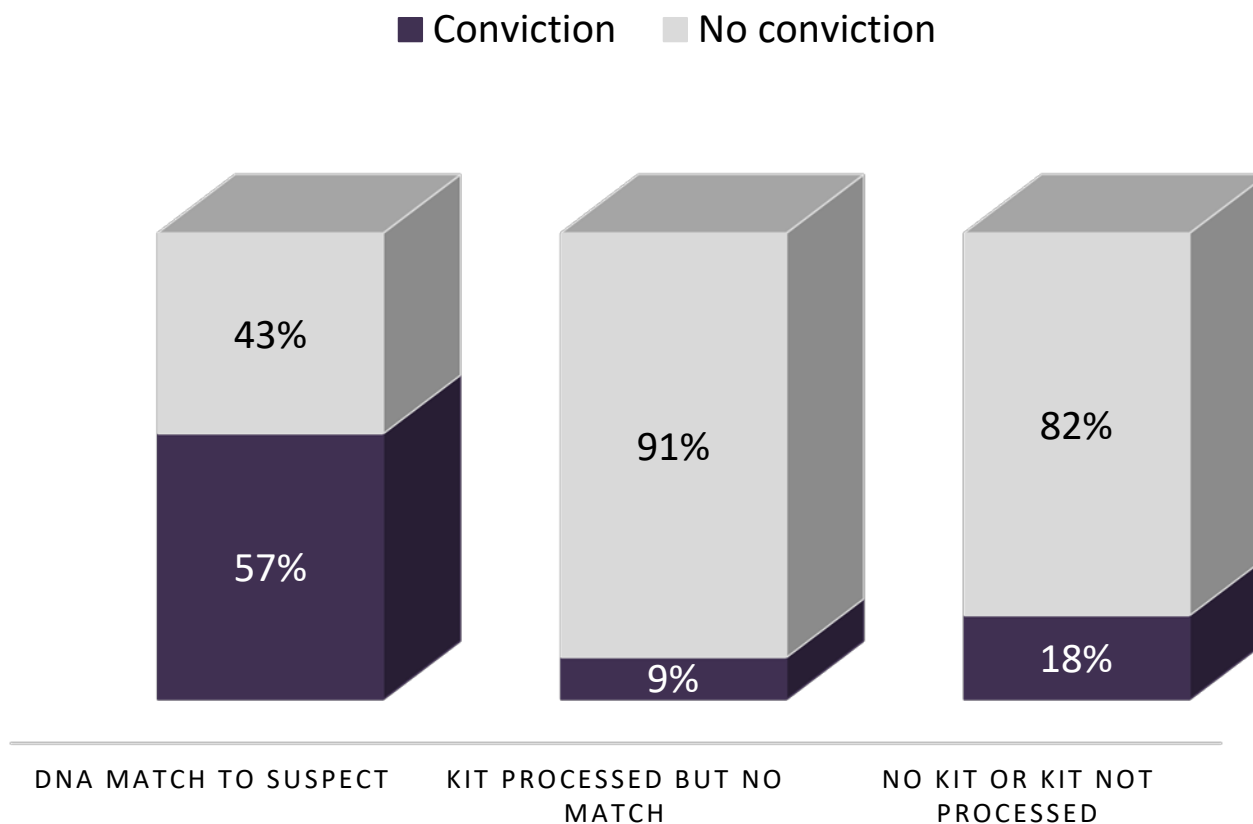
DNA MATCH TO SUSPECT

KIT PROCESSED BUT NO  
MATCH

NO KIT OR KIT NOT  
PROCESSED



Cases with a DNA match to the suspect were **more likely** to result in a conviction.



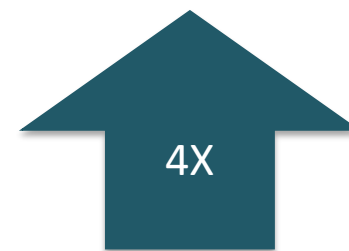


# Significant factors explaining conviction:

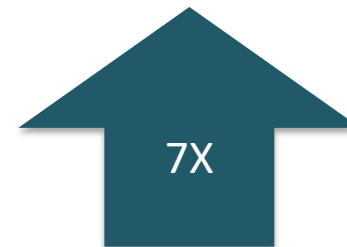
Victim credibility\*



Suspect arrest\*



DNA suspect match\*\*

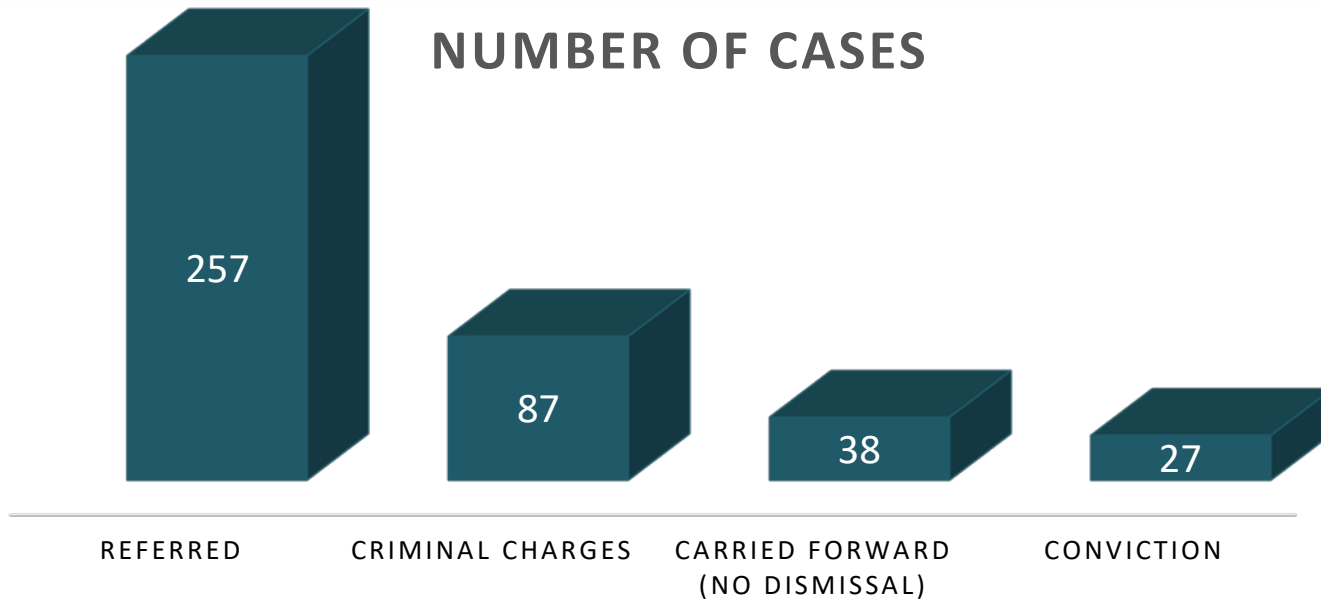


\* $p \leq .05$

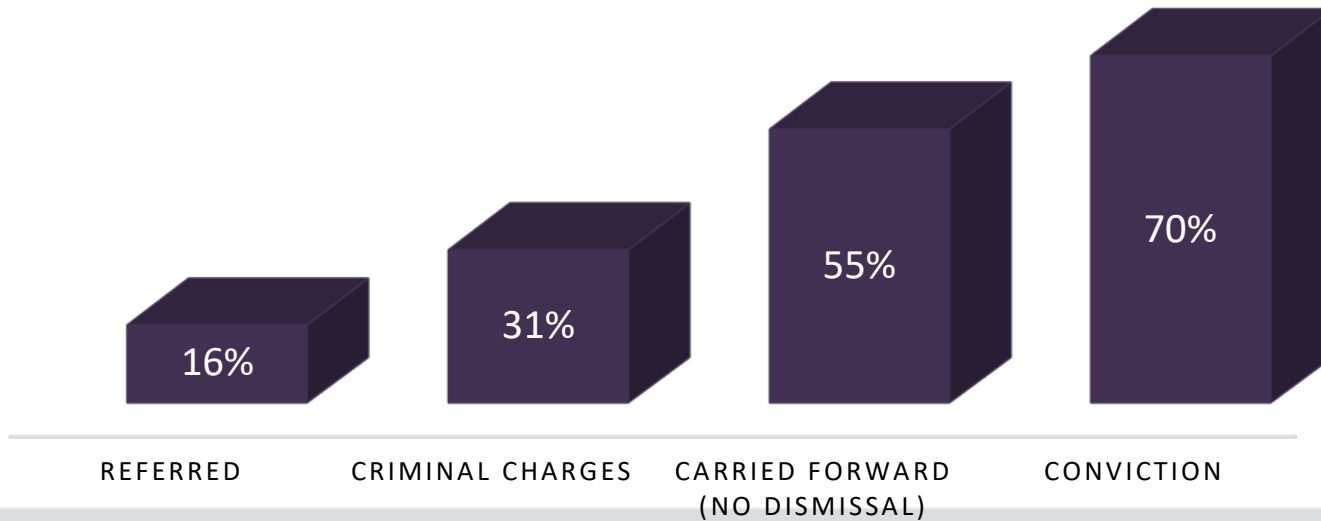
\*\* $p \leq .01$



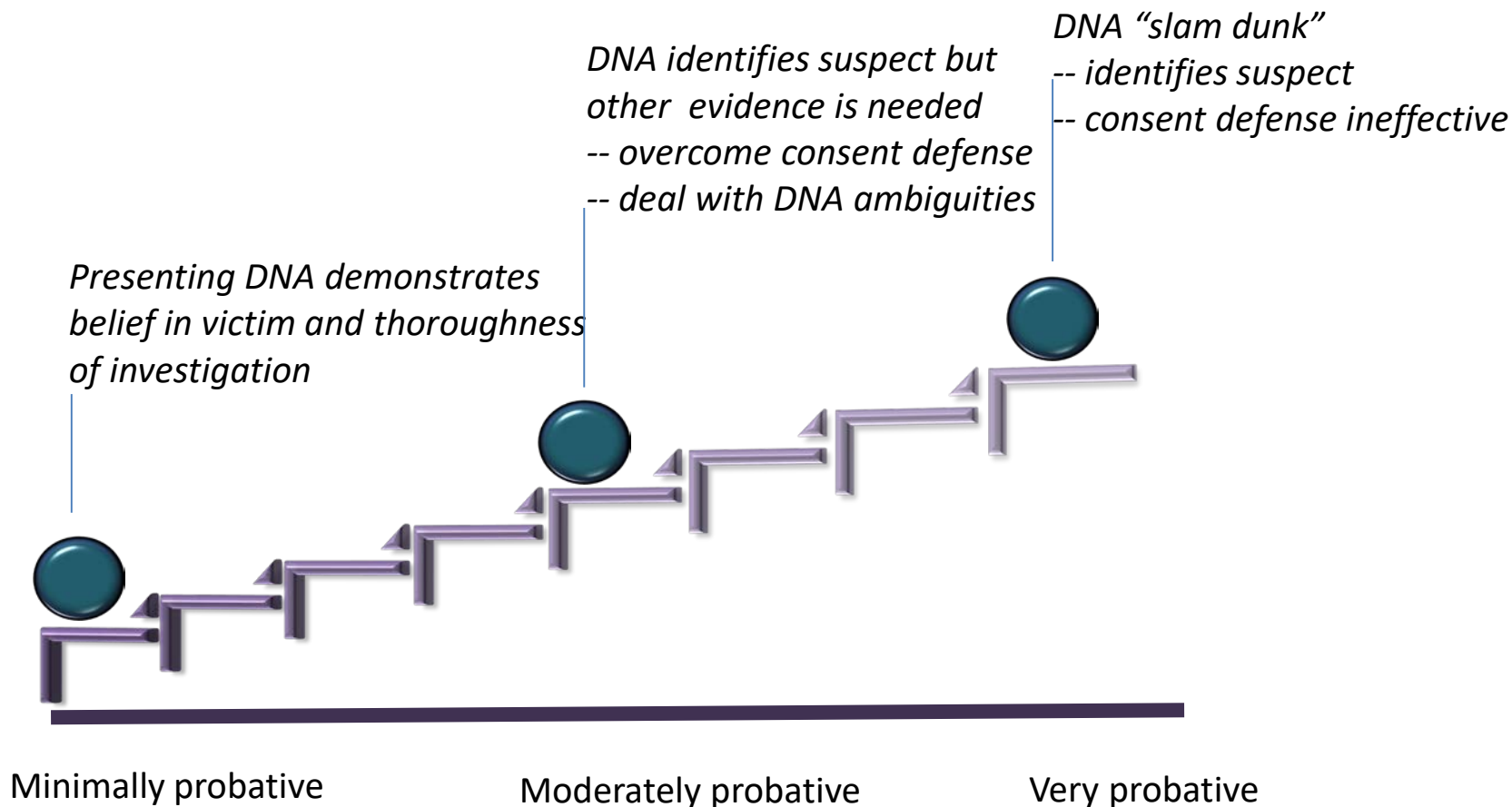
## NUMBER OF CASES



## % DNA MATCHES



# Biological Evidence: Continuum of Probative Value





# Biological Evidence Assists Investigations and Prosecution

- **Identifying** suspects in stranger cases
- **Identifying** suspects in cases where victim unable to provide good witness
- **Places** suspects at the scene of the crime
- **Helps** with questioning suspects
- **Bolsters** victim's credibility



# Biological Evidence is Not a Panacea

- Consent **difficult to overcome**
- Defense can **challenge** the chain of custody or results
- Defense can **offer alternative explanations** for DNA presence





# Biological Evidence is Impacted by Court Culture

- Forensic evidence presented even if not probative
  - ADA 2: *We still have a burden of proving the elements of the crime and the fact that the defendant is the person who committed the crime. . . Under the theory of better to be safe than sorry—we don't do it to the extent that we would in non-consent cases.*
  - ADA 4: *When we have the evidence, we use it. When we don't have it, we bring in experts to explain why we don't have it every time, every time.*



## Study 2: Summary of Findings

- DNA matches happen in a **small number of cases**
- DNA is **associated** with charging, no dismissal, conviction
  - Prosecutors often sought DNA analysis on cases they **moved forward on.**
- DNA is **more useful** in stranger cases or assailants denying sexual contact; **less useful** when assailants claim consent



## Study 2: Summary of Findings

- Prosecutors sought to introduce DNA evidence **whenever possible**
  - Felt it reflected prosecutor and victim **thoroughness and corroboration** of victim allegations.
- **Skillful** prosecution needed to make DNA effective (e.g., countering switch to a consent defense)
- Prosecutors use **multiple forms of evidence**, not just DNA evidence



## Overall Conclusions

- More effective use of biological evidence is **unlikely** to dramatically increase arrest and prosecution rates
- Victim participation in prosecution and victim credibility are **big factors**—more needs to be learned
- Testing untested kits holds **promise** for catching serial rapists, but much more research is needed



## Overall conclusions (cont.)

- Almost all cases carried forward to guilty plea or trial had a DNA match
  - Prosecutors often sought a DNA match even after filing criminal charges
  - Is DNA match a new requirement for prosecution?
- Increasing access to quality exams, crime lab analysis, and prosecutor skill in using biological evidence is a social justice issue.



# Contact us!

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