Understanding the Impact of De-escalation during Police-Civilian Interactions: Developing a Comprehensive Research Framework for Police Reform

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What we know about UoF studies …

- What and how we "count" use of force varies dramatically across police departments and researchers

- Prevalence estimates vary depending on how use of force is conceptualized, measured, and reported

- Large methodological and statistical variations across studies

Basic Example: Measuring Use of Force
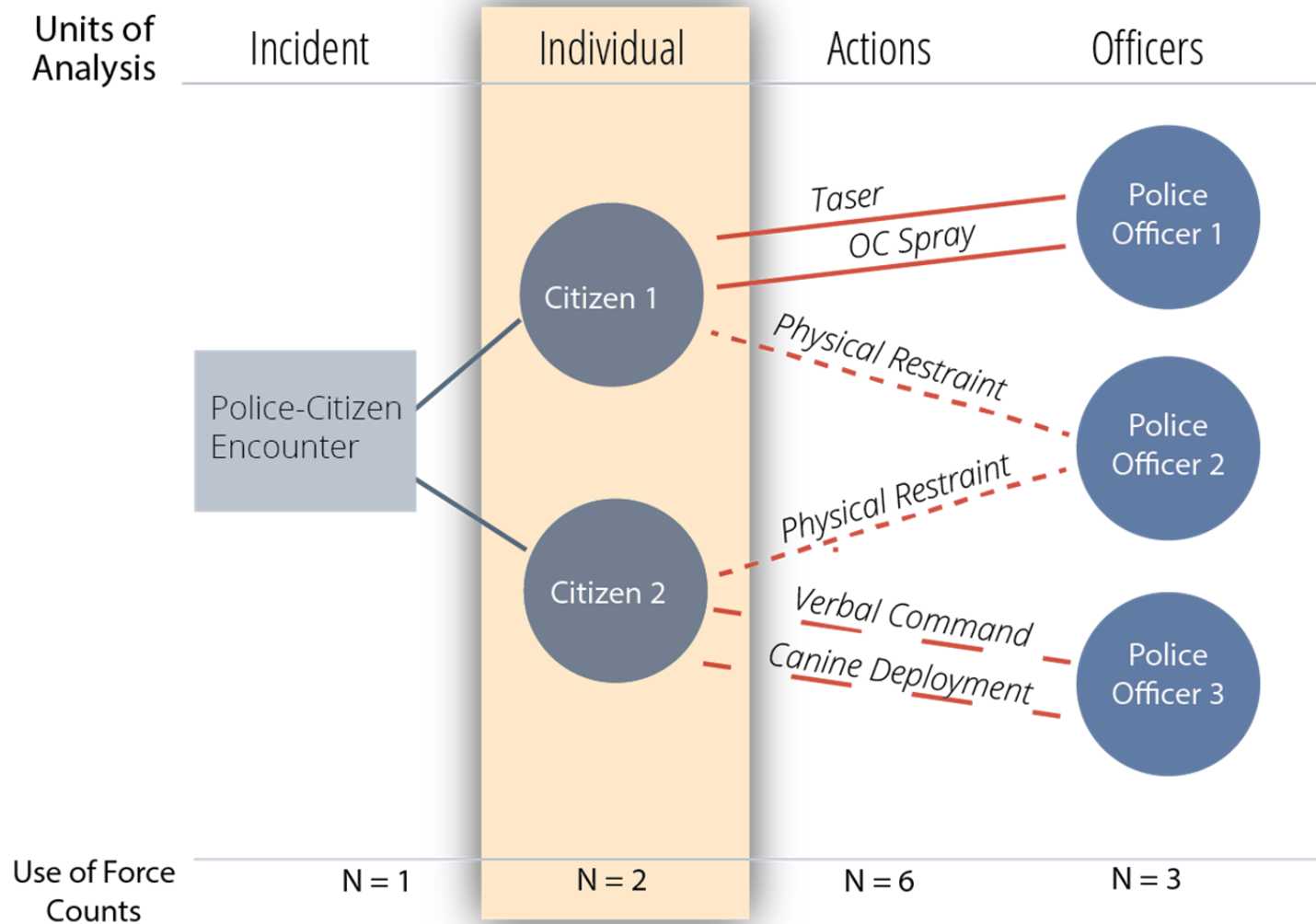
What we know about UoF studies …

- Measuring racial/ethnic disparities in use of force is also fraught with inconsistencies and inappropriate benchmark comparisons

- Measuring the factors that predict use of force (e.g., situational, legal, individual, organizational, community) often have same limitations as measurements of UoF

- **Limitations in UoF studies can be even more problematic when examining the impact of UoF reform efforts**
  - Why … and what can we do about it …. Using example of police de-escalation training

De-escalation Training

- Widely supported by across various stakeholders; endorsed by experts and academics after 2014

- Most recently, calls for de-escalation training have been combined with calls for changes in UoF policies, peer-intervention, and larger reform efforts

- No uniform definition or recognition of what "de-escalation" is

- Sparse evidence regarding its effectiveness

De-escalation Training

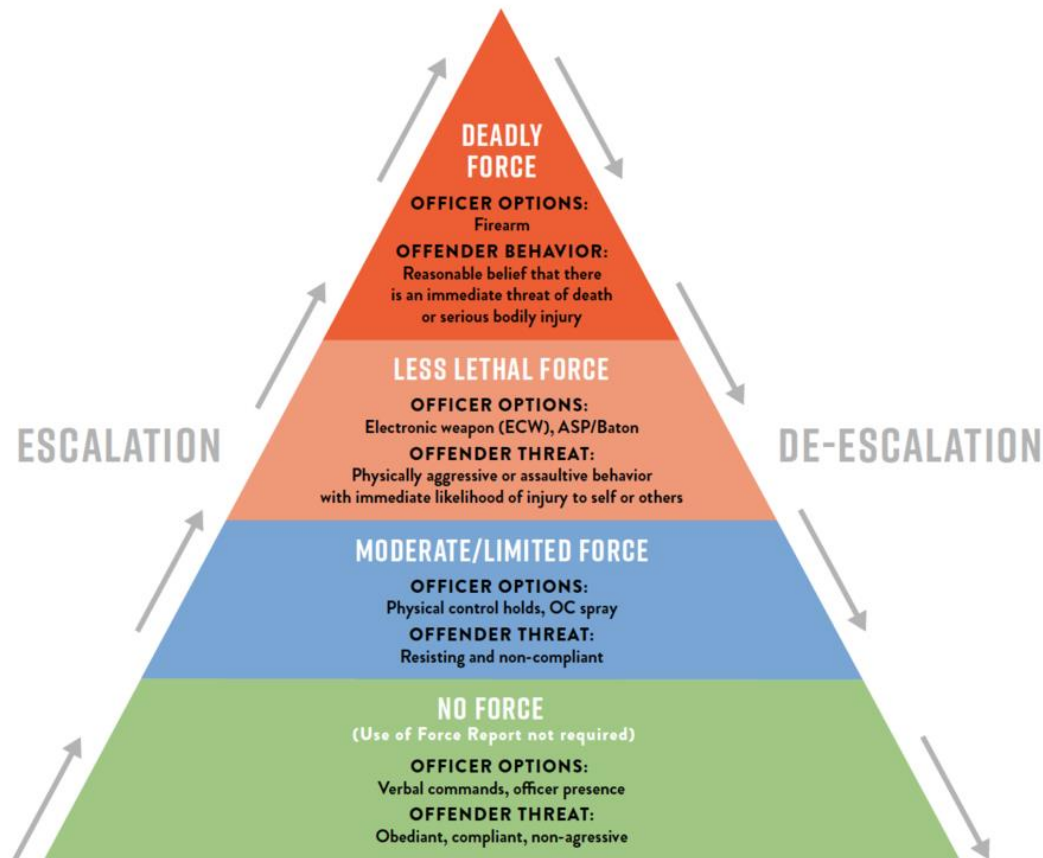| SUPPORT	CONCERNS

• Viewed as "common sense" approach
 • Perceived as effective for CIT and SWAT units
 • Used in other countries – considered "best practice"
 	
 • Believed to:
   o Reduce frequency/severity of officer use of force
   o Reduce officer/citizen risk of injury/death
	• No systematic evidence regarding officer risk/safety
	 • Environment growing more dangerous for police
	 • Training contradicts traditional tactics believed to be effective
	
	 • Believed to:
	   o Teach officers to become hesitant to use force
	   o Increase officer/citizen risk of injury /death

Does de-escalation training work?

- Prior to 2019 – no studies of police de-escalation training
- Studies have measured changes in officers' attitudes, perceptions, knowledge, and self-reported behaviors
- Does it change officer behavior?
  - Must consider **changes** in:
    - Use of force incidents
    - Citizen complaints re: force
    - Citizen and officer injuries resulting from UOF incidents
    - Severity of force incidents, relative to resistance

Impact of Police Reforms on Measuring Use of Force Severity

Severity measured as:

- Type of force – severity continuum
- Force relative to resistance – Force Factor (Alpert & Dunham, 1997)
- Police force relative to civilian resistance
  - Captures the escalation and de-escalation of both officer and civilian behaviors during an individual use of force encounter
    - Officers might use multiple types of force
    - Civilians might respond using multiple types of resistance
  - Used to determine whether use of force was proportionate
- De-escalation-based UoF models make creation of force factor more challenging

Use of Force Continuum: Philadelphia PD (2020)

DEADLY FORCE

OFFICER OPTIONS: Firearm

OFFENDER BEHAVIOR: Reasonable belief that there is an immediate threat of death or serious bodily injury

LESS LETHAL FORCE

OFFICER OPTIONS: Electronic weapon (ECW), ASP/Baton

OFFENDER THREAT: Physically aggressive or assaultive behavior with immediate likelihood of injury to self or others

MODERATE/LIMITED FORCE

OFFICER OPTIONS: Physical control holds, OC spray

OFFENDER THREAT: Resisting and non-compliant

NO FORCE
(Use of Force Report not required)

OFFICER OPTIONS: Verbal commands, officer presence

OFFENDER THREAT: Obediant, compliant, non-agressive

ESCALATION

DE-ESCALATION

USE THE OPTION THAT REPRESENTS THE MINIMAL AMOUNT OF FORCE NECCESSARY TO REDUCE THE IMMEDIATE THREAT

Source: Philadelphia Police Department Use of Force Policy, Directive 10.1

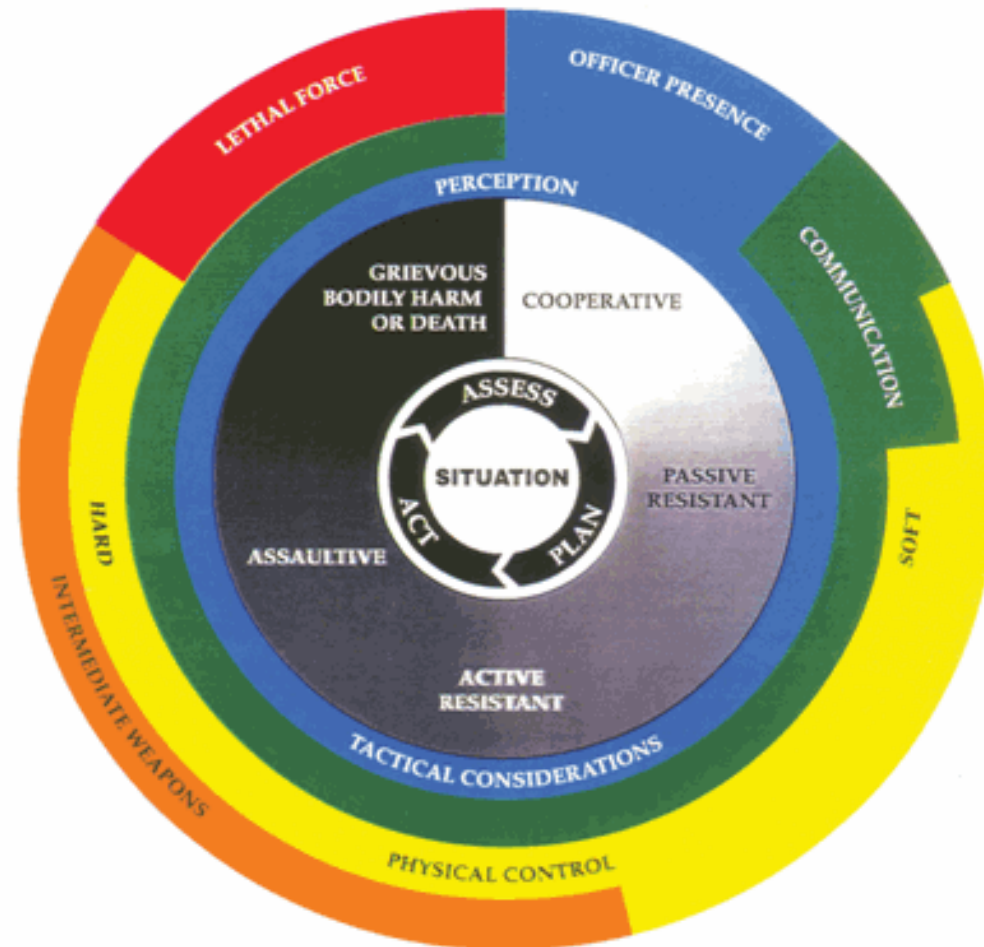# Use of Force Continuum: Las Vegas Metro (2020)
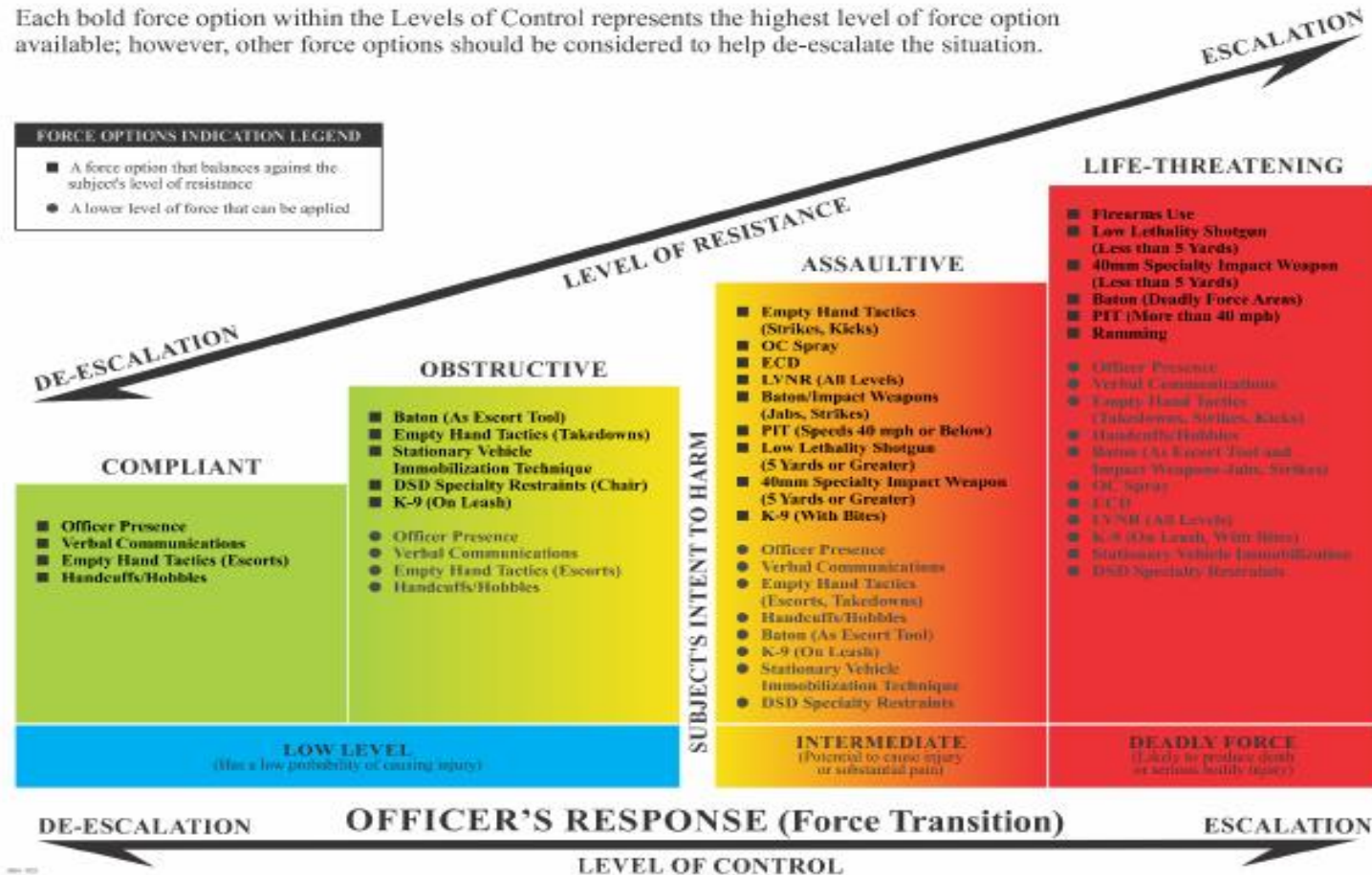
Use of Force Continuum: Dallas PD (2019)

Dallas Police Department

Linear Response Continuum
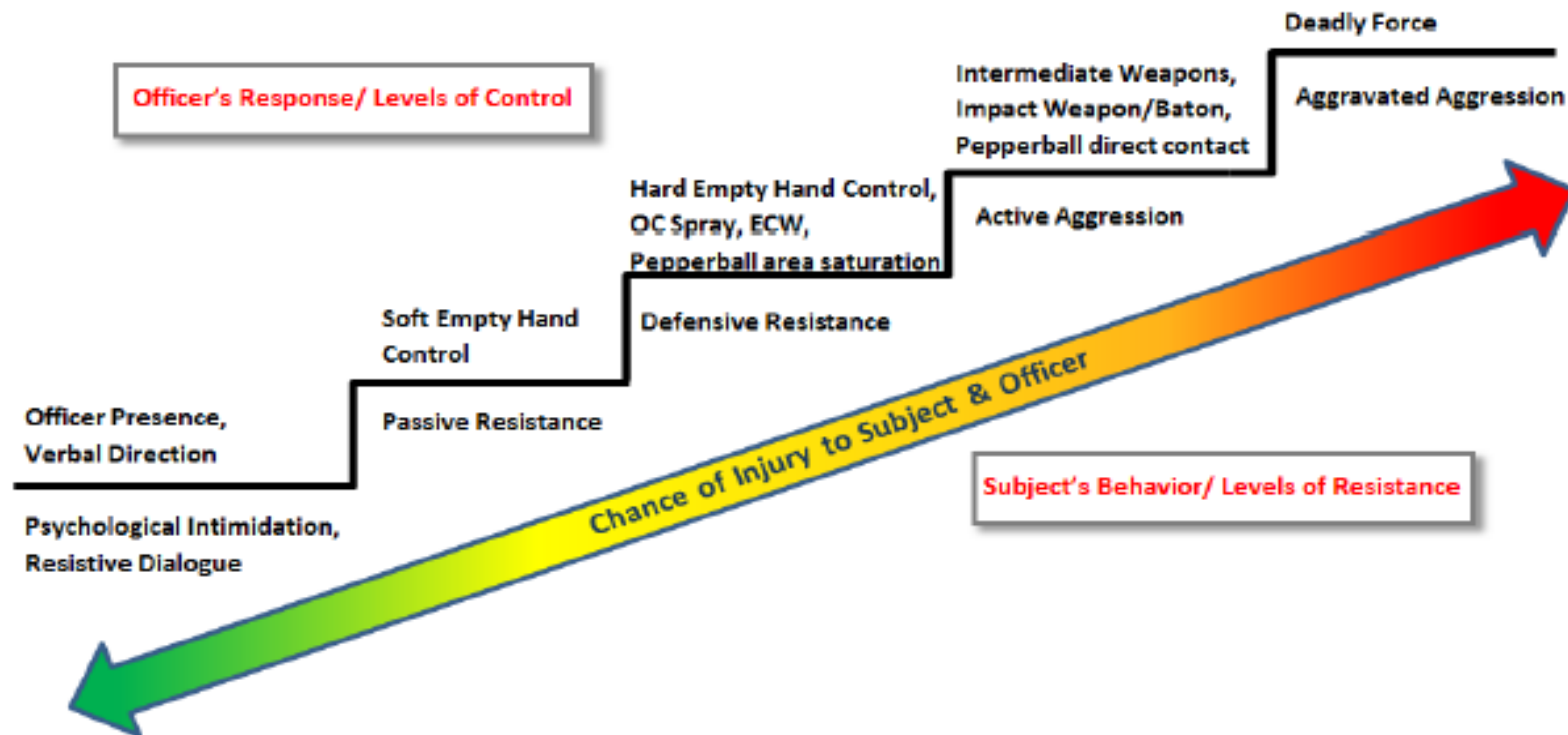
National Use of Force Model: Canada

The officer continuously assesses the situation and acts in a reasonable manner to ensure officer and public safety.
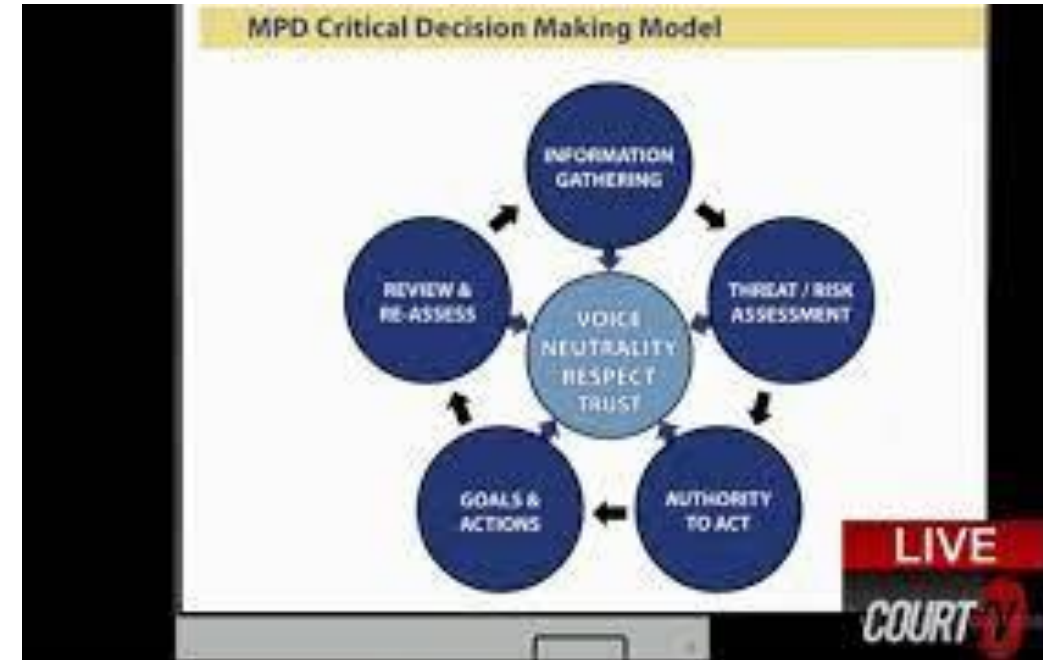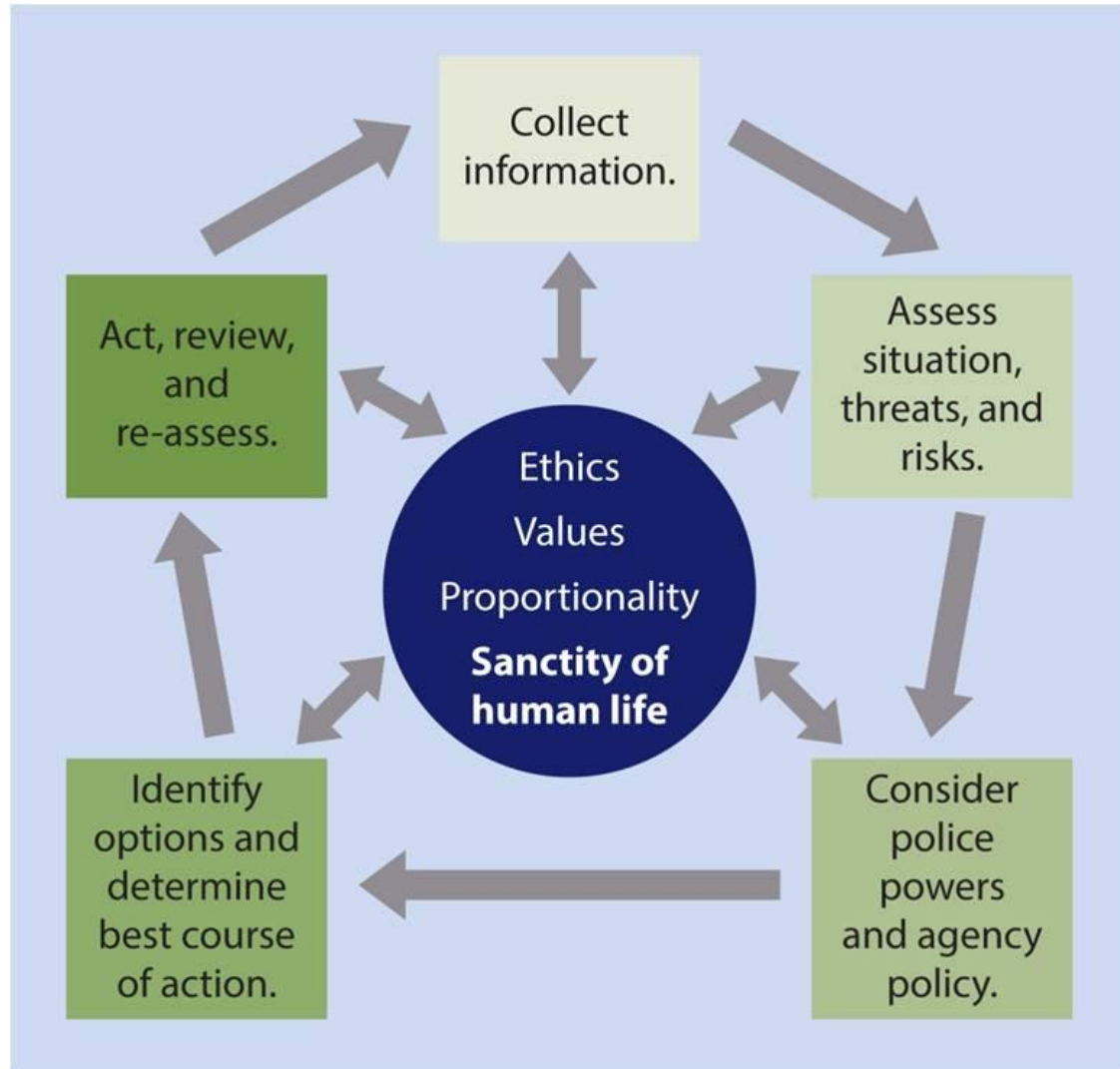
Use of Force Model: Queensland, Australia

Situational Use of Force Model (2016)
Use the minimum amount of force necessary to safely resolve an incident

ICAT Critical Decision Making Model (PERF)

Why does this matter for measuring UoF?

- How police are conceptualizing and reporting force is likely to change … this is important for measuring **severity** of force … which in turn matters for determining effectiveness of de-escalation training
- Severity measures are especially important for studies of de-escalation
- UoF counts may not decrease **even if training is effective**
- Presents another challenge for studying UoF

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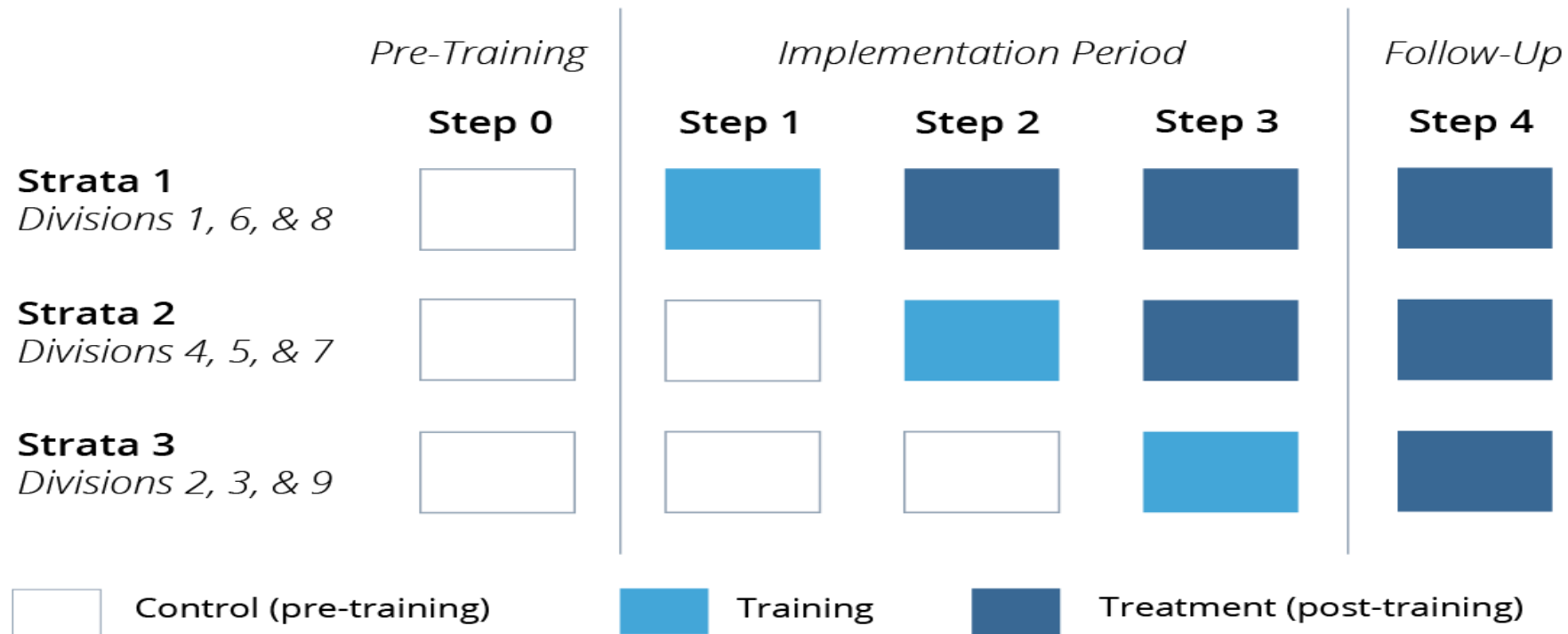**Changes must correspond with timing of the training**

Assessments of Police Training

- Few studies examine effectiveness of police training
  - Those that do mostly use survey designs
  - Some interrupted time series analyses – but many limitations
  - Difference-in-Difference models need to compare across agencies (problematic for UOF)
  - Very few use Randomized Control Trial (RCT) designs
    - Operationally challenging to administer
    - Strong likelihood of contamination
    - Ethical considerations

Stepped Wedge RCT

- Hussey and Hughes (2007) framework, primarily used in the fields of health (medicine, nursing) and education
- Clusters of research subjects are randomly exposed to intervention sequentially over time
- Crossover design: clusters of subjects begin as no-intervention control groups, but cross permanently from control group into intervention group in sequence at randomized, pre-specified time
- Design allows experimental comparison between subjects in clusters receiving intervention and subjects in clusters receiving "conditions as usual" awaiting crossover
- Used to study NYPD implicit bias training (Worden et al., 2020)

Stepped Wedge RCT Design

- Examine whether changes in outcomes corresponds with timing of training relative to pre-training period (baseline) and other division clusters that had not yet crossed over into treatment (controls)

- Linear mixed model – cluster level random effect (clusters = police divisions)

- Includes fixed effect for time (assumes a common underlying secular trend across all clusters)

- Includes single term for treatment (implying a constant shift from untreated to treated condition)

- Random assignment and diagnostic tests show between clusters stability pre-treatment

Findings from Stepped-Wedge RCT

Study of de-escalation training with LMPD (Engel et al., 2020)

- Significant reductions in police UOF incidents (-28%), citizen injuries (-26%) and officer injuries (-36%)

Study of implicit bias training with NYPD (Worden et al., 2020)

- No significant changes in counts or racial disparities for multiple police actions (stops, citations, arrests, and UOF)

Limitations of Stepped Wedge Design

- Restrictions on agency size eligible
- Restrictions on time to implement training eligible
- Assumption that secular trend may influence different clusters at the same time – possible that some districts could be impacted differently on factors related to UoF
- Training delivery may impact control sites through maturation related to policy changes or other agency factors – impact of training alone may be overstated relative to other contemporaneous factors

- **Hybrid of fixed effects panel regression modeling and interrupted time series – making it an appropriate statistical test to measure training effects**

Moving Forward:
Documenting the Impact of Police Reform

- Struggle to compare UOF prevalence and severity **across jurisdictions** will continue for the foreseeable future
  - Greatest opportunity to standardize is at the state level
- In the interim, focus on meaningful research that will support police reform efforts
- Develop loose framework that provides agencies with their own opportunities to appropriately measure **change within their agencies**
  - Standardization is not necessary for meaningful research – methodology should vary based on agency size, policies, training, reporting, etc.

Moving Forward: Supporting Police Reform

- Strengthen research designs and analyses to support pre/post comparisons, changes within agencies

- Develop basic data and analytical guides that are helpful for agencies, policymakers, and communities

- Support the collection of new data sources (e.g., de-escalation tactics)

- Invest in research examining content-rich data sources to better unravel police-civilian interactions (SSO, report narratives, BWC footage, interviews)

- Refocus efforts to appropriately measure racial/ethnic disparities

- More involvement of scientific community **within agencies and communities**

Comments / Questions?

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