



FIRST AID



Just In Time CME

James Harper, MD

Associate Professor of Pediatrics,
University of Nebraska Medical Center

Director of Continuing Medical Education,
Childrens Hospital and Medical Center

jlharper@unmc.edu



CME

Commitment to
Continuing Medical Education

Disclosures

<u>Item</u>	<u>Disclosure</u>
Stock	Merck
Speaker Bureaus	None
Research Support	MCHB, NovoNordisk
Off label use	Not applicable

This research project is supported by a grant from the Genetic Services Branch of the Maternal and Child Health Bureau (MCHB) of the Health Resources and Services Administration
(HRSA Grant H46MC24089).

Background

- Nebraska's program
 - Universal newborn screening.
 - Hemoglobinopathy screening by IEF
 - Confirmatory testing by HPLC
 - System detects both serious hemoglobinopathies (e.g.: SS disease) and traits.

Traits vs traits

First baby with FAS

vs

Second baby with Hgb Barts

Problem:

Large number of referrals for minor hemoglobinopathies.

Question:

Why is this happening?

Hypotheses

The high referral rate was caused by one of or a combination of:

- Lack of current education on the subject
- Lack of clinical comfort with the topic
- Lack of time
- Lack of reimbursement
- Parental preference

Previous interventions

1. Grand Rounds on Newborn Screening
2. ACT Sheets sent to the primary care physician (PCP)
3. Instructions and parent information forms sent to the parent and PCP.

What assets can we employ?

- Accredited CME program
 - An established Grand Rounds, with an online presence since 1998
 - CHMC has a google.org account
- Newborn Screening Program mailings to families and PCP's

Selection of an Educational Intervention

Factors:

Grand Rounds have been done

Handouts have been used since the inception of the program

Live meetings are expensive and difficult to schedule

Selection of an Educational Intervention

YouTube

- Platform independent
- Scalable graphics to fit user's screen
- Available as part of software package on most smart phones and tablets.
 - Portable
 - Affordable

YouTube

Previous experience with YouTube

Peds resident night course

(www.youtube.com/bigredmed)

Video	Views to date
Transfusion reactions 1	3259 (1), 1160 (2)
Neutropenic Fever	926
Head injury in Hemophilia	113

Methods

Survey

Survey of Needs Assessment sent to Family Medicine and Pediatricians with Nebraska work addresses.

Demographics

Barrier identification

Responsibilities of the PCP vs the NSP

Construction of the videos

- Powerpoint slides
- Narration over slides using Echo Personal Capture software
- .wma file then converted and uploaded by YouTube

Presentation topics

Sickle cell disease (FS)

Sickle cell trait (FAS)

Hemoglobin Barts (FA + Barts)

Variant Hemoglobins (FAV)

Structure of videos

Aim is to help the primary care provider deal with the first visit with the affected baby.

- What do I need to do today?
 - What urgencies do I need to consider?
- Where can I get more information for myself?
- Where can I get more information for the family?

Just In Time CME

NEWBORN WITH SICKLE CELL DISEASE

Per ACCME guideline for enduring CME materials:
Review date: November 2012
Release date: November 2012
Expiration date: November 2014

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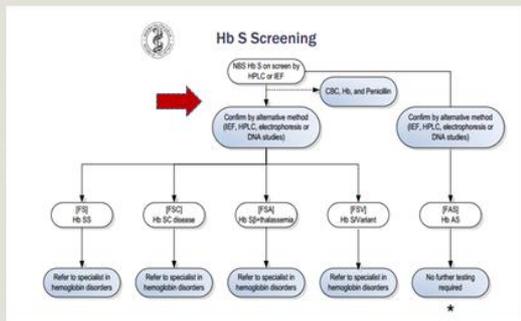
Counseling families of newborns with hemoglobinopathy traits by primary care physicians in Nebraska (IRB# 177-12-EX, UNMC)

Children's Hospital & Medical Center is accredited by the Nebraska Medical Association Commission on Medical Education to provide continuing medical education for physicians. Children's Hospital & Medical Center designates this activity for a maximum of one half hour (0.5 hours) AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

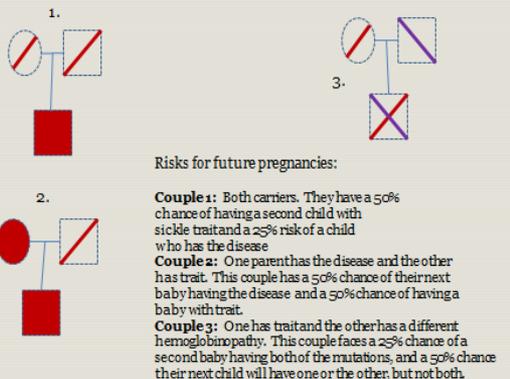
Note, you may claim credit for each video only once, but you may reuse these videos as often as needed.

Things to do now.

1. Contact the family to inform them of the screening result.
2. Consult a specialist in hemoglobin disorders; refer if needed.
3. Evaluate infant and assess for splenomegaly; do complete blood count (CBC) with mean corpuscular volume (MCV), and reticulocyte count.
4. Order hemoglobin profile analysis (usually performed by electrophoresis).
A. Nebraska Regional Lab: Hemoglobin Confirmation-Newborn
5. Initiate daily penicillin VK (125mg po bid) prophylaxis and folate supplements (400 mcg po daily)
6. Educate parents/caregivers regarding the risk of sepsis, the need for urgent evaluation if fever of $\geq 38.5^{\circ}\text{C}$ (101°F) or signs and symptoms of splenic sequestration.
7. Report the results to the Newborn Screening Program.



<http://www.acmg.net>



CME credit

- ACCME regulations allow division of category 1 CME credit to the quarter of an hour.
 - Our presentations are credited at 0.5 credit hours (due to video and CME questions)
 - Users can watch videos as often as they like
 - Users can claim CME credit once per video

Marketing the CME

- URL was added to the reports from Nebraska's Newborn Screening Program
- URL was marketed to Pediatricians and Family Physicians by Childrens Hospital Medical Staff Office.

Demographics

Ownership/Affiliation	Number (% responders)
Private	124 (46.8%)
Hospital-owned	47 (17.7%)
Practice network	10 (3.8%)
University	8 (3%)
Public	11 (4.2%)
Other	7 (2.6%)

Surveys Sent	942
Surveys Returned	264 (28.02%)

Location	Number (% responders)
Urban	59 (22.3%)
Suburban	61 (23%)
Rural	86 (32.5%)

of newborns with positive NbScr in last 6 mo.

	None	<5	>5
Fam. Med.	61 (42.36%)	72 (50%)	10 (6.94%)
Peds	5 (6.85%)	33 (45.21%)	35 (47.95%)

Responsibilities

>5 in last 6 mo.	SS disease	S trait	PKU	Hgb Barts	Variant Hgb
Inform family	4 (8.89%)	5 (11.11%)	6 (13.33%)	3 (6.67%)	5 (11.11%)
Arrange Confirm. Testing	4 (8.89%)	4 (8.89%)	9 (20%)	4 (8.89%)	7 (15.56%)
Arrange Subspecialty eval.	5 (11.11%)	3 (6.67%)	8 (17.78%)	4 (8.89%)	7 (15.56%)

Number and percent who wanted the state program to handle each task

0 in last 6 months	SS disease	S trait	PKU	Hgb Barts	Variant Hgb
Inform family	13 (19.7%)	13 (19.7%)	16 (24.24%)	15 (22.73%)	15 (22.73%)
Arrange Confirm. Testing	24 (36.36%)	22 (33.33%)	25 (37.88%)	25 (37.88%)	26 (39.39%)
Arrange Subspecialty eval.	13 (19.7%)	14 (21.21%)	17 (25.76%)	15 (22.73%)	16 (24.24%)

Do you think there are barriers to counseling?

Yes: 135 (65.2%)	No: 72 (34.8%)
Barrier	Number of responses
Lack information	106 (40%)
Lack the time	78 (29.4%)
Can't get reimbursed	29 (10.9%)
Parents prefer specialist	56 (21.1%)
Other	4 (1.5%)

Barriers to initial work up

	PKU	Sickle Cell Trait	Sickle Cell Disease	Variant Hgb	Hgb Barts
What tests?	108 (40.8%)	60 (22.6%)	59 (22.3%)	96 (36.2%)	89 (33.6)
Convenient lab?	25 (9.4%)	22 (8.3%)	21 (7.9%)	22 (8.3%)	21 (7.9%)
Interpretation of tests	59 (22.3%)	39 (14.7%)	36 (13.6%)	66 (24.9%)	68 (24.9%)
Who to refer to?	44 (16.6%)	30 (11.3%)	28 (10.6%)	38 (14.3%)	39 (14.7%)
None of the above	67 (25.3%)	98 (37%)	102 (38.5%)	80 (30.2%)	83 (31.3%)

Video use

Video	Upload date	Views to date
Hgb Barts	Oct. 26, 2012	56
Sickle Cell	Oct. 29, 2012	56
Sickle cell trait	Oct. 12, 2012	91
Hgb Variant	Oct. 26, 2012	106
Mgmt of NF 1	June 19, 2013	246

Conclusions

1. Lack of information was the largest perceived barrier to counseling at the PCP level.
2. The Just in Time CME structure allows for online education that can be used as needed, and updated in parts as warranted without having to redo other parts that have not changed.

Videos are available at:

www.childrensomaha.org/medicaleducation/

Future Plans

1. We will move our annual vaccine update to this platform as a series of single vaccine topic videos that then can be updated or replaced separately as needed.

Collaborators

Gary Beck, PhD

Julie Luedtke

Sara Fisher, MS, CGC

Sara Olsen, MA

Matthew Rutledge

Marlene Deres

statistics

Neb. NBS program

Genetic Counselor

CME Coordinator

video capture

HPTS

