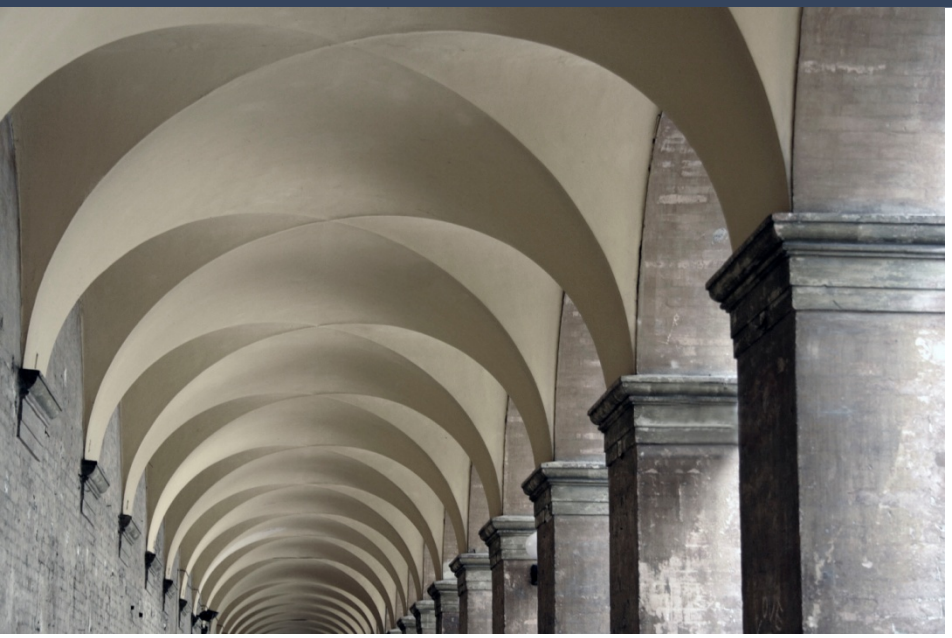
Forensic Blueprint for Law Enforcement



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NIJ Social Science in Forensic Science

Technical Working Group

Washington, DC

URBAN INSTITUTE
Justice Policy Center

Introduction

- Project History
- Project Scope
- Data Collection Methods:
  - Literature
  - US Interviews
  - UK Interviews
  - Practitioner Surveys
  - Roundtable

Purpose

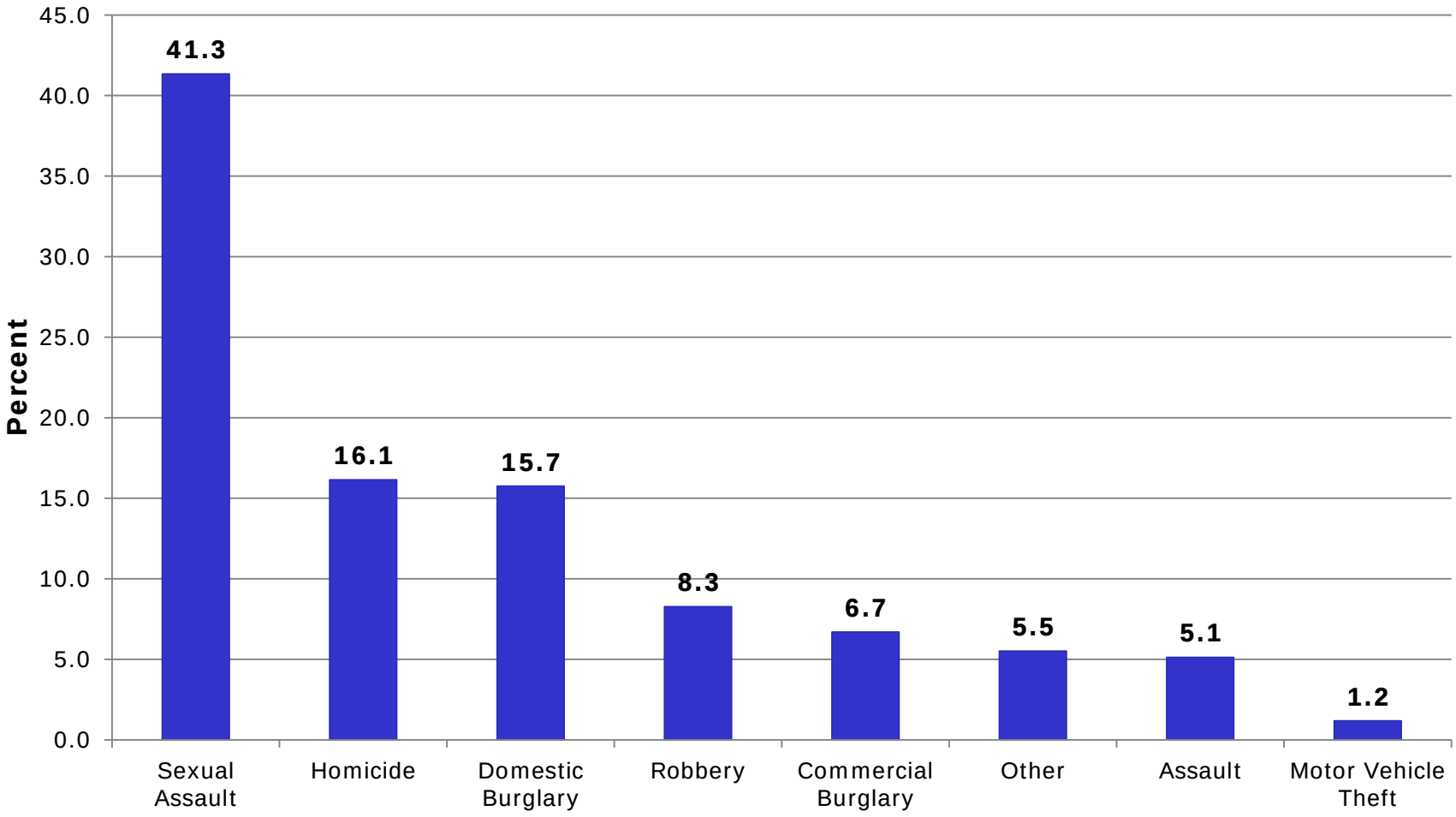
- Purpose of the Survey
  - Case-Level data from multiple jurisdictions
  - Collect factual data that describe practice
  - Collect opinion data on previously identified roadblocks to the effective use of DNA evidence

Survey Design

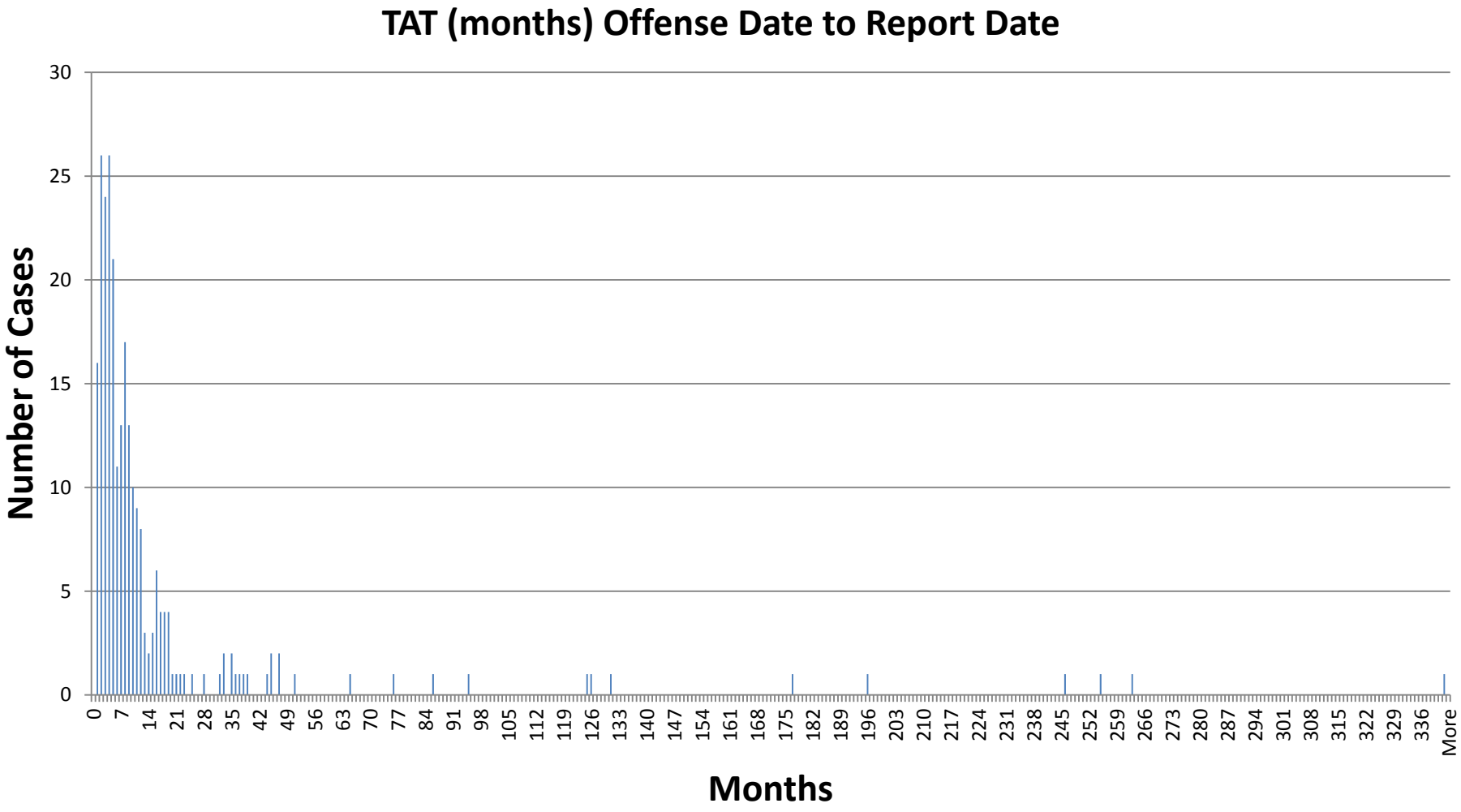
- 60 Jurisdictions
- 6 types of practitioners
  - 3 Law Enforcement: Evidence Collectors, Investigators, Police Chief
  - 2 Laboratory: Lab Analysts, Lab Directors
  - 1 Prosecutor

Group	Completed	Individuals Contacted	Response Rate (%)
Evidence Collectors	98	217	45
Investigators	97	215	45
Lab Analysts	50	176	28
Lab Directors	22	49	45
Police Chiefs	39	59	66
Prosecutors	17	56	30
Total	323	772	42

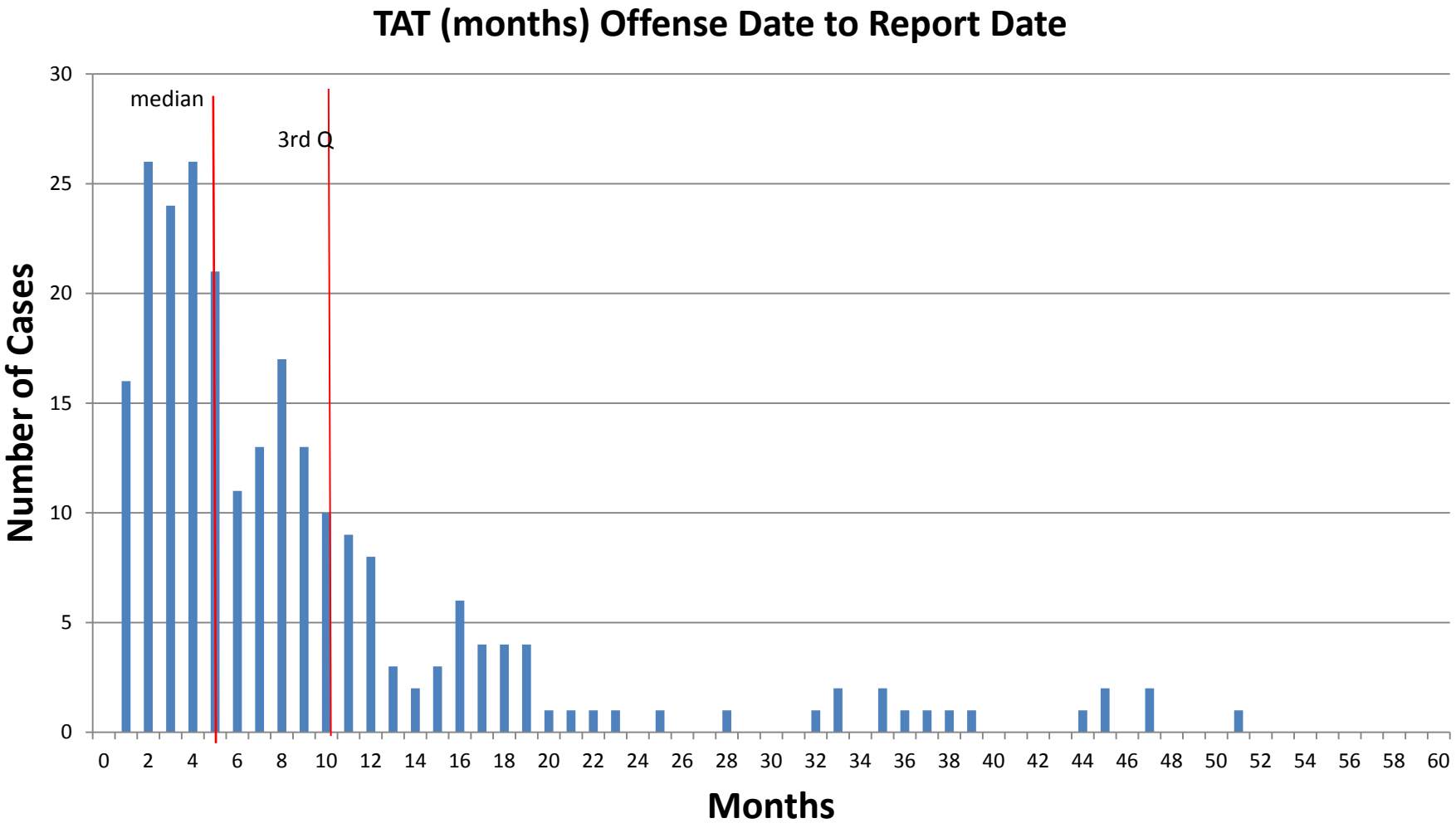
Offense Distribution (%) (n=254)



TAT in Months



TAT in Months



Case-Level Data (n=254)

Median Days from Offense to Report: 183 days

Homicide: 274 days

Commercial Burglary: 123 days

	Frequency	Percent
Cases with profiles developed	207	81%
Cases with profiles uploaded	140	55%
Cases with uploads before a suspect was identified	*63*	*35%*
Cases with a probative hit	43	17%
Cases with uploads before a suspect was identified and probative hits	*25*	*10%*

Case-Level Data (n=254)

	Survey Percent	Outcomes observed during the Property Crime Field Experiment
Cases with profiles developed	81	70.3
Cases with profiles uploaded	55	54.7
Cases with a probative hit	17	23.3

Roadblocks

- Positive Statements that target RBs in capacity, training and communication.
  - (e.g. Judges are knowledgeable about DNA evidence)

- 5-point agreement scale

  5=Strongly Agree
  1=Strongly Disagree

Roadblocks

- Strongest agreement reported

	ECT	INV	Chief	Analysts	Director	PROS	St. Dev	Mean
Chain of custody is always maintained.	4.65	4.68	4.87	4.65	4.59	4.40	0.152	4.64
DNA databases should be expanded to include more offenders and arrestees to produce more hits.	4.51	4.59	4.62	4.04	4.09	4.80	0.307	4.44
In this jurisdiction, biological materials are correctly packaged when submitted to the laboratory.	4.35	4.46	4.56	3.80	4.14	4.40	0.276	4.29
DNA evidence is effective at resolving criminal cases prior to trial.	3.92	3.93	4.18	4.18	4.36	4.67	0.282	4.21
Laboratory analysts have received sufficient training for the analysis of DNA evidence.	3.61	3.86	4.18	4.80	4.64	4.07	0.455	4.19

Where do practitioners agree?

- It appears that there is a consensus that there are safeguards in place, and that current practices are meeting legal requirements for valid samples/analysis.

- There is significant and widespread agreement that the most important DNA samples are being properly collected and submitted to the lab.

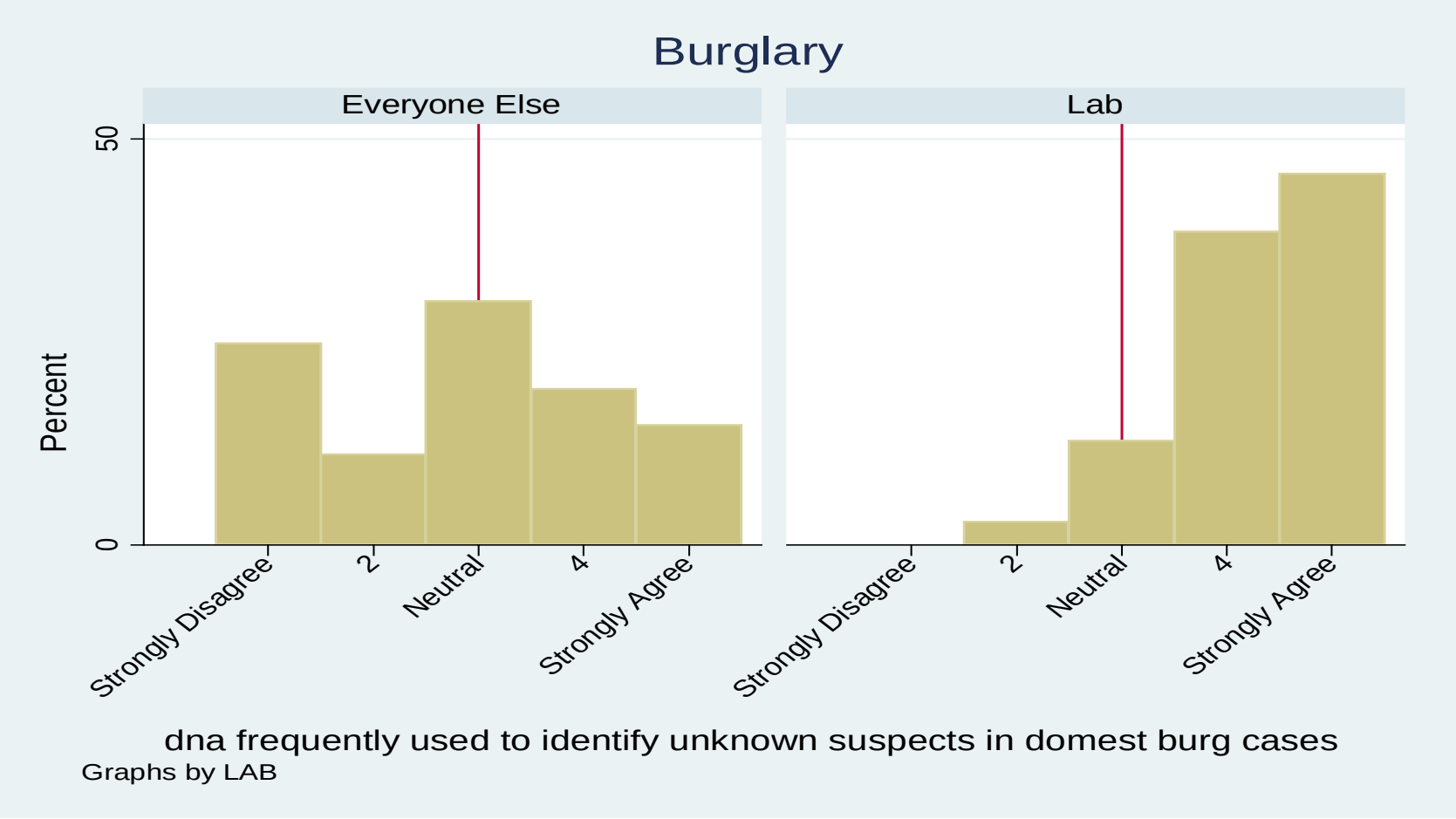
- The perception is that the system isn't being inefficient due to over carelessness.

Roadblocks

- Strongest disagreement reported

	ECT	INV	Chief	Analysts	Director	PROS	St. Dev	Mean
The lab in this jurisdiction does NOT have an accumulation of untested DNA evidence that contributes to delays	2.22	2.78	2.41	2.67	2.59	2.47	0.200	2.52
The laboratory has the capacity to analyze all DNA evidence submitted.	2.78	3.15	2.76	2.88	2.55	2.40	0.261	2.75

Where do practitioners disagree?



Hit Outcomes (perceived)

What is the usual outcome of a DNA database hit?

	New Suspect	Corroborated known suspect	Hit to a non-suspect person	Other
Police Chief	33	**51.3**	2.6	15.7
Lab Director	**72.7**	27.3	0	0
Lab Analysts	**46.2**	32.7	0	21.1

- Investigators were asked by crime type but the most common : Corroborated a known suspect (post arrest)
- Of all crime types, sexual assault had the highest perceived percentage of the most valuable outcome: Identification of a new suspect: **17.4%** “

Roadblocks

- Most variation among groups

	ECT	INV	Chief	Analysts	Director	Pros	St. Dev	Mean
DNA evidence is frequently used to identify UNKNOWN SUSPECTS in cases of DOMESTIC BURGLARY.	3.08	2.65	2.92	4.41	4.00	2.93	0.703	3.33
Evidence collectors and investigators submit the most important items for DNA analysis.	4.27	4.62	4.67	3.29	3.50	4.27	0.578	4.10
When an eligible DNA profile is obtained from crime scene evidence, it is uploaded to the CODIS DNA database in a timely manner.	3.21	4.11	3.90	4.53	4.59	3.87	0.507	4.04
Laboratory analysts have received sufficient training for the analysis of DNA evidence.	3.61	3.86	4.18	4.80	4.64	4.07	0.455	4.19
DNA evidence is frequently used to CONFIRM SUSPECTS already identified in cases of DOMESTIC BURGLARY.	3.07	2.73	2.77	3.55	3.86	3.33	0.446	3.22

Decision Makers

- Evidence Path

Response → Collection → Submission

Choose (evidence collectors, investigators, lab personnel, prosecution personnel, written policy, IDK)

Investigator – most commonly selected answer by all practitioner types.

Homicide – written policy

Domestic burglary – more discretion

Usefulness: Perceived and Actual

- Evidence Path

Response → Collection → Submission → Testing → Use of Results

Investigators

  - Investigators rated DNA evidence between useful and extremely useful for homicide (4.38) and sexual assault (4.63).
  - Less so for other crime types (2.93 – 3.39).
    - domestic burglary (2.93)

Decision Makers

- Evidence Path

Response → Collection → Submission → Testing → Use of Results

- 5 point scale: Always (5) to Never (1)
- Why not collected?
  - EC: Long drive (3.91)
    Insufficient Funds (3.36)
    Lab work takes too long (3.24)
- Why not collected and submitted?
  - INV: All answers between 1 → 3
    Other strong evidence (2.69)
    Low priority (2.38)
    Lab limits on number of items (2.35)

- If submitted, why not used?
  - No profiles developed (3.16)
  - No hit (2.87)
  - Investigation concluded before results were obtained (2.69)

UK and US Systems

US assumption on UK

- National system
- TAT clock starts at submission
- Privatization is a mess

What we found:

- While FSS was a national system, LEAs are more fractured than expected.
  - 43 different police forces and each are responsible for procuring their own forensic services. Many organizations, both governmental and not are involved in this process. (e.g. Home Office, FS Regulator, ACPO, NPIA*, UKAS) this both adds value and complicates the system.
- Usually 3-5 day TAT from date of offense to report, including database upload and search if applicable. Cases with suspects take longer due to comparison.
- Attribute great TATs to both large government financial investment and increased capacity due to privatization.

- **How does this inform our discussions of privatization and database technology in the US?**

Assumptions

- DNA is used frequently to ID unknown offenders
- New equipment/personnel/labs create efficiencies
- Public labs > Private Labs
- Legal barriers exist to using private labs
- Actors in the system know with accuracy what the other actors are doing
- Evidence is only collected when useful and evidence collectors know what to collect
- We know who should have oversight of crime labs
- All cases backlogged are open and should be tested
- Bigger is better
- Adversarial system ensures quality
- Accreditation ensures quality