

Critical Value Reporting: The Need To Develop
Appropriate Communication Channels

Ken Obenson MD FRCPC
Saint John Regional Hospital NB
Dalhousie University

1

Critical values

May be defined as any result OF a coronial
postmortem examination (PME) that:
PROMPTS expeditious testing/monitoring of the
decedents relatives
MUST be rapidly communicated to the next of kin
(NOK)

2

For example

Hypertrophic
cardiomyopathy (HCM)
in a 5 year old girl

Inheritance: Autosomal
dominant and may be
familial

Is this a critical
value?

3

YES!!!

Living relatives may be asymptomatic but carry the same gene

And therefore be at risk of sudden death themselves!!

4

Arrhythmogenic right ventricular dysplasia (ARVD)

In a 17 year old semi professional hockey player

Is it a critical value?

5

YES!!!

Inheritance: Autosomal dominant - 30 to 50% of victims will test positive for one of several mutation

Living relatives may asymptomatic and yet be at risk of sudden death themselves

6

How are the results communicated?

There should be a clearly defined mechanism to notify (NOK) and their family doctor (FD)

FDs role is to guide them as they seek medical advice on options for diagnosis or treatment.

7

In some parts of the world...

Such as NB, Canada forensic pathologists are not permitted under provincial law to make such disclosures to relatives or to the FD.

This can delay communication of critical values

8

Privacy legislation in NB

Patient/ decedent personal information

Right to Information and Protection of Privacy Act (RTIPPA).

9

RTIPPA

Under the act, “personal information about individuals held by public institutions is well protected and handled only in accordance with generally accepted privacy principles”

The NB coroner’s office is part of the Department of Public Safety, and therefore subject to RTIPPA.

10

So what are the processes for notification in this situation?

A 23 year old female with bilateral MAMMARY invasive carcinoma of no special type with metastases kept her disease private found dead in a hotel across statelines

Why would it be a “critical” value?

Approximately 5% of breast cancers are associated with inherited gene mutations. Hereditary cancers tend to develop earlier and new (primary) tumors are more likely to be bilateral

11

What would you do or are permitted to do...?

Do nothing

Write a report

Call the Family doctor (FD)

Call/email the chief coroner

Arrange a sit down with the family

Call 911

12

Limitations of the Act

FORENSIC PATHOLOGIST IS NOT AUTHORIZED TO CONTACT FAMILY DIRECTLY

The FDs do not have an automatic right to know when a patient registered in their practice dies

FD does not have an automatic right to know the cause or manner of death.

ONLY The NOK can authorize the coroner to distribute copies of the postmortem report to the FD.

13

MAXIMIZING the forensic pathologists role

```

graph LR
    A[Forensic pathologist must transmit critical values through an intermediary - the coroner] --> B[PME report must be succinct and emphasize the importance to the family of following up with their FD]
    B --> C[Follow up call to coroner should be part of SOP - document it]
  
```

14

A 23 year old GSW victim with..

```

graph LR
    A[Colonic polyposis (familial adenomatous polyposis) FAP] --> B[Why is it a "critical" value? Genetic. may be autosomal dominant or recessive]
    B --> C[The incidence of malignancy in Familial Adenomatous Polyposis approaches 100%.]
  
```

Diagnosis is important to surviving family members who may carry the gene, regardless of the traumatic cause of death

15

LCHAD deficiency in a 12 month old male

Why is this a critical value?

Where a SIDs death has occurred, the autosomal recessive mode of inheritance indicate that ..

a- Another child in the same family could have the disease

b- A subsequent pregnancy could result in a child with the disease
The parents can receive appropriate genetic counselling

16

“Not-so” critical values

- Ischemic coronary artery disease in a 75 year old male
- Enlarged yellow fatty liver with gallstones in a middle aged alcoholic male
- A surgically absent spleen in a 20 yo female s/p remote mva
- Unusually tall, with long limbs in 28 yo male in the absence of other stigmata of Marfans (“pigeon” chest, aortic dilation or dissection, mitral valve prolapse)

17

Why they ARE not LIKELY TO be deemed critical

- Is there a danger of sudden death from an inherited condition?
- Is there a danger that an infectious disease has been transmitted?
- Is there a potentially fatal environmental condition that would require monitoring/investigation

18

In sum

Identify with "stakeholders" what critical values for your jurisdiction should be. Reach a consensus (ensures buy-in)

Discuss with stake holders what the communication process should be- PREVENTS "we did not know" SCENARIOS....

Develop and update an SOP that includes notification protocols

Test them!!!

19

QUESTIONS



20

References

Association of Directors of Anatomic and Surgical Pathology. Critical diagnoses (critical values) in anatomic pathology. *American journal of clinical pathology*. 2006 Jun 1;125(6):815-7.

Galiatsatos PFoulkes WD. Familial Adenomatous Polyposis. *The American journal of gastroenterology*. 2006 Feb; 101(2):385.

Genzen JR, Tormey CA. Pathology consultation on reporting of critical values. *American journal of clinical pathology*. 2011 Apr 1;135(4):505-13.

Government of New Brunswick. Making a request for information. https://www2.gnb.ca/content/gnb/en/departments/treasury_board/office_of_the_chief_information_officer/content/rti/request.html

McPherson R, Tybjaerg-Hansen A. Genetics of Coronary Artery Disease. *Circ Res*. 2016 Feb 19;118(4):564-78. doi: 10.1161/RES.118.4.564

21
