

Forensic Evidence Recovery in Pre-pubertal Children: The MA PEDI Kit Experience

Massachusetts Pediatric Evidence Collection Kit
for Children under the age of 12

Incident Reported to Police? Yes No
Incident Reported to DSS? Yes No

City/Town in which Incident occurred: _____

Hospital/ Clinic: _____
(Please Print)

Phone Numbers: _____
(Please Print)

Clinicians: _____
(Please Print)


Kit Sealed By: _____
(Please Print)

PLACE KIT IN LOCKED REFRIDGERATED SAFE

Placed By: _____
Date: _____ Time: _____

For Police Personnel
Chain of Possession

Received From: _____ Agency: _____
Date: _____ Time: _____
Received By: _____ Agency: _____
Date: _____ Time: _____
Received From: _____ Agency: _____
Date: _____ Time: _____
Received By: _____ Agency: _____
Date: _____ Time: _____

The Commonwealth of Massachusetts 

A Program of the MA Department of Public Health



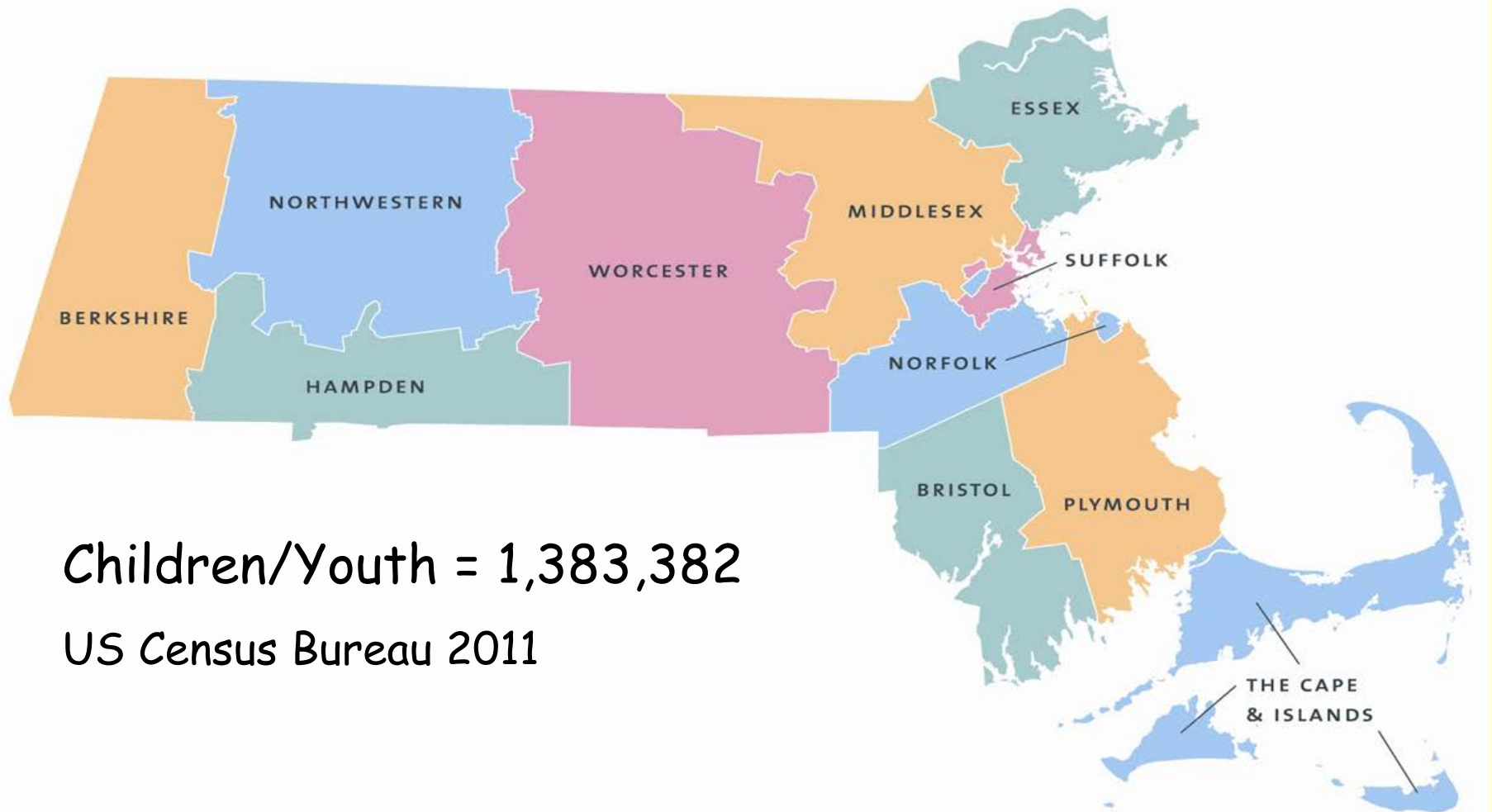
Joan Meunier-Sham, RN, MS
Acting Director, MA SANE Program
Associat Director, MA Pediatric SANE Program

Cynthia Moore, PNP, SANE
Clinical Consultant
MA Pediatric SANE Program

Dr. Theodore Cross
Full Research Professor
Children and Family Research Center
University of Illinois at Urbana-Champaign

Massachusetts

Population = 6,587,536



Children/Youth = 1,383,382

US Census Bureau 2011

MA SANE Program



Centrally Managed

- Adult and Adolescent SANE

Emergency department based, 24/7 on-call services
for patients 12 years and older

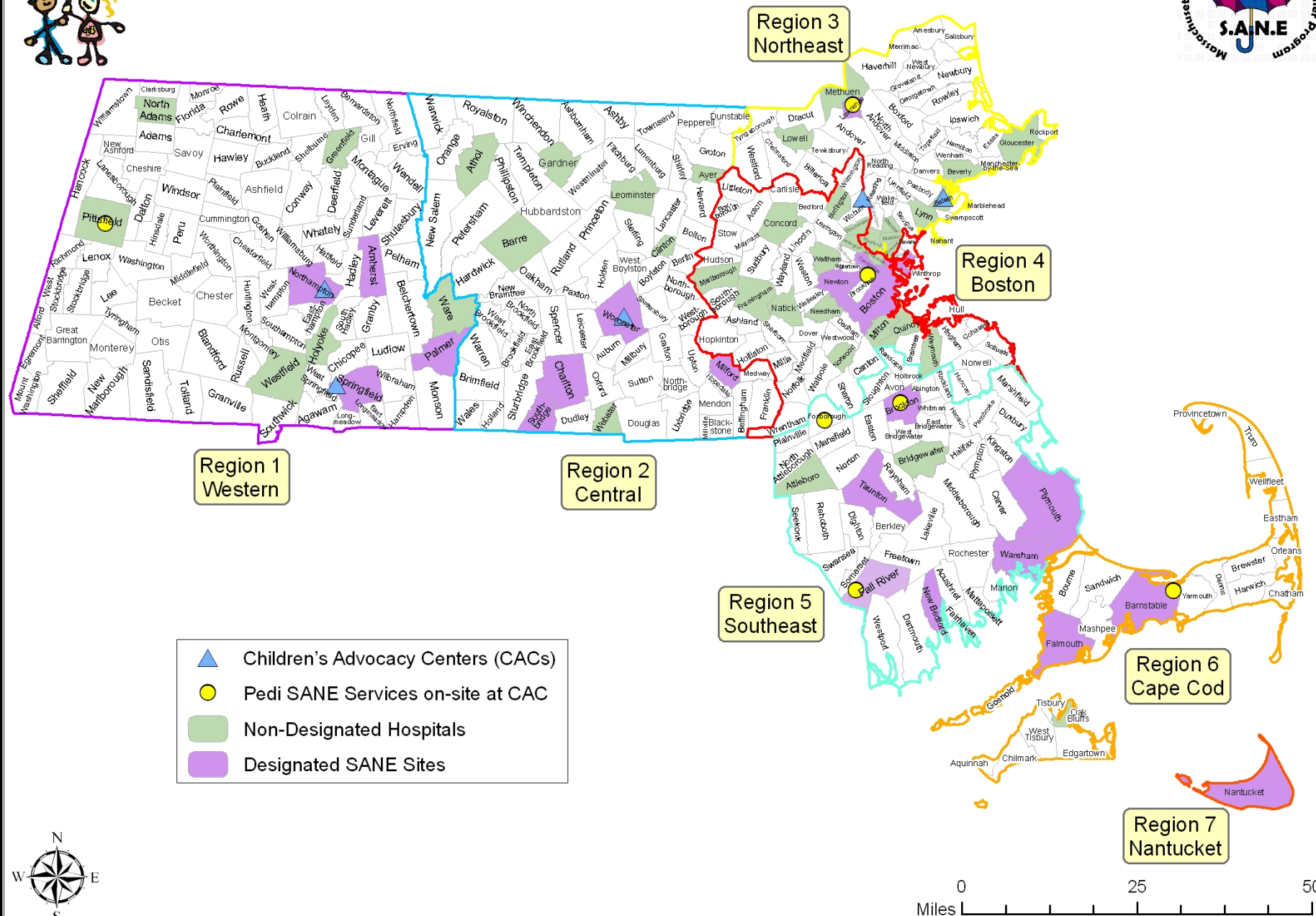
27 Designated SANE sites statewide

6 Regions managed by Regional Coordinators

- Manage 105 SANEs statewide
- Quality Assurance activities
- Liaison with SANE sites/Crime labs
- Training to SANE and non-SANE hospitals



SANE and CAC Program Site Designation



MA PEDI SANE & Kit Advisors

- State Police Crime Lab
- Boston Crime Lab
- MA DA's Association
- CACs
- Law Enforcement
- Department of Children and Families
- Public Safety and Security
- Emergency Nurses
- SANEs
- Social Workers
- Child Abuse Physicians



The Goals

- Create a "child friendly" forensic evidence collection kit for use by emergency clinicians statewide
- Develop Pediatric SANE Protocols
- Create a Pediatric SANE Program
- Develop a network of local care for children who are sexually abused

A "First of Its Kind" Pediatric Evidence Collection Kit

Massachusetts Pediatric Evidence Collection Kit
for Children under the age of 12

Incident Reported to Police? Yes No
Incident Reported to DSS? Yes No

City/Town in which Incident occurred: _____

Hospital/ Clinic: _____
(Please Print)

Phone Numbers: _____
(Please Print)

Clinicians: _____
(Please Print)

Kit Sealed By: _____
(Please Print)


PLACE KIT IN LOCKED REFRIDGERATED SAFE

Placed By: _____
Date: _____ Time: _____

For Police Personnel
Chain of Possession

Received From: _____	Agency: _____
Date: _____	Time: _____
Received By: _____	Agency: _____
Date: _____	Time: _____
Received From: _____	Agency: _____
Date: _____	Time: _____
Received By: _____	Agency: _____
Date: _____	Time: _____

The Commonwealth of Massachusetts



- Children 11 years and younger
- "Child friendly"
- "Do No Harm" Principles guides clinicians
- 13 Steps versus 20 Steps in Adult Kit
- Organized for highest yield while child is cooperative

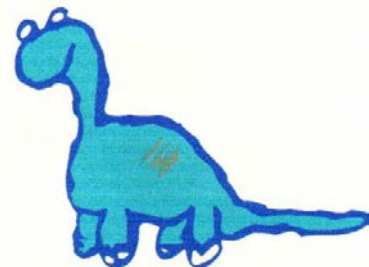
Do No Harm Principles



- PROVIDE THE APPROPRIATE LEVEL OF CARE
- DO NOT INTERVIEW THE CHILD
- AVOID INVASIVE OR PAINFUL PROCEDURES
- UNCOOPERATIVE CHILD = NO EXAM
- SUPPORT THE CHILD

Indications for the Use of the MA PEDI Kit

- Children 11 years of age and younger
- Abuse/assault occurred within 3 days (72 hours) of ED presentation
 - Suspected vaginal or anal penetration (however slight)
 - Suspected oral penetration within 24 hours
 - Anogenital bleeding/discharge with injury inconsistent with mechanism
 - Possibility of ejaculate on child's body



MA PEDI KIT

Massachusetts Pediatric Evidence Collection Kit
for Children under the age of 12

Incident Reported to Police? Yes No
Incident Reported to DSS? Yes No

City/Town in which Incident occurred: _____

Hospital/ Clinic: _____
(Please Print)

Phone Numbers: _____
(Please Print)

Clinicians: _____
(Please Print)

Kit Sealed By: _____
(Please Print)

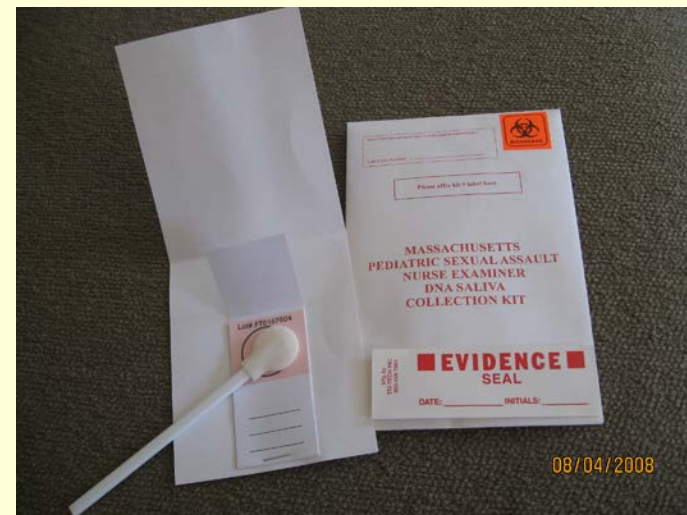

PLACE KIT IN LOCKED REFRIDGERATED SAFE

Placed By: _____
Date: _____ Time: _____

**For Police Personnel
Chain of Possession**

Received From: _____	Agency: _____
Date: _____	Time: _____
Received By: _____	Agency: _____
Date: _____	Time: _____
Received From: _____	Agency: _____
Date: _____	Time: _____
Received By: _____	Agency: _____
Date: _____	Time: _____

The Commonwealth of Massachusetts



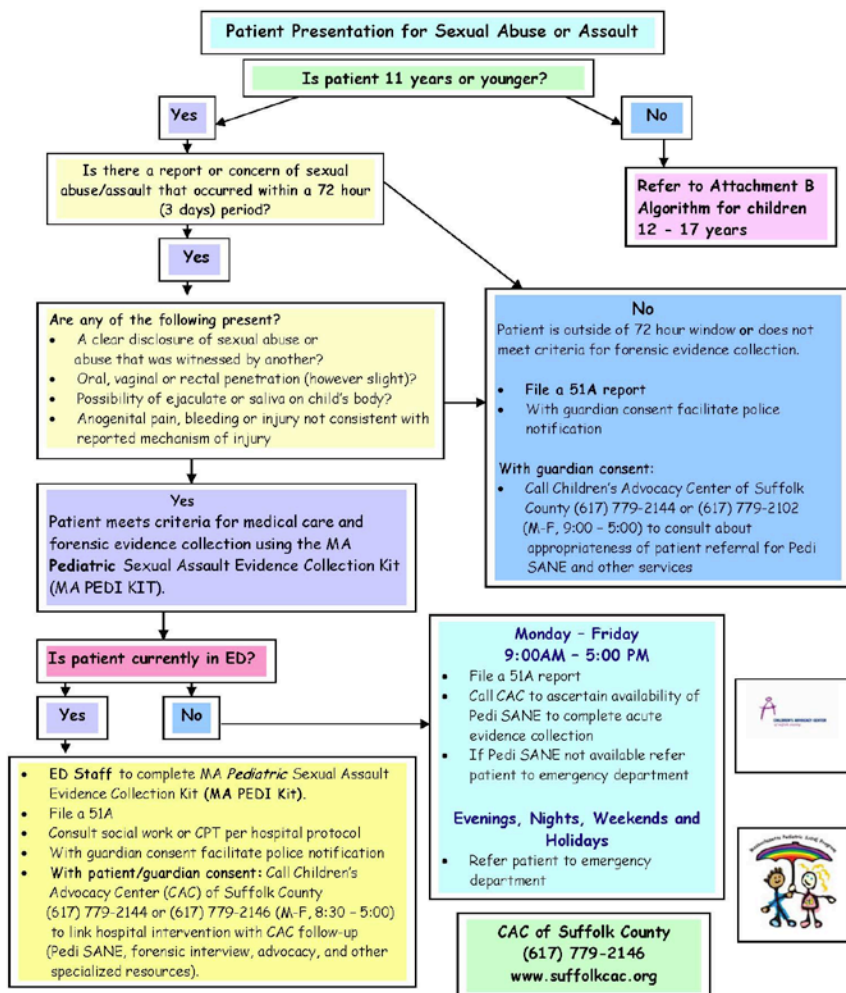
More Than Just a "Kit"

- Multi-disciplinary collaboration
 - Crime labs, DAs, DCF, police, CACs, hospitals
- Documentation Forms
- Pediatric SANE Protocol
- Forum for discussion around statewide needs for pediatric patients
- Gave voice to the issue of child sexual assault
- Instrumental in funding allocation

Community Patient Care Algorithm

Attachment A

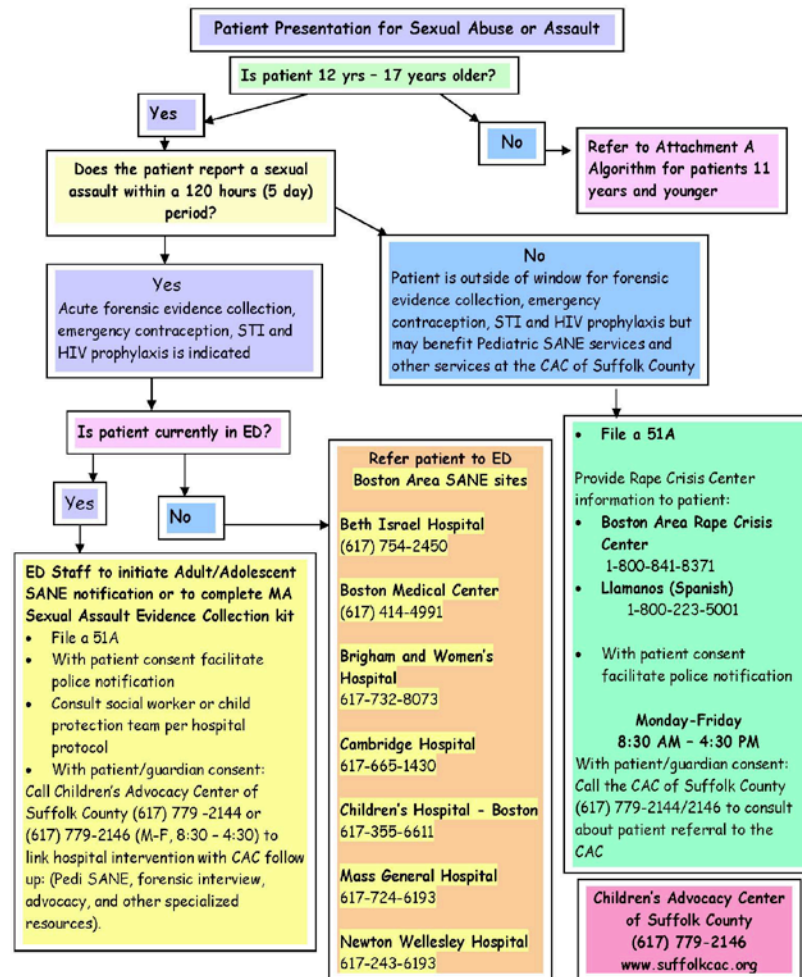
Suffolk County Medical Referral Process Patients 11 Years and Younger Who Have Been Sexual Assaulted/Abused



MA Pediatric SANE Program/Suffolk CAC and CAC 6.12

Attachment B

Suffolk County Medical Referral Process Patients 12 - 17 Years of Age Who Have Been Sexually Assaulted



MA Pediatric SANE Program/CAC of Suffolk County 6.12

2006 The MA Pedi SANE Program Implementation



Pediatric SANE Program

- 1 Emergency Department Response
 - Children < 11 yrs with acute assaults (< 72 hours)
 - MA PEDI Kit
 - MedScope - Video-documentation
 - Provide court testimony



Children's Advocacy Center Response

- Advanced Practice Pediatric SANEs in 7 of 11 Children's Advocacy Centers
- Children up to 18 years of age
- Most children with non-acute assaults
- MedScope Exam
- Medical consultation to MDT
- Provide court testimony

Children's Advocacy Centers (CAC) with Pediatric SANE Services



Suffolk CAC



Cape and Islands CAC



Essex CAC & LGH



Plymouth CAC



Bristol CAC



Norfolk CAC



Berkshire CAC

Norfolk County CAC



Bristol County CAC



Nursing: An Art and Science



MA PEDI KIT FINDINGS

Massachusetts Pediatric Evidence Collection Kit
for Children under the age of 12

Incident Reported to Police? Yes No
Incident Reported to DSS? Yes No

City/Town in which Incident occurred: _____

Hospital/ Clinic: _____
(Please Print)

Phone Numbers: _____
(Please Print)

Clinicians: _____
(Please Print)

Kit Sealed By: _____
(Please Print)


PLACE KIT IN LOCKED REFRIDGERATED SAFE

Placed By: _____
Date: _____ Time: _____

For Police Personnel
Chain of Possession

Received From: _____	Agency: _____
Date: _____	Time: _____
Received By: _____	Agency: _____
Date: _____	Time: _____
Received From: _____	Agency: _____
Date: _____	Time: _____
Received By: _____	Agency: _____
Date: _____	Time: _____

The Commonwealth of Massachusetts



MA PEDI Kit Distribution

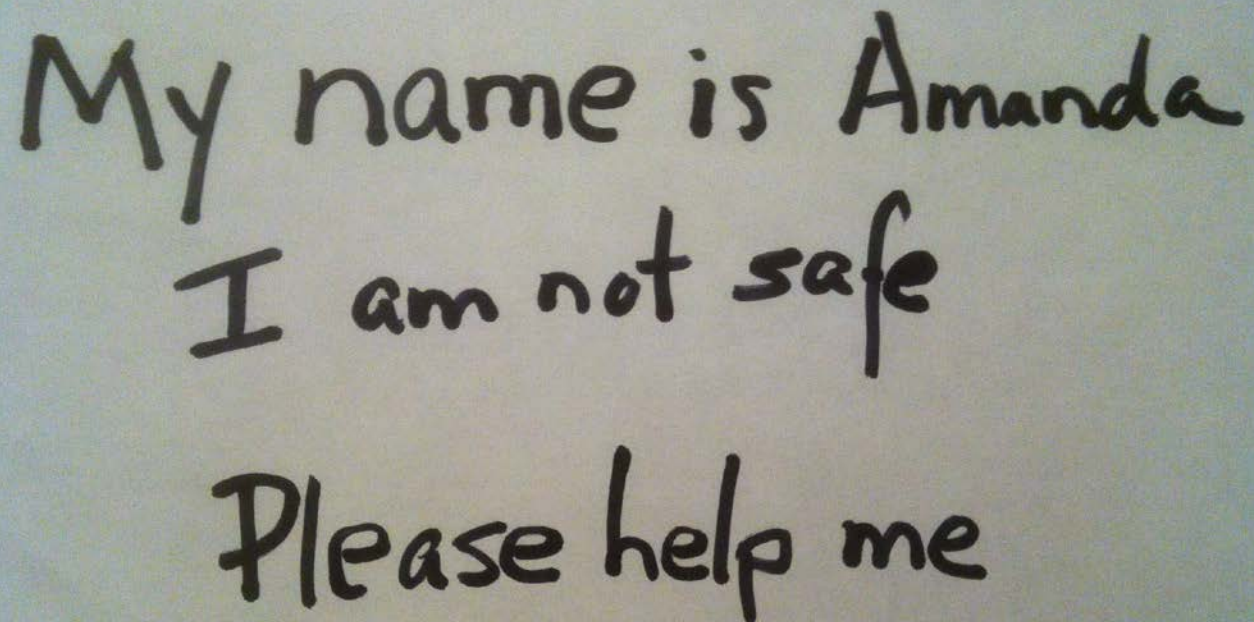
- Pilot of MA PEDI Kits (12/05 - 6/06)
 - 3 Locations with Child Protection Teams and Pedi SANEs
- Regional MA PEDI Kit Trainings with statewide kit distribution
 - 18 month period (Summer 2006 - Fall 2007)

MA PEDI KIT Review

Methods

- On-site review of all MA PEDI Kits at Boston and State Police Crime Labs
- Kits from 12/2/05 - 4/21/12
- Time 1 = June 2008
- Time 2 = Aug 2012
- N = 283

Resilient Children

A photograph of a piece of light blue paper with handwritten text in black ink. The text is written in three lines, each starting with a capital letter. The handwriting is somewhat shaky and informal, suggesting it was written by a child or someone in a state of distress. The paper is slightly wrinkled and has a dark border on the right side.

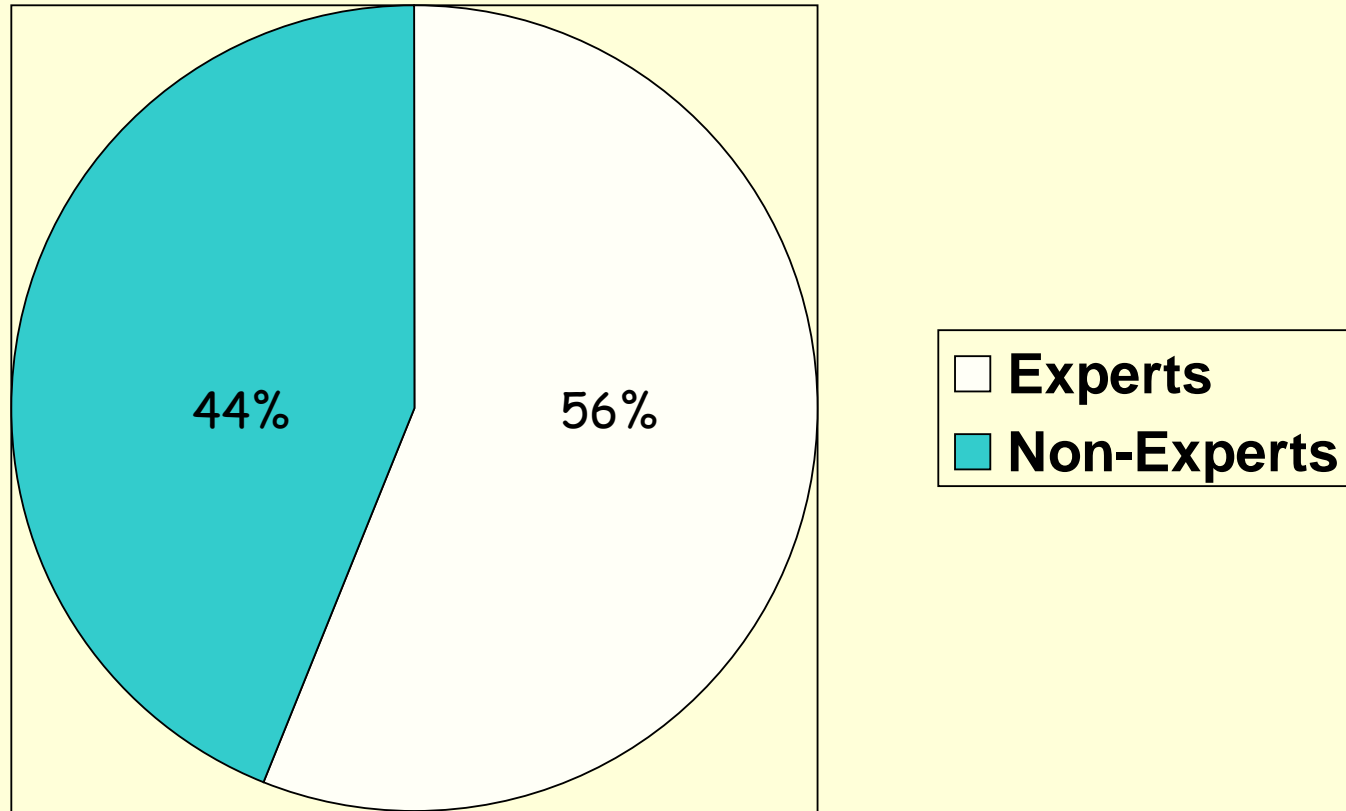
My name is Amanda
I am not safe
Please help me

Brave Children

6 year old female locked herself in room
and called police to "come and arrest
the bad man"



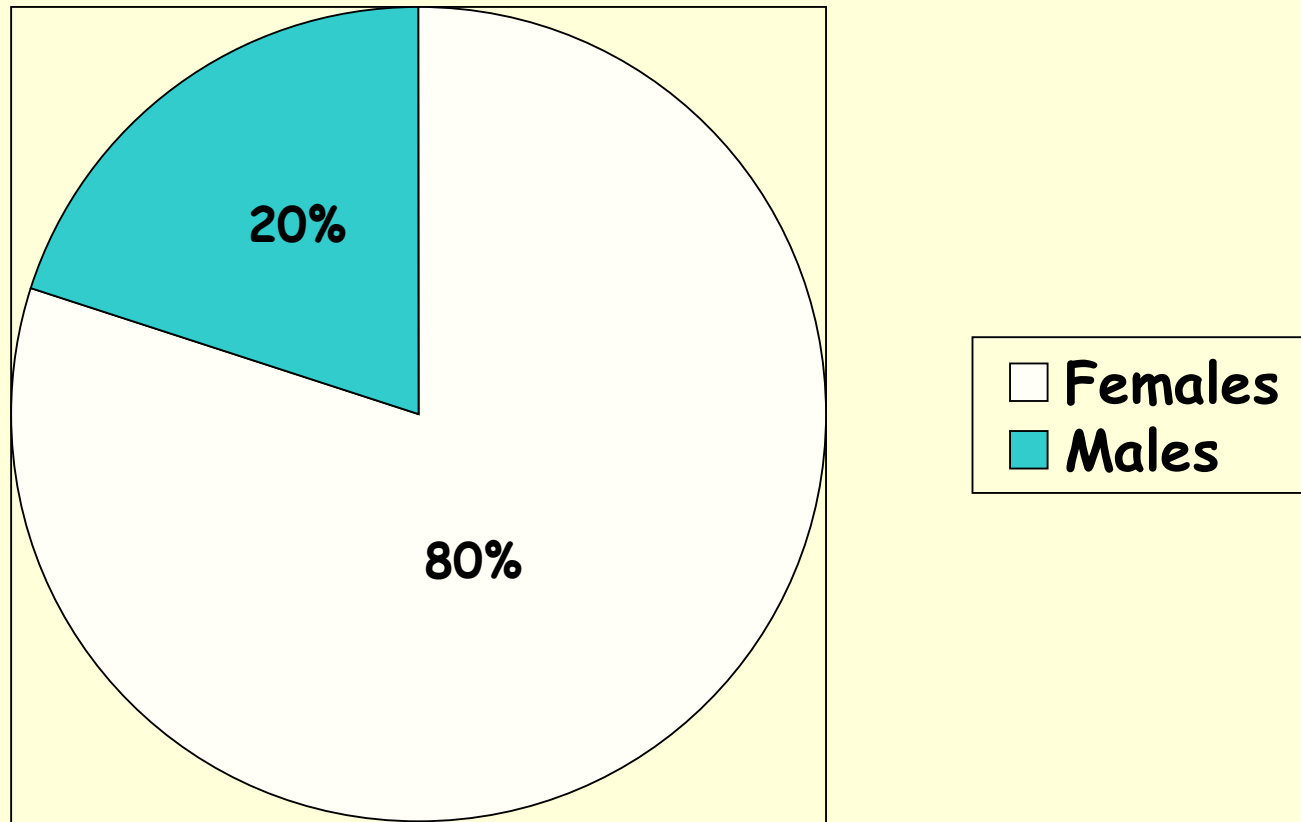
Kit Completion Expert vs. Non-Expert



Indicators for Use of MA PEDI Kit

- Kit indicators met in 90% of all case
- Kit indicators met in 93.7% of cases done by experts
- Kit indicators met in 86% of cases done by non-experts
- Average age of child = 3.9 years in cases in which indicators were not met
- Average age of child = 5.9 years in cases in which indicators were met

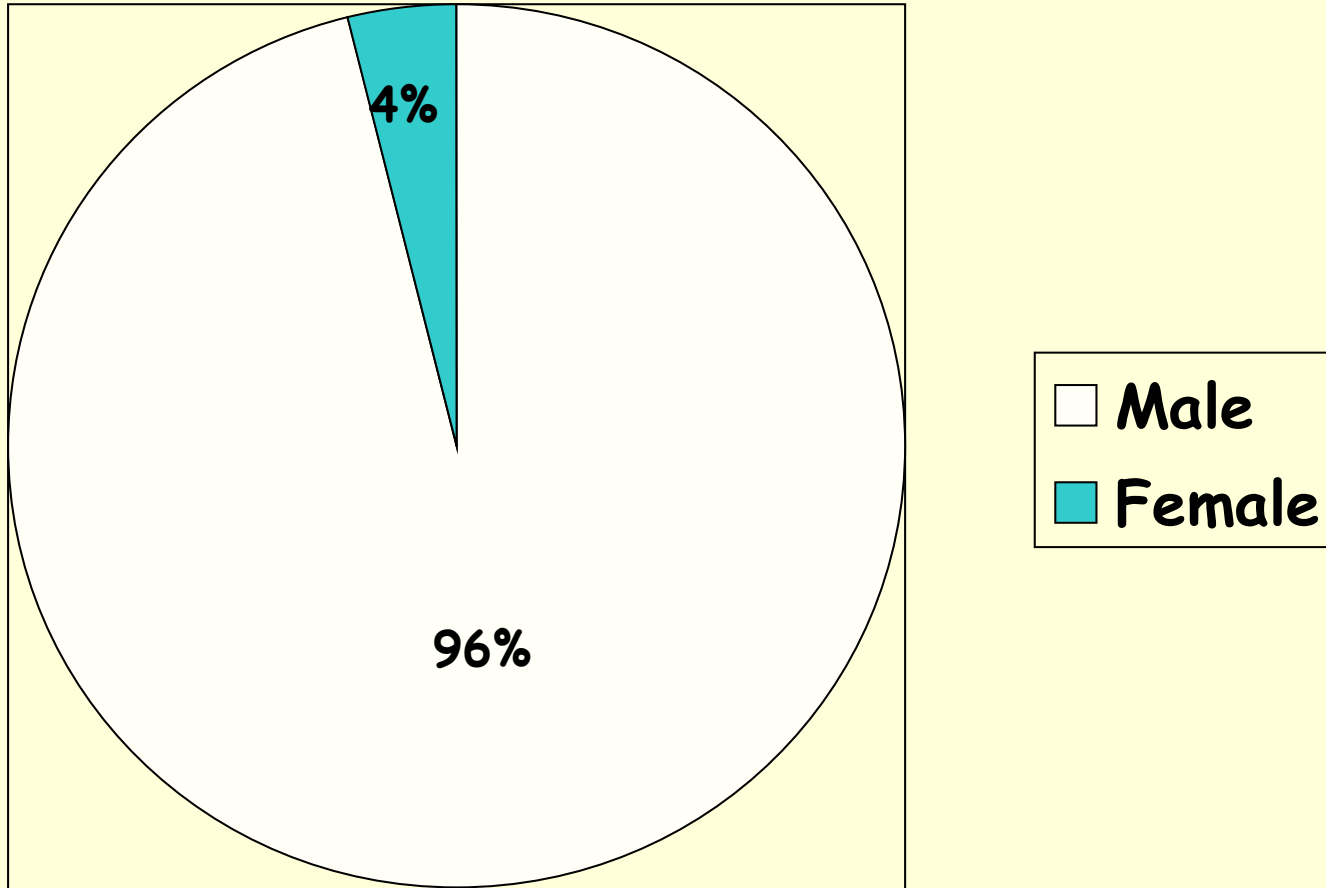
Gender of Children



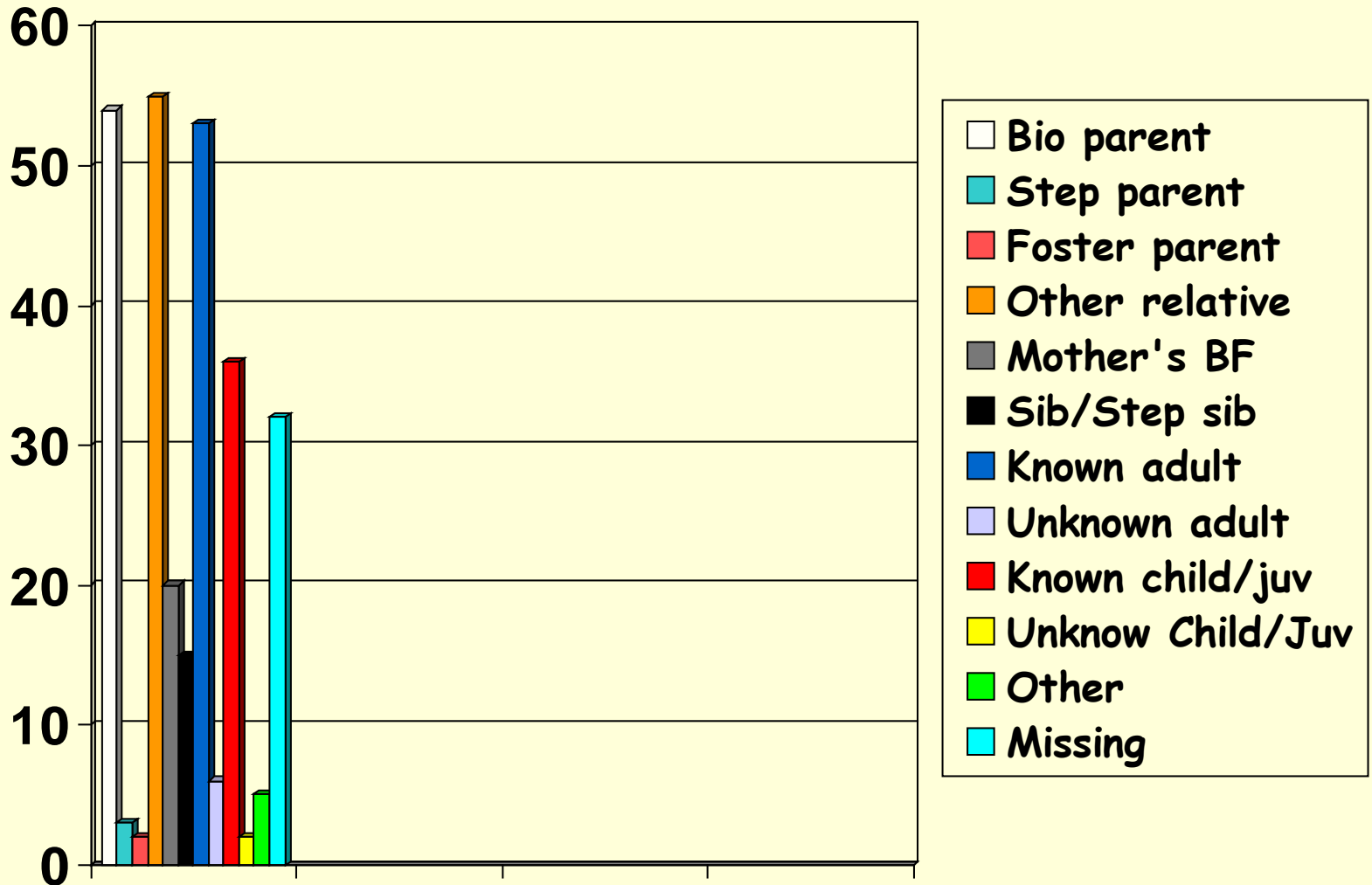
Population Description

Mean age	5.76 Years
Age Range	0 - 17 years
Tanner Stage 1	93%

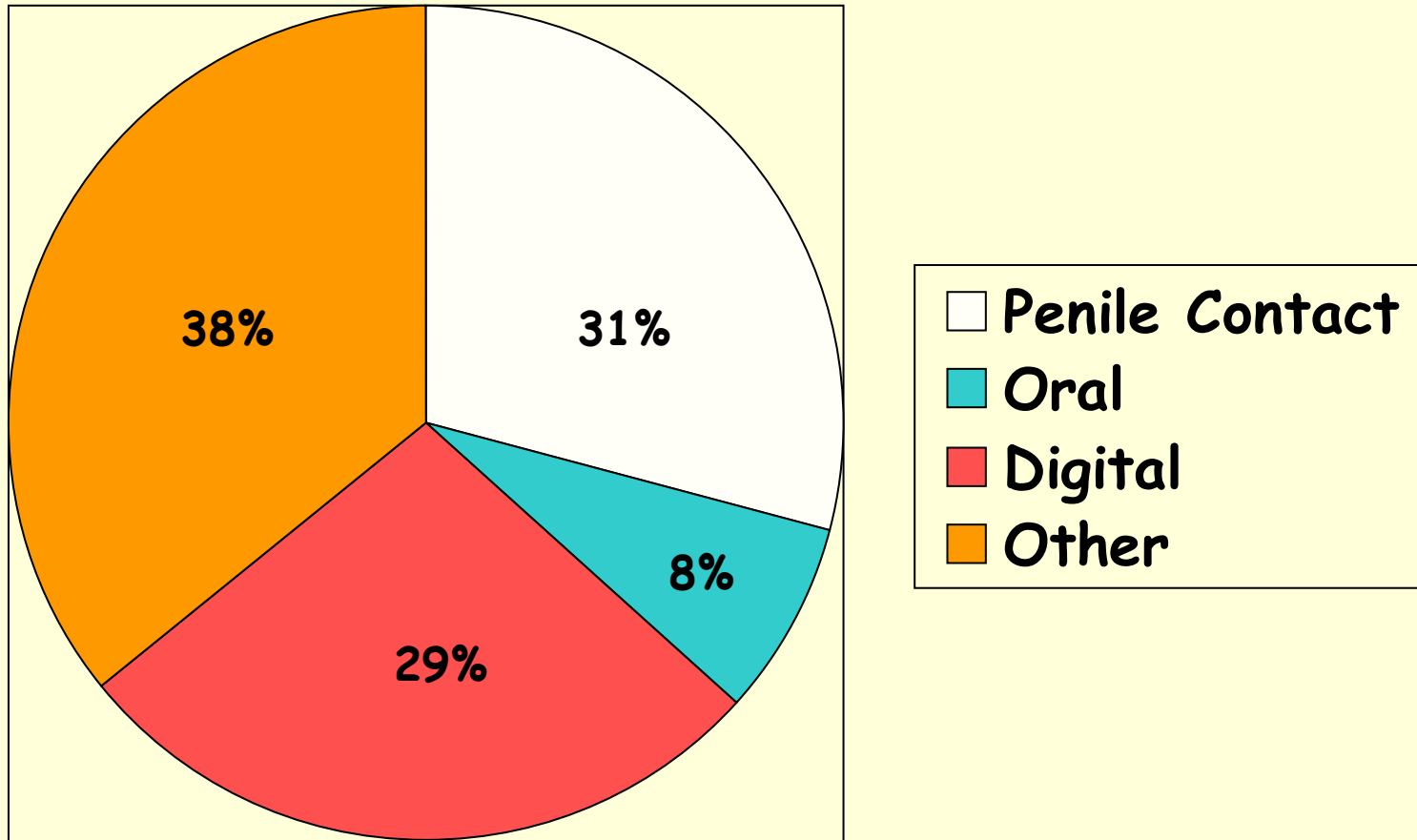
Perpetrator Gender



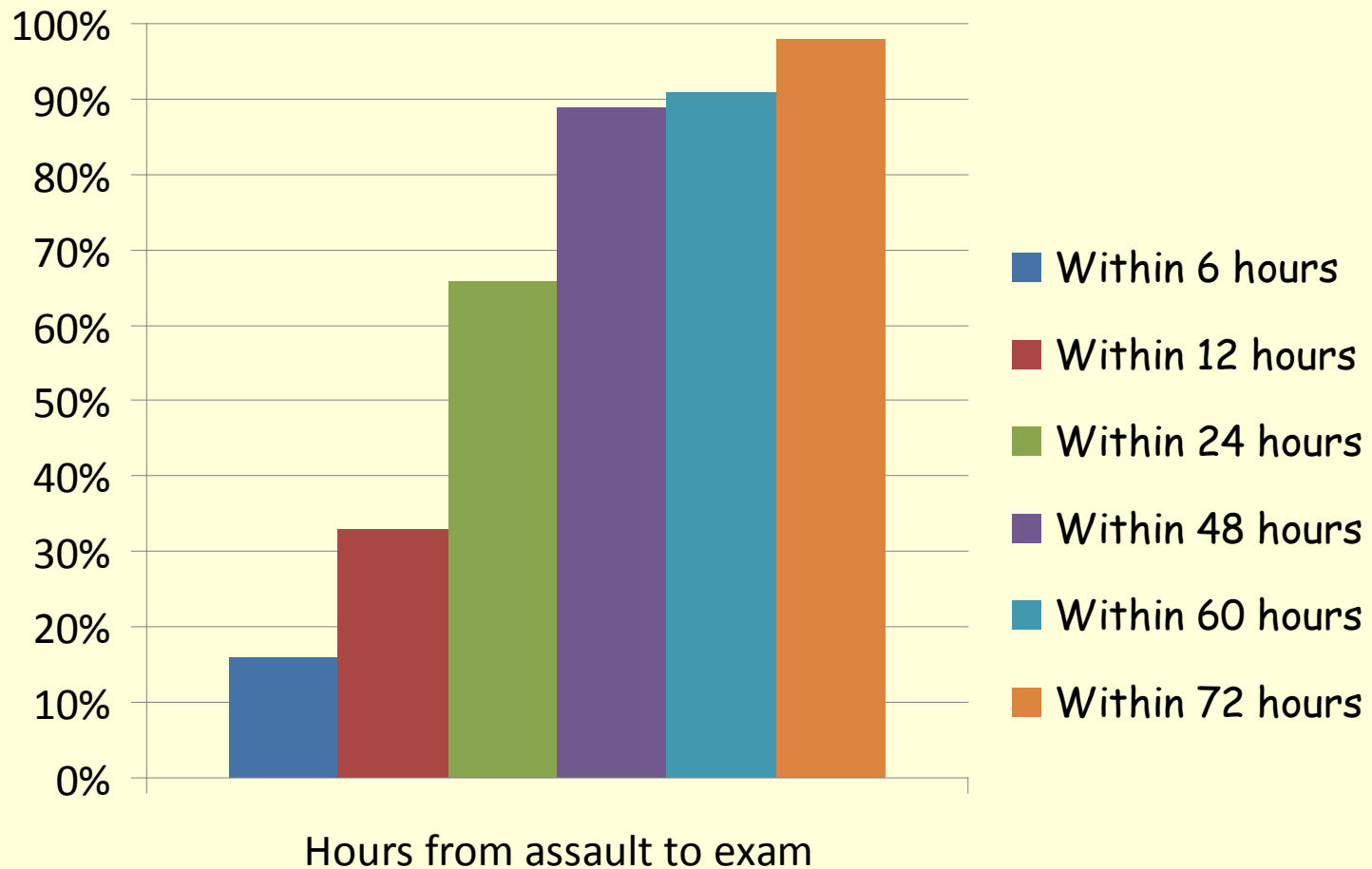
Relationship of Perpetrator to Child



Type of Assault



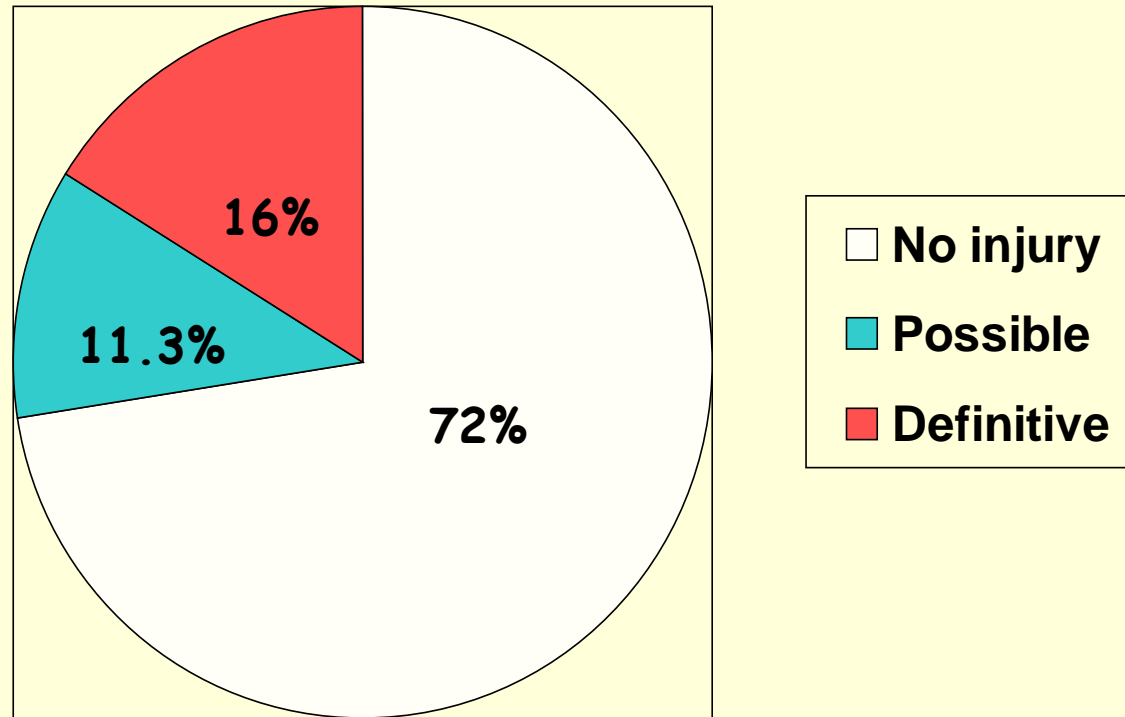
Hours From Assault to Exam



Injury Definitions

- Possible Injury:
 - Genital ecchymosis, internal/hymenal erythema, pain, tenderness
- Definitive Injury:
 - Hymenal/peri-hymenal/posterior forchette/commissure/rectal/peri-rectal lacs, abrasions, bleeding

Physical Exam Findings



- 28% of children had physical findings consistent with injury
- 3% of children (N=8) had significant injuries requiring surgical repair

Biological Evidence Recovery

Amylase on body	10%
Amylase on underwear/diaper	10%
Blood on body	7%
Blood on underwear/diapers	7%
Sperm on body	5%
Sperm on clothes	11% (10% underwear/diaper)

**At least one form of biological evidence
was recovered in 34% of cases**

Evidence Recovery by Perpetrator Age

- There was no significant difference in biological evidence recovery for perpetrators <16 years (41%) and 16+ years (36%)
- Sperm recovery on child's body and child's clothing was twice as likely when perpetrator was 16+ years

Sperm Recovery

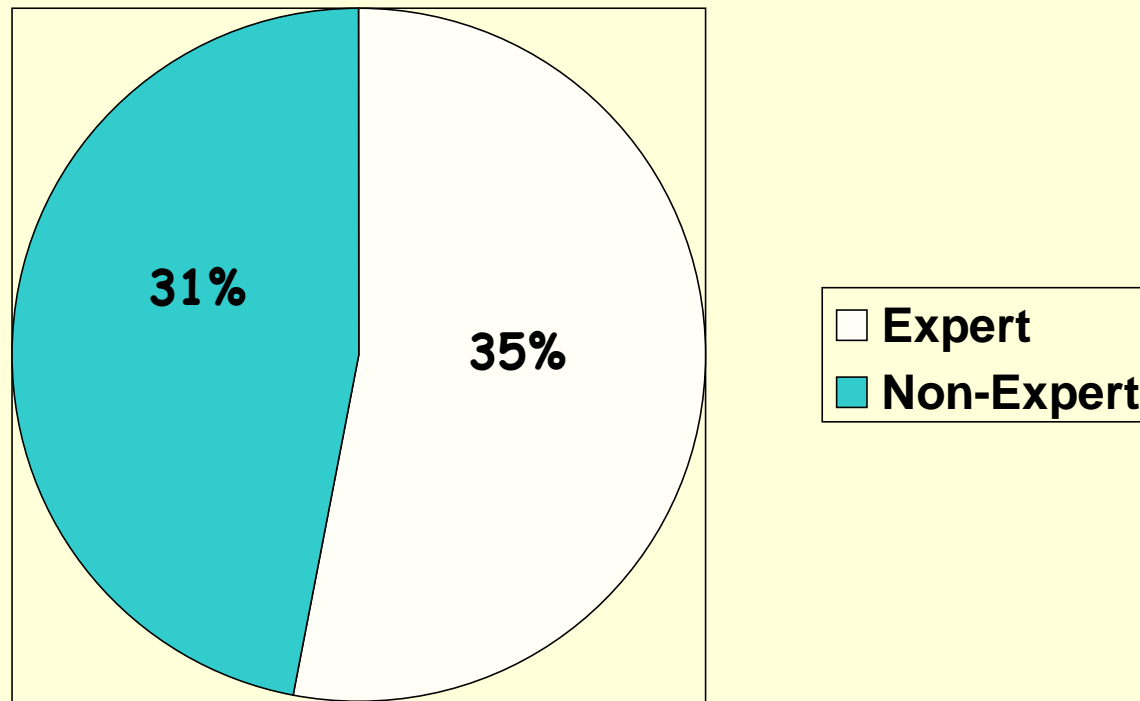
- 4 children with no report of penile contact had recovery of sperm on their bodies
- 9 children without information or disclosure of penile contact had sperm in diaper or underwear



Biological Evidence Recovery by Kit Indicators

- Biological evidence was recovered in 34% of cases when kit indicators were met.
- Biological evidence was recovered in 27% of cases when kit indicators were not met.
- Clinical judgment should always be used. A “do no harm” approach and developmentally appropriate evidence collection kit minimizes additional trauma to child.

Recovery of Biological Evidence by Expert versus Non-expert



Not significantly different

DCF and Police Reporting

- Cases reported to the Department of Children and Families = 98.6%
 - (missing data 7 cases)
- Cases reported to Police at time of ED presentation = 81%

MA Kit Transport/Processing

- Kit completion to Police pick-up
 - Median = 1 day
 - Mean = 6.4 days
 - Range = 0 - 367 days
- Kit Hospital pick-up to Lab Submission
 - Median = 8 days
 - Mean = 32 days
 - Range = 0 - 572 days
- Date of Offense to Final Lab Report
 - Median = 64.5 days

Lessons Learned

- Multi-disciplinary collaboration critical to success
- MA PEDI Kit is a solid forensic tool that can be used successfully by expert and non-expert clinicians
- Do No Harm principles are essential in care of children who have been sexually abused
- Complete as many steps as long as child is cooperative
- Strengthen linkages between CPS and law enforcement
 - MA PEDI Kit # on 51A (MA Mandated Report)
- Need for training reinforcement
 - MA PEDI KIT DVD with post-test

Thank You

- MA State Police Crime Lab
 - Michelle Levasseur - Technical Leader, Criminalistics Unit
 - Kristen L. Sullivan - Deputy Director, Forensic Services Group
 - Gina Testa - Case Representative, Case Management Unit
- Boston Crime Lab
 - Donald R. Hayes - Director, Crime Laboratory Unit
 - Erica Neu - Senior Criminalist, Crime Laboratory Unit
- Executive Office of Public Safety and Security
 - Diane DeAngelis, Director, Justice and Prevention Division, Office of Grants and Research

What It's All About

