

Supplemental Digital Appendix 1

Clinical Cases for Case-Based Gun Violence Prevention Training Program for Medical Residents

Learning objectives for participants:

- Utilize nonjudgmental language to screen for access to guns and safe storage practices.
- Respond to a positive screen to gun safety practice questions.
- Identify common pitfalls in having these discussions.
- Identify opportunities to educate patients about risks and understand your responsibility for patient safety counseling.
- Practice giving out gun locks and finding patient information handout on the hospital intranet.
- When appropriate, discuss legal pathways, such as an extreme risk protection order (ERPO), for safe removal of firearms.

Internal Medicine (CORE) Case Stem

You are seeing a patient, Chris, for the first wellness visit in your primary care practice.

HPI:

Chris is a healthy 35-year-old without significant past medical history. Chris just moved to your city 2 months ago. You have reviewed Chris's past records and Chris is not due for any screenings or immunizations today. Chris takes no medications, gets regular exercise and has good sleep hygiene. A review of symptoms is negative.

CASE PROMPT:

As part of taking Chris' social history, you have found out that Chris, Chris's spouse, Sam, and son, Joey, age 4, live together in their new home. Chris is a non-smoker, who drinks 1-2 beers each week, and does not use any drugs. Chris and Sam use condoms and are starting to plan to have a second baby soon.

You are now ready to ask a safety history, including screening for guns at home.

For Standardized Patients

Internal Medicine (CORE) Patient Profile

Background:

You are Chris, a healthy 35-year-old married to Sam. Together you have a 4-year-old son, Joey. All three of you are healthy and you have no health concerns today. You are seeing the doctor for an annual physical.

You are in a safe relationship with Sam and you have no concerns for your safety or the safety of your son Joey. You use seatbelts and Joey is restrained in a 5-point restraint car seat always when in the car.

At home, you keep 2 shotguns and a handgun.

The shotguns have been in your family for years. The shotguns are kept unloaded in your garage, leaning next to the rakes. You keep ammunition in the back of your sock drawer far away from the guns.

You keep a handgun for safety. You keep it in your bedside table. The ammunition is nearby but you do not keep the handgun loaded except for when Sam is out of town traveling and you're alone at night.

Your spouse, Sam, has had some reservations, but has deferred decisions on guns to you. Some of Sam's extended family have greater concerns about keeping guns in the house with a young child.

You feel you are a very responsible gun owner. You have never used trigger locks as your family always believed the most important thing is to train children never to touch guns. You plan to do that with your children as your parents did for you. At Sam's insistence, after Joey was born, you have stopped keeping your handgun loaded, but you worry you aren't as safe because it would take a few minutes to get to the ammunition nearby to load the gun.

Reaction A: Wants to learn more

You're open to hearing the physician's opinion about gun safety. You definitely want your son to be safe and, while you believed you were doing everything necessary to do that, you are open to learning more. You don't think you're willing right away to buy a safe, but you would consider a trigger lock if suggested. You are sensitive to any perceived judgment, but you don't become overtly angry if that happens.

Reaction B: Angry

You feel it is your right to own a gun and that it is important for your safety. You do not like anyone, including a physician telling you how to live your life. If the physician remains calm and non-judgmental, you'll be calm but remain skeptical, grudgingly taking written materials but promising nothing. You agree on the common goal of keeping Joey safe if nothing else. If you perceive more judgment or aggression, you will escalate.

Expectations and Assessment

Things clinician may include in response:

- Active listening
- Leaving open chance to speak again in the future
- Statistics on safety
- Law in Massachusetts that firearms must be safely stored
- Keep politics out of the conversation, avoid any personal strong emotions
- Open questions in response to reactions--Can you tell me more?

Modified Case Stems

Surgery / Emergency Medicine Case Stem

You are seeing a patient, Chris, in the ED for a grease burn to the right arm and abdomen suffered while at work earlier in the evening.

HPI:

Chris is a healthy 35-year-old without significant past medical history. Chris just moved to your city 2 months ago. You have reviewed Chris's past records and Chris has no history of illness or prior surgeries. Chris takes no medications, gets regular exercise and has good sleep hygiene. A review of systems is negative.

CASE PROMPT:

As part of taking Chris' social history, you have found out that Chris, Chris's spouse, Sam, and son, Joey, age 4, live together in their new home. Chris is a non-smoker, who drinks 1-2 beers each week, and does not use any drugs.

You are ready now ready to follow up with any additional questions and history taking that is appropriate, including screening for guns in the home.

Pediatrics Case Stem

You are seeing a pediatric patient, Joey, for their first visit in your primary care practice, brought in by his parent, Chris.

HPI:

Joey is a 4-year-old boy without significant past medical history. Joey and his parents just moved to your city 2 months ago. You have reviewed his immunizations and he is up-to-date. He will need a CBC and lead level today. His development, dietary, elimination histories are all reassuring.

CASE PROMPT:

As part of taking his social history, you have found out that Joey lives with his parents, Chris (who is here today) and Sam. They live in a newer home and they have no pets. There are no smokers in the home.

You are ready now to ask a safety history and you start with car restraints and then screen for guns in the home.

OB-GYN Case Stem

You are seeing a patient, Chris, for the first regular visit in your gynecology practice.

HPI:

Chris is a healthy 35-year-old G1P1 with a history of one prior, uncomplicated pregnancy. Chris just moved to your city 2 months ago. You have reviewed Chris's past records and Chris is due for a routine exam today. Chris uses condoms for birth control and expects to try to get pregnant again in a few months. LMP was 2 weeks ago. A review of symptoms is negative.

CASE PROMPT:

As part of taking Chris' social history, you have found out that Chris, Chris's spouse, Sam, and son, Joey, age 4, live together in their new home. Chris is a non-smoker, who drinks 1-2 glasses of wine each week, and does not use any drugs.

You are ready now to ask a safety history and you start with domestic violence screening and then screen for guns in the home.

Psychiatry Case Stem

You are seeing a patient, Chris, for an initial visit as part of a routine screening for all new patients in your comprehensive group practice:

HPI:

Chris is a healthy 35-year-old without significant past medical history. Chris just moved to your city 2 months ago from a very rural area. You have reviewed Chris' past records and Chris is not due for any screenings or immunizations today. Chris takes no medications, gets regular exercise and has good sleep hygiene. A review of symptoms is negative.

Case Prompt:

As part of taking Chris' social history, you have found out that Chris, Chris's spouse, Sam, and son, Joey, age 4, live together in their new home. Chris is a non-smoker, who drinks 1-2 glasses of wine each week, and does not use any drugs. Chris and Sam use condoms and are starting to plan to have a second baby soon.

You are ready now to ask a safety history and you start with domestic violence screening and then screen for guns in the home.

Supplemental Digital Appendix 2

Gun Violence Prevention Learning Checklist for Case-Based Gun Violence Prevention Training Program for Medical Residents

Gun Violence Prevention Learning Checklist

Please check 'Yes' or 'No' depending on whether the trainee successfully performed the objective/asked the question initially. We anticipate that the SP will coach the trainee through the use appropriate question/advice after initial interaction:

Case 1:

1. Utilize non-judgmental language to screen for access to guns and safe storage practices

Yes No

Specific feedback:

Example language: 'One of the things we always ask our patients about is if you or anyone in the family has access to any firearms'

2. Respond to a positive screen to gun safety practice questions – the 5 L's [Ref 9]:

'Is the gun **L**ocked?'

Yes No

'Is the gun **L**oaded?'

Yes No

'Has everyone in the home **L**earned about gun safety?'

Yes No

'Anyone in the home who's been under a lot of stress or suffering from depression? Are you concerned about anyone's safety?' (Feeling **L**ow)

Yes No

'Are there any **L**ittle kids at home?'

Yes No

3. Provide specific advice on safe gun storage:

- Yes No

Example language: ‘What we recommend for all of our patients is that all guns are stored locked and unloaded with ammunition stored separately.’

4. Practice giving out gun lock and patient information handout located on the hospital intranet.

- Yes No

Example language: ‘We have many safety resources available. If you are interested, MGH provides free gun locks and information about how to use them and store firearms safely.’

‘These gun locks are a helpful safety measure; the best practice, if there are guns in the home, would be to store the gun separately from ammunition in a safe.’

5. Provides an opportunity to ask questions

- Yes No

6. Responds to patient not wanting to discuss firearms/takes issue with discussion:

Rephrase the patient’s concern: ‘What I hear you saying is, you are concerned about people taking away your right to own a gun.’

- Yes No

‘My only concern is making sure things at home are as safe as possible – this includes wearing seatbelts, bike helmets, and ensuring that everyone is as safe as possible if there is any access to firearms.’

- Yes No

‘I just want to provide you the information and tools to help make things safe.’

- Yes No

Specific feedback:

Case 2:

1. Utilize non-judgmental language to screen for access to guns and safe storage practices

- Yes No

Specific feedback:

Example language: ‘One of the things we always ask our patients about is if you or anyone in the family has access to any firearms’

2. Respond to a positive screen to gun safety practice questions – the 5 L’s [ref 9]:

‘Is the gun **L**ocked?’

- Yes No

‘Is the gun **L**oaded?’

- Yes No

‘Has everyone in the home **L**earned about gun safety?’

- Yes No

‘Anyone in the home who’s been under a lot of stress or suffering from depression? Are you concerned about anyone’s safety?’ (Feeling **L**ow)

- Yes No

‘Are there any **L**ittle kids at home?’

- Yes No

3. Provide specific advice on safe gun storage:

- Yes No

Example language: ‘What we recommend for all of our patients is that all guns are stored locked and unloaded with ammunition stored separately.’

4. Practice giving out gun lock and patient information handout located on the hospital intranet.

Yes No

Example language: 'We have many safety resources available. If you are interested, MGH provides free gun locks and information about how to use them and store firearms safely.'

'These gun locks are a helpful safety measure; the best practice would be to store the gun separately from ammunition in a safe.'

5. Provides an opportunity to ask questions

Yes No

6. Explicitly discusses ERPO and how it can be used.

'There's a red flag law also known as ERPO or the Extreme Risk Protection Order that was recently passed in MA, have you heard about it?'

If no,

'This law is one tool that allows family members or concerned loved ones, if they are worried that the gun owner is at risk to themselves or others, can ask to temporarily remove guns from the home.'

'I understand that you are concerned about your father, I want to offer you some resources which could help you to consider the option of using this ERPO law to protect him and others in the home.'

If yes,

'Can you tell me your understanding of the law?'

Specific feedback:

Supplementary Digital Appendix 3

Pre- and Postsurvey for Case-Based Gun Violence Prevention Training Program for Medical Residents

Presurvey

Department:

- | | |
|-------------------------------------|----------------------------------|
| <input type="checkbox"/> Medicine | <input type="checkbox"/> Surgery |
| <input type="checkbox"/> EM | <input type="checkbox"/> Ob/Gyn |
| <input type="checkbox"/> Psychiatry | <input type="checkbox"/> Peds |

Where did you attend medical school?

- | | |
|---------------------------------------|---|
| <input type="checkbox"/> Northeast | <input type="checkbox"/> Midwest |
| <input type="checkbox"/> Mid-Atlantic | <input type="checkbox"/> West |
| <input type="checkbox"/> Southeast | <input type="checkbox"/> Outside the US |

Have you had any prior training related to talking with patients about firearm safety and/or gun violence prevention?

- Yes
- No

Please describe any training you have had and when the training occurred:

Please give us your opinion on the following statements:

I believe it is important for health care providers to routinely screen patients for access to firearms and to counsel patients on safe gun practices:

- Yes
- No

Are you familiar with the resources available at MGH to support patients in safe gun practices?

- Yes
- No

Do you feel that screening for safe gun practices would interfere with your typical patient interview and workflow?

- Yes
- No

I am aware of the Extreme Risk Protection Order and how it can be used:

Yes

No

How important do you feel it is to assess safe gun practices in your field of medicine?

1 2 3 4 5 6 7 8 9 10

Very unimportant

Very important

How comfortable do you feel holding a discussion about access to guns and gun safety with a patient?

1 2 3 4 5 6 7 8 9 10

Very uncomfortable

Very comfortable

Postsurvey

Department:

Medicine

Surgery

EM

Ob/Gyn

Psychiatry

Peds

Please give us your opinion on the following statements:

I believe it is important for health care providers to routinely screen patients for access to firearms and to counsel patients on safe gun practices:

Yes

No

Are you familiar with the resources available to the MGH to support patients in safe gun practices?

Yes

No

Do you feel that screening for safe gun practices would interfere with your typical patient interview and workflow?

Yes

No

I am aware of the Extreme Risk Protection Order and how it is used:

Yes

No

How important do you feel it is to assess safe gun practices in your field of medicine?

1 2 3 4 5 6 7 8 9 10

Very unimportant

Very important

How comfortable do you feel holding a discussion about access to guns and gun safety with a patient?

1 2 3 4 5 6 7 8 9 10

Very uncomfortable

Very comfortable

Do you feel this session provided effective teaching on how to talk with patients about access to guns and gun safety?

Yes

No

Please give any further comments or feedback on this session below.