

INFANT SAFE SLEEP POLICIES

AT MASSACHUSETTS MATERNITY FACILITIES



A Report of Survey Findings

February 2014

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The Infant Safe Sleep Survey was sponsored by the Massachusetts Department of Public Health's **Division of Violence and Injury Prevention** and the **Massachusetts Perinatal Team**. This report was prepared by **Catherine Barber** of the Harvard Injury Control Research Center (HICRC, **David Hemenway**, Director) under contract with the Massachusetts Department of Public Health's Bureau of Community Health and Prevention (**Carlene Pavlos**, Director). Funding was provided by the Centers for Disease Control and Prevention's National Center for Injury Prevention and Control (Grant #U17 CE002009). The contents of the report are solely the responsibility of the authors and do not necessarily represent the official views of the CDC.

Members of the team that developed the survey were **Ruth Aga, Lisa Alee, Catherine Barber, Deborah Clapp, Holly Hackman, Jeanne Hathaway, David Hemenway, Ruth Karacek, Lisa McCarthy, Paul Muzhuthett, Carlene Pavlos**, and **Lauren Smith** (see Appendix 3 for affiliations).

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INTRODUCTION

The leading cause of death among Massachusetts infants ages one month to twelve months is sudden unexpected infant death. Multidisciplinary reviews by Massachusetts Child Fatality Review Teams have found that many of these deaths are associated with unsafe infant sleep positions and environments. The Massachusetts Department of Public Health has set a goal of reducing these deaths by increasing the proportion of families of newborns who follow safe sleep habits such as placing infants on their backs to sleep.

Maternity hospitals and birthing centers play a unique role in this effort by educating patients and by modeling safe practices by their own staff. After the American Academy of Pediatrics (AAP) released its updated recommendations for safe sleep practices in 2011, the Massachusetts Department of Public Health (DPH) sought to learn how it could best assist Massachusetts maternity facilities in implementing these recommendations and disseminating them to their patients. As a result, DPH and the Massachusetts Perinatal Team—an association of providers in maternity hospitals and birth centers—jointly sponsored a survey to document current practices and to request input on ways that DPH could assist maternity facilities.

METHODOLOGY

Collaborators and Survey Items

DPH contracted with the Harvard School of Public Health's Injury Control Research Center (HICRC) to develop the instrument and administer the survey to Massachusetts maternity facilities. An ad hoc committee (see Appendix 3) provided advice in developing the survey items, and staff from HICRC and DPH sought feedback on the survey items at meetings with the Massachusetts Perinatal Team, the Massachusetts Perinatal Advisory Commit-

tee, and with neonatologists Dr. Munish Gupta and Dr. Susan Hwang.

Ensuring High Participation Rate

HICRC developed an online survey using Qualtrics software. Interim Commissioner of Public Health Lauren Smith sent letters to hospital CEOs advising them of the project in April 2013. The Massachusetts Perinatal Team provided a list of contact people at each of the 47 maternity hospitals (see Appendix 2). Contact people were typically nurse managers or directors of nursing in hospital maternity departments. The administrator of the MA Perinatal Team sent an email to the contact list inviting recipients to complete the survey and sent reminder emails at intervals over the next few months. July through September, HICRC personnel sent personal emails, wrote letters, and telephoned the remaining non-responders to urge their participation. Invitations were also sent to the state's two birth centers in September.

By September 2013 all maternity hospitals and both birth centers had responded to the survey, for a 100% response rate.

Data Analysis

We created a variable to indicate whether facilities had a “model” written policy for staff practices, that is, one that included each of six AAP recommendations relevant to hospital care (back sleep only, no co-sleeping with adults, no soft items in the crib, no co-sleeping multiple birth siblings, avoid overheating infant, and encourage co-rooming with parents). Similarly, we created a variable to indicate whether facilities had a “model” discharge document that educates newborn mothers on each of seven AAP recommendations (back sleep only, no co-sleeping with adults, no soft items in crib, no co-sleeping with babies/children/pets, avoid overheating infant, encourage co-rooming, inform

100% Response Rate

All Massachusetts maternity hospitals and both birth centers completed the online survey.

94% of facilities report training all nursing staff on safe sleep. 73% report that all nurses were trained within the past 3 years.

other caretakers like babysitters and grandparents about safe sleep practices).

We tested the association between having a model policy and certain outcomes using chi square analysis. To improve statistical power, for key variables we collapsed responses into two categories: yes and all others (no, unknown, missing).

RESULTS

Results on each survey item are included in Appendix 1 and summarized here.

Hospital Policies and Staff Practices

Among the 49 facilities, all but 3 (94%) report training all nursing staff on how to sleep healthy infants. For nearly three quarters of the facilities, all nursing staff were trained within the past three years, but for 12 facilities, at least some staff were trained over three years ago. The most recent release of the AAP safe sleep guidelines was in 2011. A quarter of facilities report that placing “spitty” or “mucous-y” infants on their side is a somewhat or very common practice among nursing staff at their hospital; 27% report that it is never done. The 2011 AAP guidelines advise against side-sleeping infants (with the rare exception of infants for whom the risk of death from gastroesophageal reflux is greater than the risk of SIDS).

Nearly half (46%) of the facilities had a written policy or guideline governing safe sleep procedures. Information was provided on the content of these policies. Among the 22 with written policies, all but one (95%) call for back sleep only (no side sleep), 82% instruct that soft items be kept out of the crib/isolette, and 82% recommend against co-sleeping. Lower proportions recommend encouraging co-rooming with parents/caregivers (68%), avoiding infant over-heating (77%), and avoiding co-sleeping multiple-birth siblings (68%). Eleven of the written policies

were last revised in 2012 or 2013 and ten were last revised in 2011 or before.

Seventy-eight percent of the respondents report that their department has educated staff about the 2011 AAP recommendations, and many of the remainder plan to do so.

Patient Education

All of the respondents (except one missing response) report that staff verbally review a discharge checklist or other document with each newborn’s mother before the mother can be discharged. Safe sleep practices are recommended in that document for all but one of the facilities. Among the 43 facilities that provided information about the contents of the safe sleep recommendations in the document, 100% report recommending back sleep only, 93% recommend keeping soft items out of the crib, and 89% advise against co-sleeping. Somewhat lower proportions recommend co-rooming with a parent/caretaker (76%), discourage overheating the infant (80%), discourage co-sleeping with another baby/child/pet (74%), or telling others responsible for newborn care (like babysitters and grandparents) about safe sleep guidelines (74%).

Facilities use a variety of educational materials on safe sleep. 93% use brochures or other written materials, 46% use newborn classes in the hospital, and 28% use posters. One hospital volunteered the information that they attach a simple laminated diagram about safe sleep to every infant crib.

The most common (81%) barrier to improving safe sleep practices that was endorsed by respondents was patients’, or their family members’, beliefs about how to sleep a baby. The second most common was language barriers (33%). None of the facilities reported that low awareness of safe sleep practices among providers was a

27% of facilities report that nurses never side-sleep otherwise healthy “spitty” or “mucous-y” babies. 25% report that nurses somewhat or very commonly do. The AAP does not recommend side-sleeping these infants.

46% of the facilities have a written safe sleep policy. 26% have a policy that covers each of these AAP guidelines:

- *back sleep only*
- *no soft items in crib/isolette*
- *no co-sleeping with adults*
- *no co-sleeping with siblings*
- *encourage co-rooming*
- *avoid overheating.*

barrier, but 23% report that nursing staff do not always follow these practices.

Advising the Massachusetts Department of Public Health

A surprising 57% of respondents volunteered to join a working group to advise DPH and Massachusetts facilities on ways to improve safe sleep practices among staff and patients.

Nearly three-quarters (72%) of the respondents recommended that DPH assist facilities' safe sleep efforts by providing patient education materials (or advice on the best source of free or low cost materials). 62% endorsed DPH providing products to give to patients, like mugs or t-shirts, that reinforce safe sleep messages (like infant t-shirts that say "This Side Up" on the front). Over half (57%) recommended that DPH share a model hospital safe sleep policy. Other suggestions endorsed by nearly half of respondents were that DPH provide staff education materials to facilities and share tips about successful safe sleep campaigns from other facilities.

Additional suggestions volunteered by respondents moved beyond the hospital walls, calling for DPH or others to develop media campaigns; discourage retailers from promoting bumpers, blankets, or stuffed animals in cribs; train daycare providers; provide more education in outpatient settings, and better coordinate messaging with breastfeeding advocates.

Analysis

Facilities with model safe sleep policies were more likely than other facilities to have educated staff on the 2011 AAP recommendations (100% vs. 69%, $p=.02$) and to use a patient discharge document that covers key AAP recommendations (77% vs. 44%, $p=.04$). However, side-sleeping a spitty or mucous-y baby was about as common in facilities with model policies as in other facilities. Nurses were

reported never to side-sleep these infants in 31% of facilities with a model policy vs. 25% in other facilities, a difference that was not statistically significant ($p=.69$).

DISCUSSION

Limitations

The survey has important limitations. Information about providers' behavior is based only on self-report by a manager and not on direct observation by an outside observer. The actual content of hospital written policies and patient education materials was not reviewed. In an attempt to keep the survey short, important issues, like whether the hallways or patient education materials include art depicting babies in unsafe sleep environments (e.g., sleeping in cribs with bumpers or stuffed animals, or sleeping with a sleeping adult) were not asked.

Next Steps

Over half of the facilities (57%) indicated that DPH could promote safe sleep practices by sharing a model written policy with maternity facilities. Because this is low-cost and easy to accomplish, and because having a model written policy was associated with facilities giving patient education materials that cover key provisions of the new AAP recommendations, DPH plans to move forward on this. Because there is considerable heterogeneity across hospitals with respect to side-sleeping spitty or mucous-y infants who are not on a monitor, the policy should clarify that this practice is not advised.

One note regarding dissemination of a model policy: at a meeting with the Massachusetts Perinatal Team, members expressed their preference for use of the term "standard of care" over "policy." The former was perceived as directly relevant to patient health while the latter sounded administrative and remote from actual care.

Finally, hospitals and birth centers are logical distribution points for education

57% of the survey respondents volunteered to join a work group to advise DPH.

Facilities say DPH can help most by:

- *Providing patient education materials*
- *Providing educational products like infant t-shirts to give families*
- *Sharing model safe sleep policies that hospitals can adopt.*



Facilities with model written policies were significantly more likely to use patient education materials that covered key AAP guidelines.

materials geared to newborns' families. To the extent that DPH can provide patient education materials and products for these facilities to give to their patients—or point them to a source of free or low-cost—

survey results indicate that respondents at most of the facilities will welcome them.

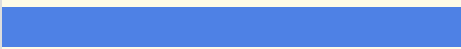

APPENDIX

1. Survey responses
2. List of Massachusetts maternity hospitals
3. Ad hoc Hospital Infant Safe Sleep Survey Committee members






APPENDIX 1. Survey Responses

STAFF TRAINING

1. Does your maternity department, normal newborn nursery, or birthing center (hereafter called “department”) train all nursing staff on how to “sleep” healthy infants while they are cared for at your facility?



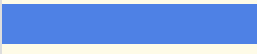

Answer		Response	%
Yes		46	94%
No		3	6%
Unknown		0	0%
Total		49	100%

2. Approximately how many of the nurses in your department have been trained in safe sleep practices in the past three years (either by your department or elsewhere)?

Answer		Response	%
All		36	73%
Most		7	14%
Some		0	0%
Few		2	4%
None		3	6%
Unknown		1	2%
Total		49	100%




SIDE SLEEPING

3. Setting aside infants who are on monitors, how common is it for nursing staff in your department to put “mucous-y” or “spitty” infants on their side for sleep? (Missing= 1)


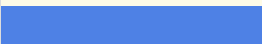


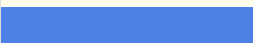


Answer		Response	%
Very common		3	6%
Somewhat common		9	19%
Uncommon		23	48%
Never done		13	27%
Unknown		0	0%
Total		48	100%

WRITTEN POLICY

4. Does your department have a written "safe sleep" policy or guideline on how to place healthy infants (i.e., those not on a monitor) for sleep while they are cared for at your facility? (Missing= 1)

#	Answer		Response	%
1	Yes		22	46%
2	No		22	46%
3	Unknown		4	8%
	Total		48	100%

5. Please identify which items are explicitly included in your department's safe sleep policy/guideline. (Please check all that apply.)

Answer		Response	%
Back sleep only for infants (i.e., no side sleep)		21	95%
Keep soft items out of the crib/isolette (e.g., stuffed animals, pillows, rolled blankets)		18	82%
Avoid co-sleeping (i.e., babies do not sleep on the same surface with another sleeping person)		18	82%
Avoid co-sleeping of multiple-birth siblings (twins, triplets, etc.)		15	68%
Avoid infant overheating		17	77%
Encourage co-rooming (infants sleep in the same room, but not same bed, as caregiver)		15	68%
Other (please describe: e.g., "Back sleep or side sleep only")		3	14%

Other (please describe: e.g., "Back sleep or side sleep only")

Encourage no blankets

Not a separate policy, just mentioned in Mother/Infant Teaching prior to discharge

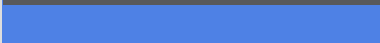


We use the NICHD December 2012 Guidelines

6. In what year was the safe sleep policy or guideline at your department last revised?

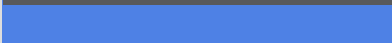

Year	Response
2013	3
2012	8
2011	6
2010	3
2009	1

AAP GUIDELINES

7. Has your department educated your staff about the 2011 safe sleep recommendations from the American Academy of Pediatrics?


Answer		Response	%
Yes		38	78%
No		6	12%
Unknown		5	10%
Total		49	100%

8. If "No," is your department planning to? (Missing= 1)



Answer		Response	%
Yes		4	80%
No		0	0%
Unknown		1	20%
Total		5	100%

PATIENT EDUCATION








9. Do nursing staff in your department verbally go over an educational document (like a discharge checklist or flyer) with each newborn's mother before they can be discharged? (Missing= 1)

Answer		Response	%
Yes		48	100%
No		0	0%
Total		48	100%







10. Are safe sleep practices recommended in that document? (Missing= 1)

Answer		Response	%
Yes		47	98%
No		1	2%
Total		48	100%

11. Which safe sleep practices are recommended in that document? (Please check all that apply.)

Answer		Response	%
Place infants only on their back for sleep		46	100%
Keep soft items out of the crib (such as stuffed animals, pillows, bumpers, positioners, etc.)		43	93%
Avoid co-sleeping on the same surface with a sleeping adult (to avoid suffocation and falls)		41	89%
Avoid co-sleeping on the same surface with another baby, child, or pet		34	74%
Encourage co-rooming (but not co-sleeping) with parents/caregivers		35	76%
Avoid overheating the infant		37	80%
Tell others responsible for newborn care (e.g., babysitters, grandparents) about safe sleep guidelines		34	74%

12. What parent educational materials devoted solely or primarily to safe sleep practices are available at your department? (Please check all that apply.)

Answer		Response	%
DVDs		5	11%
Brochures and other written materials		43	93%
Posters		13	28%
Educational messages on products such as infant t-shirts, mugs, etc.		2	4%
Newborn classes		21	46%
Other (please describe)		6	13%

Other (please describe)

Prenatal education classes

One on one discussion

We have a laminated picture of an infant in a "safe sleep" environment with bullet points about safe sleep attached to every infant crib.




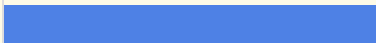






Newborn Channel

We are presently out of "Back to Sleep", and ordering more

Beautiful Beginnings (postpartum/newborn) Guidelines given to all patients on discharge/ A section in booklet on Safe Sleep





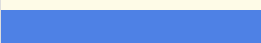



BARRIERS TO SAFE SLEEP

13. What do you think are strong barriers to improving safe sleep practices in your Department? (Please check all that apply.)

Answer		Response	%
Medical (MD) staff don't always follow safe sleep practices		3	6%
Nursing staff don't always follow safe sleep practices		11	23%
Low awareness of safe sleep practices among nursing or medical staff		0	0%
Staff members' beliefs that co-sleeping improves bonding and breast-feeding		9	19%
Patients' or their family members' beliefs		39	81%
Lack of appropriate educational materials		3	6%
Language barriers		16	33%
Other competing priorities		4	8%
Too little time to educate parents about safe sleep during their stay		1	2%
Other (please describe)		4	8%
No barriers		5	10%
Other (please describe)			
Products sold for beds or sleeping.			
We are all in agreement about safe sleep practices.			
Most information is important but time is short. Maybe more information and teaching prior to hospitalization might help.			
Most of our patients have early D/C to the hospital for 48 hours stay. They are with us for 3-4 hours. Or 6 -12 if they go home from here.			

ADVICE FOR DPH

14. In what ways do you think the Massachusetts Department of Public Health could help hospitals encourage safe sleep practices? (Please check all that apply.)

Answer		Response	%
Share a model hospital safe sleep policy we could use within our hospital		27	57%
Provide on-site, in-service trainings to hospital staff		14	30%
Provide staff education materials on safe sleep		22	47%
Provide patient education materials on safe sleep (or advice on the best source of free/low cost materials)		34	72%
Share successful safe sleep campaigns and efforts from other hospitals		23	49%
Provide products to give to new families that reinforce safe sleep messages (e.g. onesies that say "This Side Up" on the front)		29	62%
Train visiting nurses and pediatricians on safe sleep practices		21	45%
Other (please describe)		6	13%

Other (please describe)

PSA's.

Media campaign aimed at parents and family.

Marketing campaign to get the message out.

Training Daycare Providers; Mandates for Retailers Restricting Crib Bumpers, etc.

Media.

Provide more coordination with breastfeeding advocates on the best message.

VOLUNTEER

15. Would you like to join a working group that will meet by telephone 3-4 times in the next year to advise DPH and Massachusetts hospitals on ways MA maternity hospitals can improve safe sleep practices among staff and patients? (Missing= 2)

Answer		Response	%
Yes		27	57%
No		20	43%
Total		47	100%

16. Space is provided here for your suggestions or comments on improving infant safe sleep.

Text Response

Safe sleep media campaign

Educate all (parents, grandparents, care providers) through PSA's. Show them what a safe sleep environment looks like.

While there is no formal staff training, safe sleep is covered during new staff orientation.

We held a safety fair for all hospital employees teaching safe sleep recommendations, many grandparents informed.

We are strong advocates of safe sleep practices in our unit.

I have a great interest in the topic & the challenges involved with educating parents, families, health care professionals and Lactation professionals.

Public education not just birthing families.

Continual, consistent message to all patients.

Start a campaign on the social media sites to assist with safe sleeping, Encourage stores to stop all the "pretty" crib accessories.

Increased patient education in the outpatient setting so the information is reinforced in the in-patient setting.

We have been struggling with balancing the care of the NAS infant with the new AAP guidelines for safe sleeping. We had inconsistencies between units (SCN, PP and pedi) so have a task force to develop policy and consistent education/messaging for staff.

We have linked our safe sleep education with infant drop prevention.

Our patients are going to do what they want.

APPENDIX 2. Massachusetts Maternity Facilities

ANNA JQUES HOSPITAL
BAYSTATE FRANKLIN MEDICAL CENTER
BAYSTATE MEDICAL CENTER
BERKSHIRE MEDICAL CENTER INC/BERKSHIRE CAMPUS
BETH ISRAEL DEACONESS MEDICAL CENTER/EAST CAMPUS
BEVERLY HOSPITAL/BEVERLY CAMPUS
BOSTON MEDICAL CENTER CORP MENINO PAVILION
BRIGHAM & WOMEN'S HOSPITAL
CAMBRIDGE HEALTH ALLIANCE/CAMBRIDGE
CAPE COD HOSPITAL
COOLEY DICKINSON HOSPITAL, INC.
EMERSON HOSPITAL
FAIRVIEW HOSPITAL
FALMOUTH HOSPITAL
GOOD SAMARITAN MEDICAL CENTER
HALLMARK HEALTH SYSTEM MELROSE-WAKEFIELD
HARRINGTON MEMORIAL HOSPITAL
HEALTHALLIANCE HOSPITAL-LEOMINSTER CAMPUS
HEYWOOD HOSPITAL
HOLY FAMILY HOSPITAL
HOLYOKE MEDICAL CENTER
JORDAN HOSPITAL
LAWRENCE GENERAL HOSPITAL
LOWELL GENERAL HOSPITAL
MARTHA'S VINEYARD HOSPITAL
MASS GENERAL HOSPITAL
MERCY MEDICAL CENTER CAMPUS
METROWEST MED CTR/FRAM UNION CAMPUS
MILFORD REGIONAL MEDICAL CENTER
MORTON HOSPITAL
MOUNT AUBURN HOSPITAL
NANTUCKET COTTAGE HOSPITAL
NEWTON-WELLESLEY HOSPITAL
NORTH ADAMS REGIONAL HOSPITAL
NORTH SHORE MED CTR/SALEM HOSPITAL
NORWOOD HOSPITAL
SIGNATURE HEALTHCARE BROCKTON HOSPITAL
SOUTH SHORE HOSPITAL
SOUTHCOST HOSPITALS GROUP INC/CHARLTON
SOUTHCOST HOSPITALS GROUP INC/ST LUKES
SOUTHCOST HOSPITALS GROUP INC/TOBEY

ST ELIZABETH'S MEDICAL CENTER
ST VINCENT HOSPITAL
STURDY MEMORIAL HOSPITAL
TUFTS MEDICAL CENTER
UMASS MEMORIAL MED CTR/MEM CAMPUS
WINCHESTER HOSPITAL

CAMBRIDGE BIRTH CENTER
NORTH SHORE BIRTH CENTER

APPENDIX 3. Ad hoc Hospital Infant Safe Sleep Survey Committee members

A. Massachusetts Department of Public Health

Deborah Clapp, Program Manager, Emergency Medical Services for Children
Justin Egan, Epidemiologist, Division of Violence and Injury Prevention & Office of Adolescent Health and Youth Development
Holly Hackman, Epidemiologist, Division of Violence and Injury Prevention
Jeanne Hathaway, Epidemiologist, Injury Surveillance Program
Ruth Karacek, Public Health Nurse Advisor (former), Division of Perinatal, Early Childhood and Special Health Needs
Lisa McCarthy, State Child Fatality Review Coordinator, Division of Violence and Injury Prevention
Paul Muzhuthett, Regional Director, Northeast Regional Health Office; Administrator, Massachusetts Perinatal Team
Carlene Pavlos, Director, Bureau of Community Health and Prevention
Lauren Smith, Interim Commissioner (former), Department of Public Health

B. Harvard School of Public Health

Ruth Aga, MPH student, Senior Doctor, Oslo University Hospital Injury Department
Catherine Barber, Senior Researcher, Harvard Injury Control Research Center
David Hemenway, Director, Harvard Injury Control Research Center
Christelle Salomon, Intern, Harvard Injury Control Research Center

C. Hospital

Lisa Allee, Injury Prevention Coordinator, BMC Injury Prevention Center