

# 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



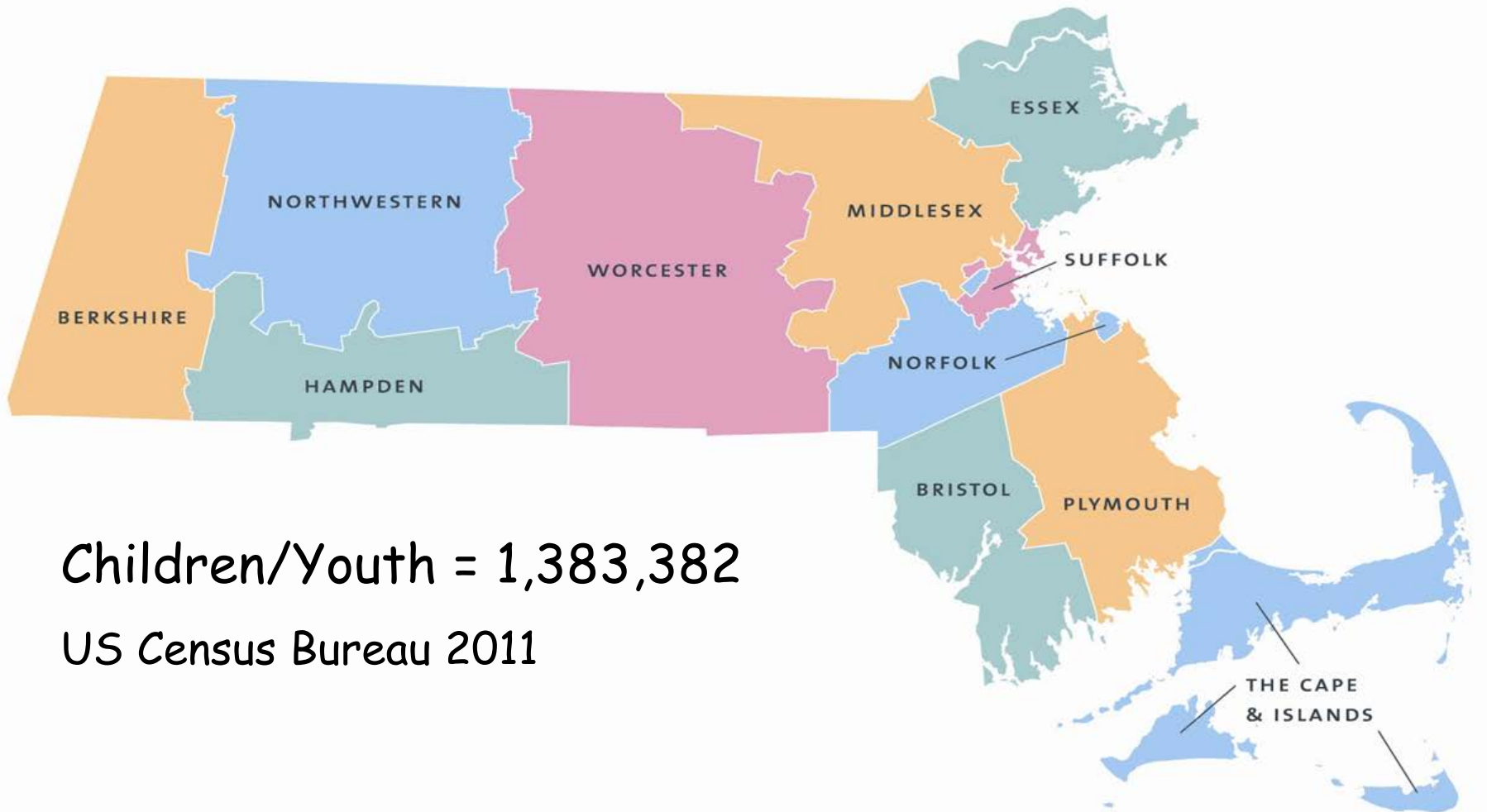
Joan Meunier-Sham, RN, MS  
Acting Director, MA SANE Program  
Associat Director, MA Pediatric SANE Program

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

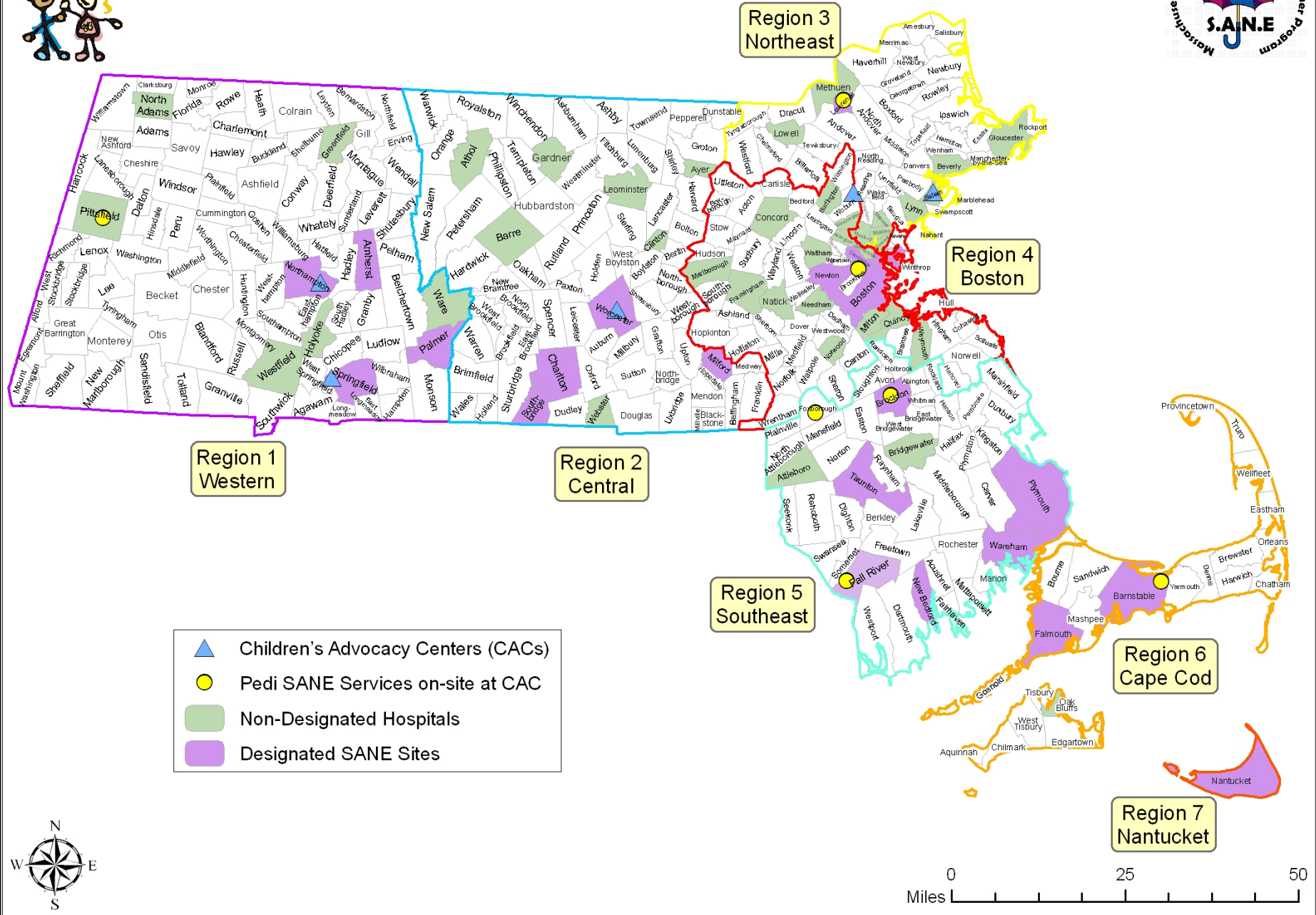
Emergency department based, 24/7 on-call services  
for patients 12 years and older

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







# 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: \_\_\_\_\_

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

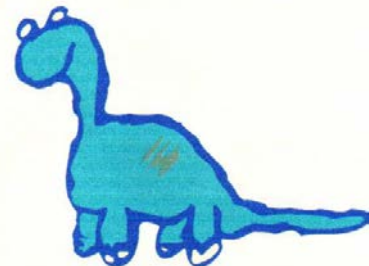
# Do No Harm Principles



- 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)

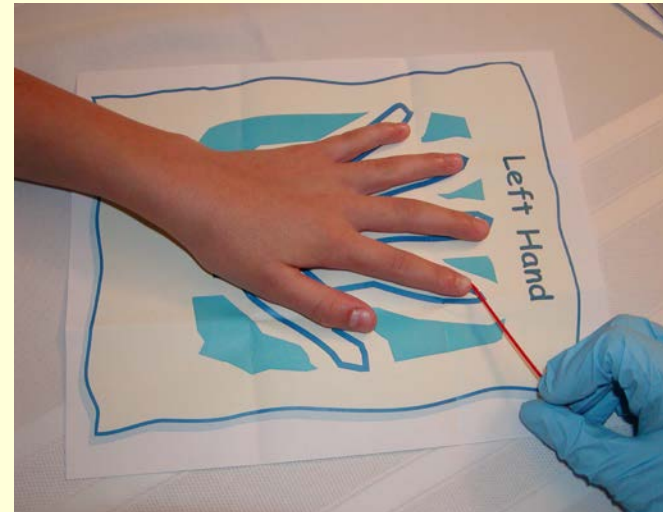
**PLACE KIT IN LOCKED REFRIDGERATED SAFE**

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*



08/04/2008

# More Than Just a "Kit"

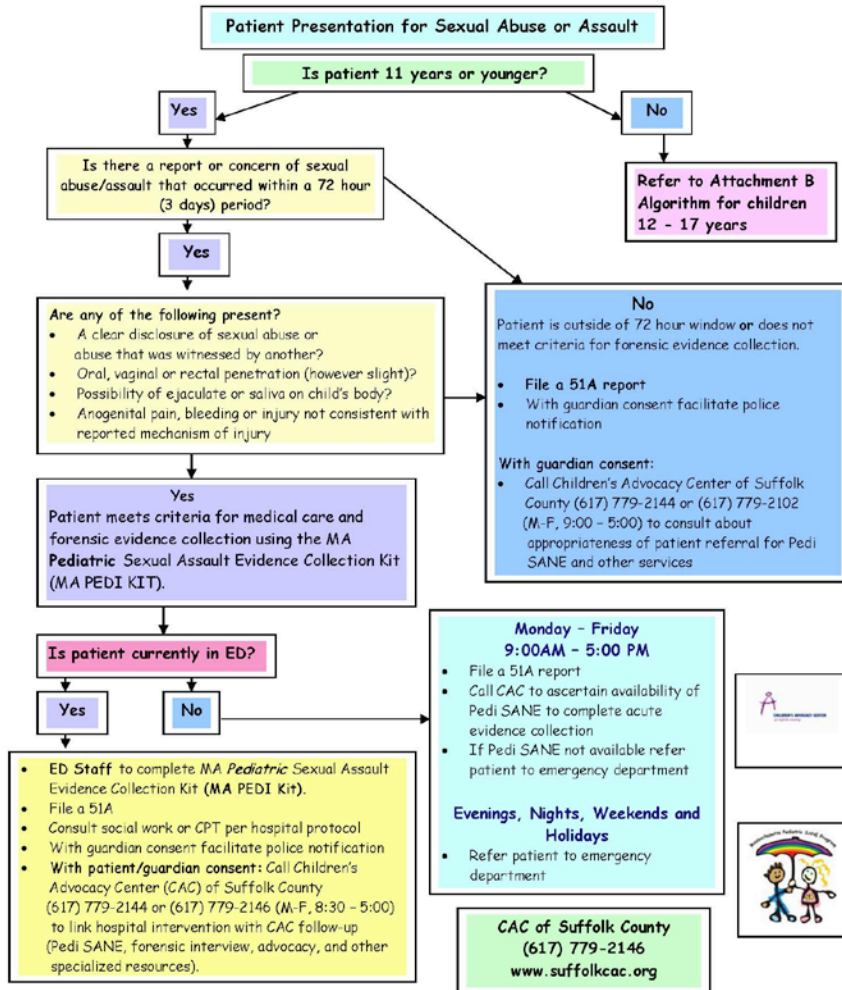
- Multi-disciplinary collaboration
  - Crime labs, DAs, DCF, police, CACs, hospitals
- Documentation Forms
- Pediatric SANE Protocol
- Forum for discussion around statewide needs for pediatric patients
- Gave voice to the issue of child sexual assault
- Instrumental in funding allocation



# Community Patient Care Algorithm

## Attachment A

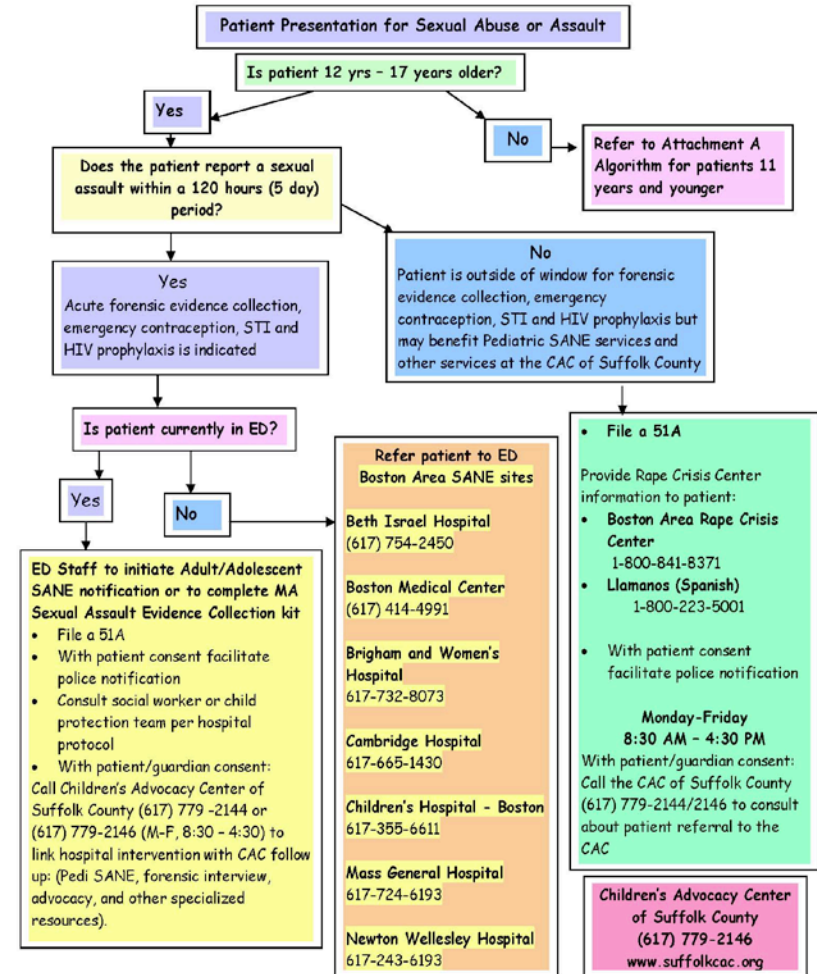
### Suffolk County Medical Referral Process Patients 11 Years and Younger Who Have Been Sexual Assaulted/Abused



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

My name is Amanda  
I am not safe  
Please help me



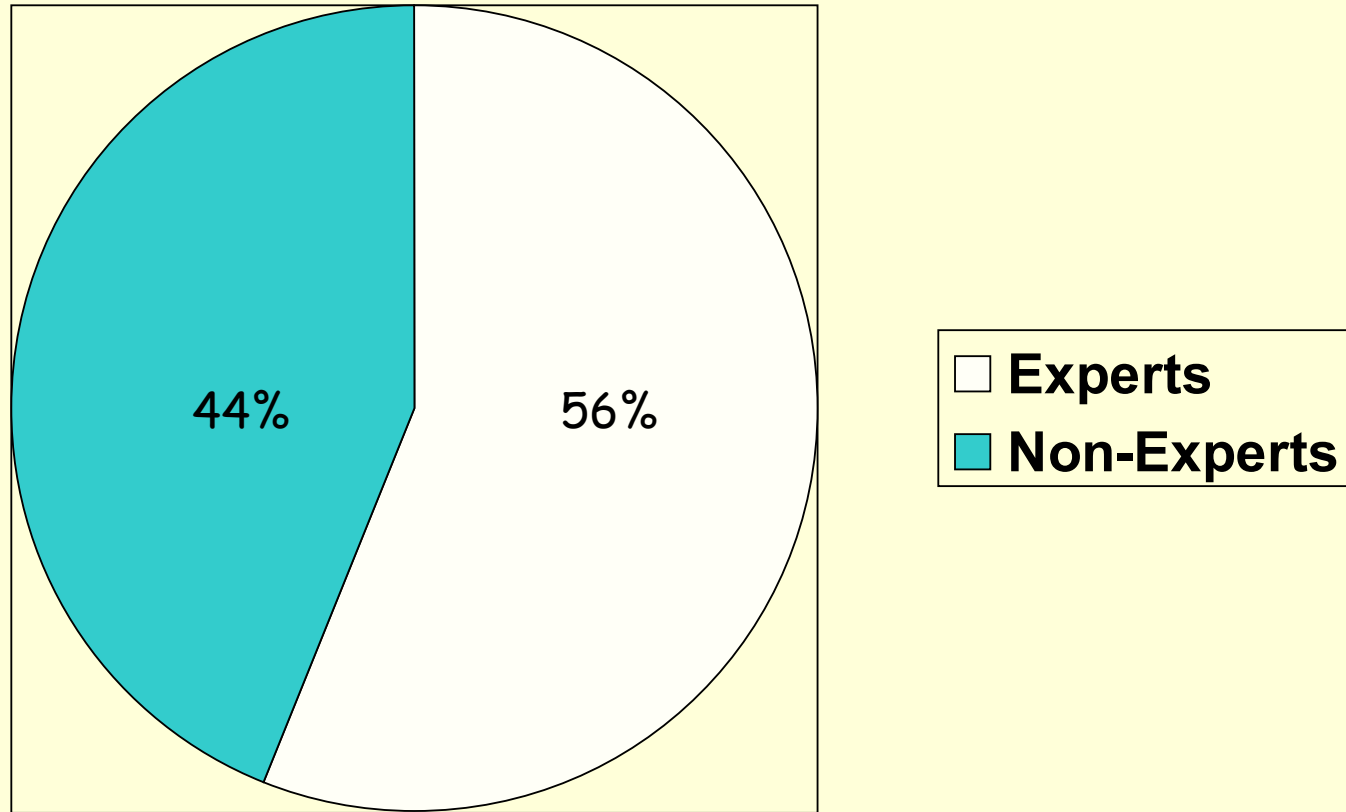
# Brave Children

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





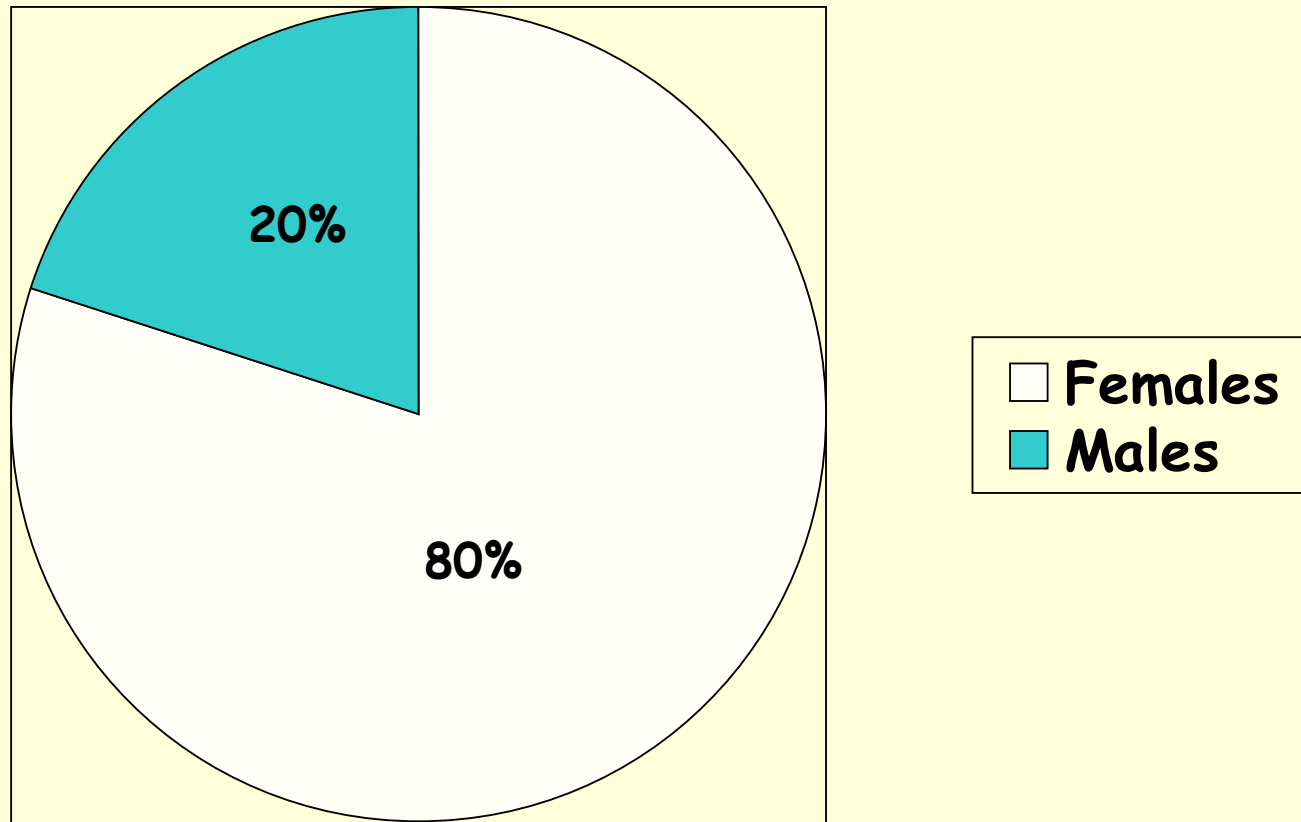
# Kit Completion Expert vs. Non-Expert



# 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

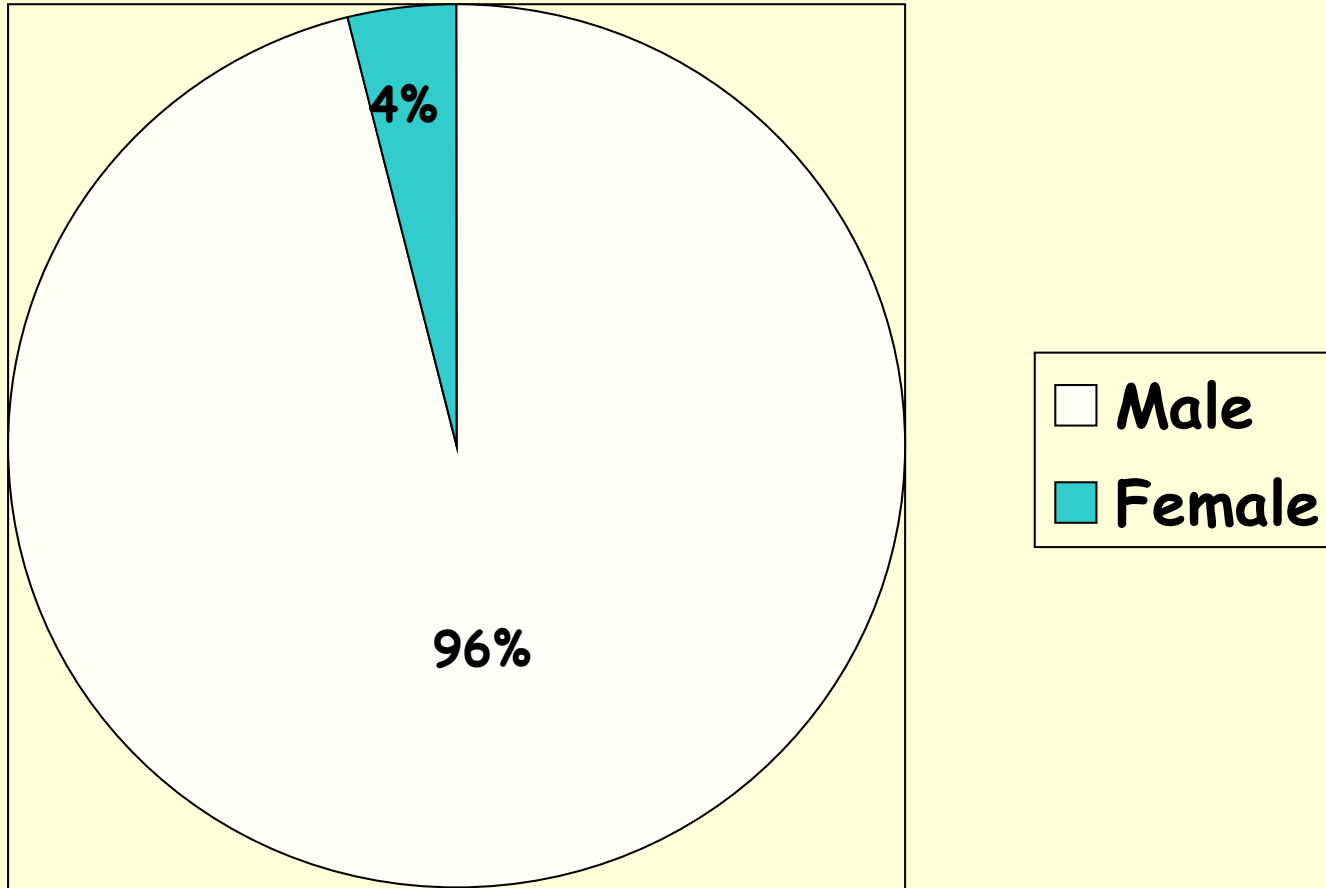
# Gender of Children



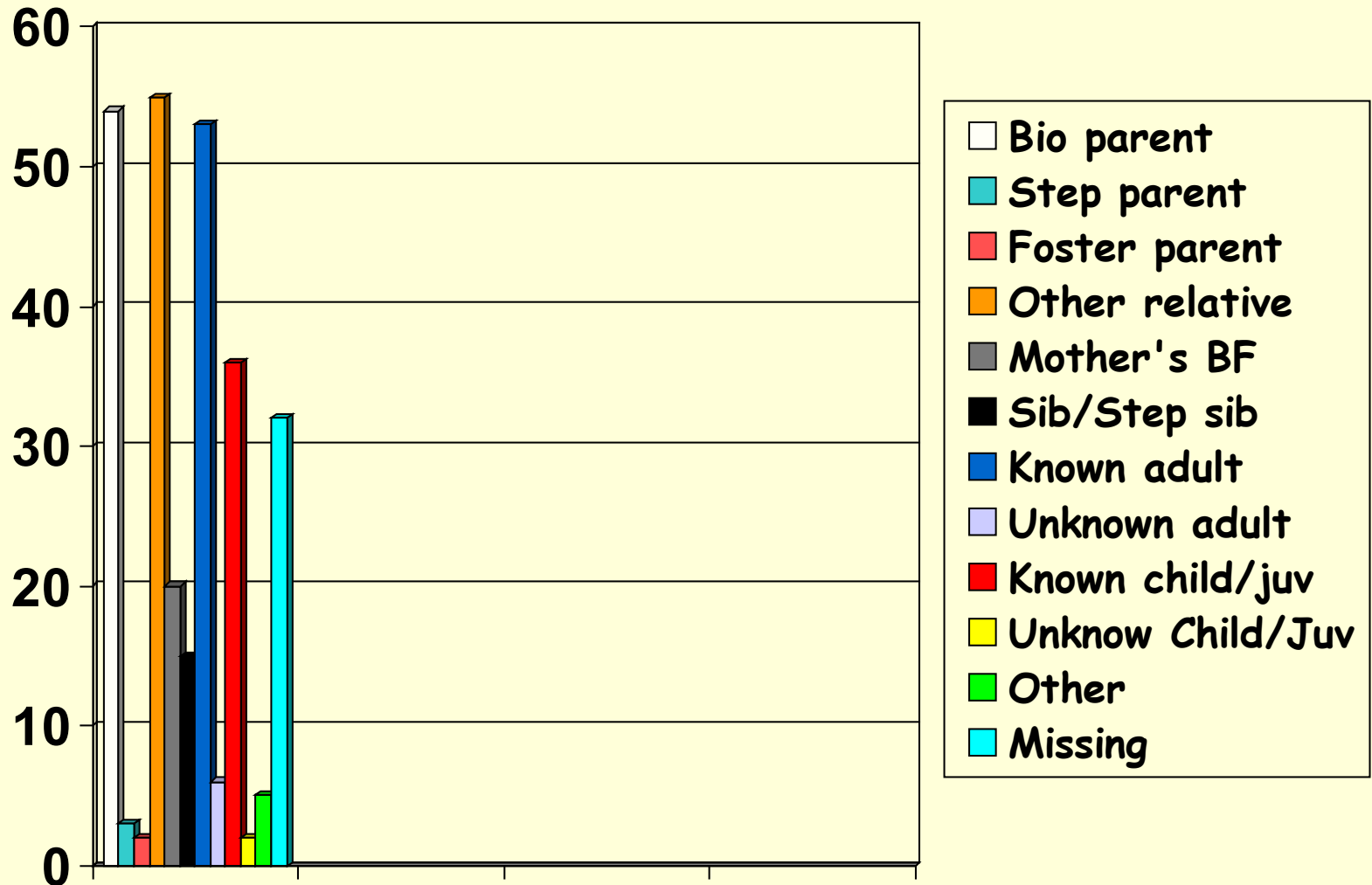
# Population Description

<b>Mean age</b>	<b>5.76 Years</b>
<b>Age Range</b>	<b>0 - 17 years</b>
<b>Tanner Stage 1</b>	<b>93%</b>

# Perpetrator Gender

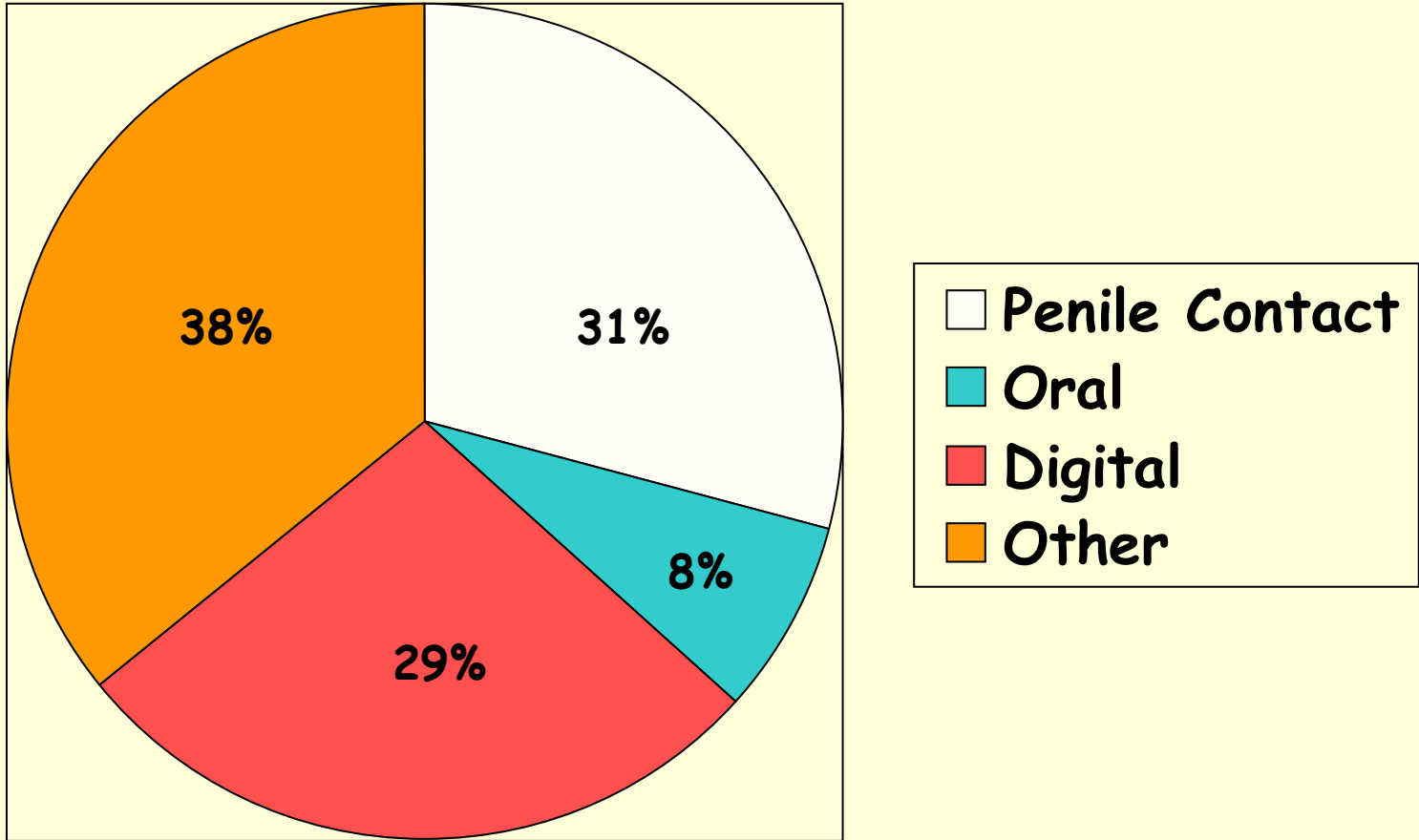


# Relationship of Perpetrator to Child

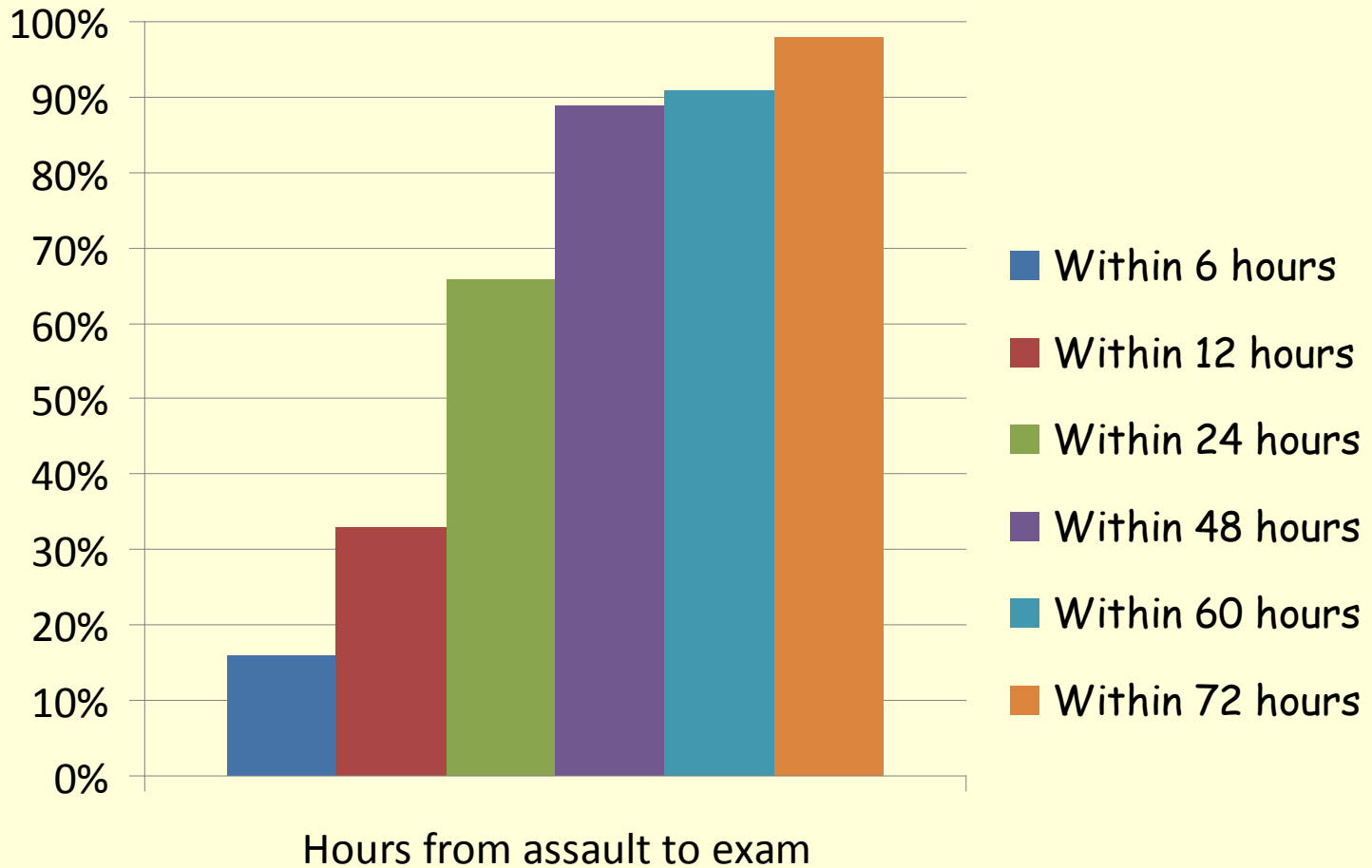




# Type of Assault



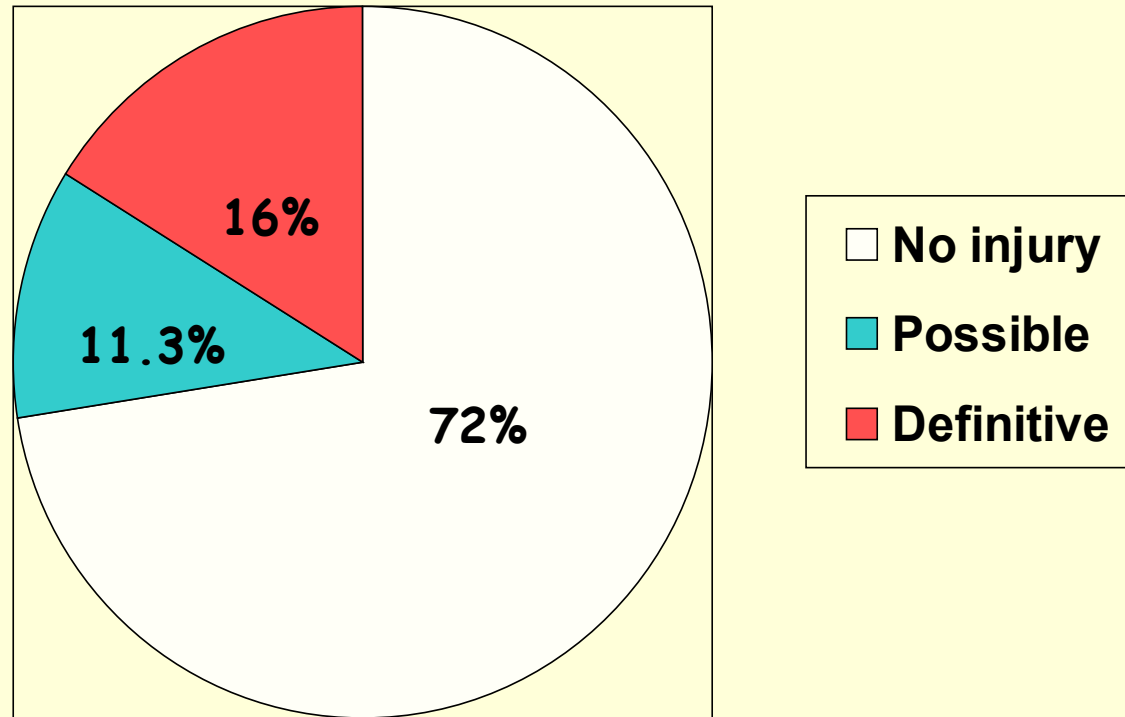
# Hours From Assault to Exam



# 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

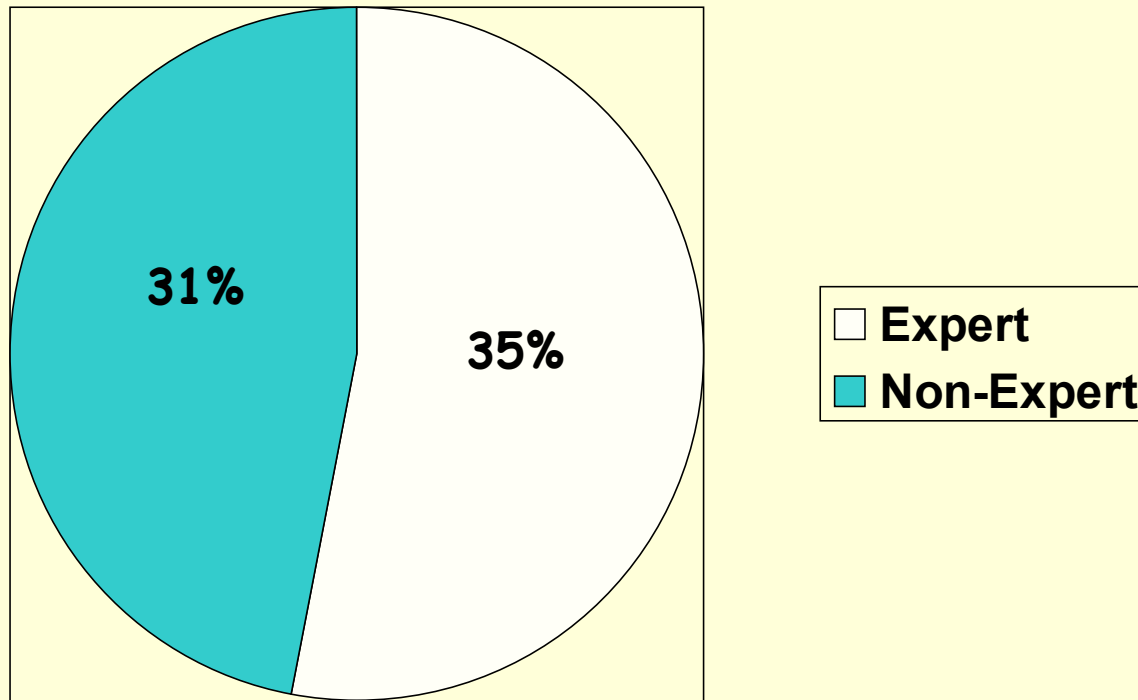
- 4 children with no report of penile contact had recovery of sperm on their bodies
- 9 children without information or disclosure of penile contact had sperm in diaper or underwear



# 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

