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# Primary Care to the Rescue, Again! Autopsy and the Death Certificate

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# Primary Care to the Rescue, Again!

## Autopsy and the Death Certificate

Emily Ryan

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In collaboration with Dr. Alison Krywanczyk, the UVMHC Department of Pathology, and the UVMHC Department of Family Medicine

# Problem Identification and Description of Need

This project has two components:

1. Autopsy Education: Understanding attitudes about autopsy in the primary care setting
  - What ways can primary care providers support autopsy services?
  - What questions do family medicine residents have about autopsy?
  - How can we improve residents' fluency in talking with patients about autopsy?
2. Death Certificate Education: Addressing problems providers have with correctly completing death certificates
  - Why are 50% of death certificates incorrectly or incompletely completed at UVMHC?
  - What knowledge do residents lack about death certificates?
  - How effective will an educational module be in improving knowledge of death certificates?

**By addressing declining autopsy rates, encouraging patient conversations about autopsy, and by educating physicians about death certificates, we can more fully study our population and better be their doctors.**

# Public Health Costs: Low autopsy rates

## Decline in autopsy rates

In the United States in 2007, 8.5% of deaths resulted in autopsy. This is a decrease from the autopsy rate of 19.1% of all deaths in 1972.

These numbers are even more stark when we look at Medical Examiner autopsies versus hospital autopsies:

Medicolegal = 43.6% in 1972 → 55.4% in 2007  
Hospital autopsy = 16.9% in 1972 → **4.3% in 2007**

Liao and Singh, 2013

## Why is autopsy important?

- Helps us understand and correct diagnostic error
- Accurately establishes cause/manner of death
- Identifies new and reemerging disease
- Establishes risk factors of disease
- Trains residents in normal cases in preparation for non-normal cases
  - Autopsy is still a requirement for accreditation in pathology training: 50 autopsies are needed for board certification

With low autopsy rates, we can't fully understand the mistakes we're making. We can't track and discover new disease processes and risk factors. We can't train our doctors sufficiently.

**And we miss out on an important conversation with our patients about dying and death.**

Slide 3A

# Public Health Cost: Incorrect death certificates

## **Why are correct death certificates important?**

- They provide population information about causes of death and risk factors for death
- They provide hospital-wide study of timing and care of those at the end of their lives
- They can provide a sense of closure for family members by answering questions, confirming diagnoses, and narrating the events at the end of life

With incorrect death certificates, we can't fully understand the population-wide causes of death that happen in our community. We can't serve our patients and their families fully if we can't provide them with correct, confident information about death.

# Community Perspective on Issue

Residents feel underprepared to have conversations with patients about autopsy

There is no training built into the family medicine residency program about autopsy

Providers feel uninformed when completing death certificates

Concerns about the death certificate itself: Why aren't there specific places on the form for cause of death and mechanism of death

Questions about the timeline of making adjustments to death certificates

Litigation concerns regarding death certificate errors

Completing death certificates on patients that aren't known to the provider

# Intervention

## Autopsy Education

A presentation was made to 15 family medicine department attending physicians, residents, and medical students that addressed the decline in autopsy rates, the importance of consent in autopsy requests, and information about autopsy in Vermont.

A dot phrase (.autopsyqs) was written that answers the following questions:

1. What is an autopsy?
2. Why might I or a loved one need an autopsy?
3. How much does autopsy cost?
4. Can I still have an open casket at my or my loved ones funeral? What happens to the body?
5. How do I find out the results of the autopsy?

## Death Certificate Education

15 family medicine attending physicians, residents, and medical students were a pilot group for the following:

- An 8 question pre-test
- An educational module
- A link to an 8 question post-test

# Results/Response Data

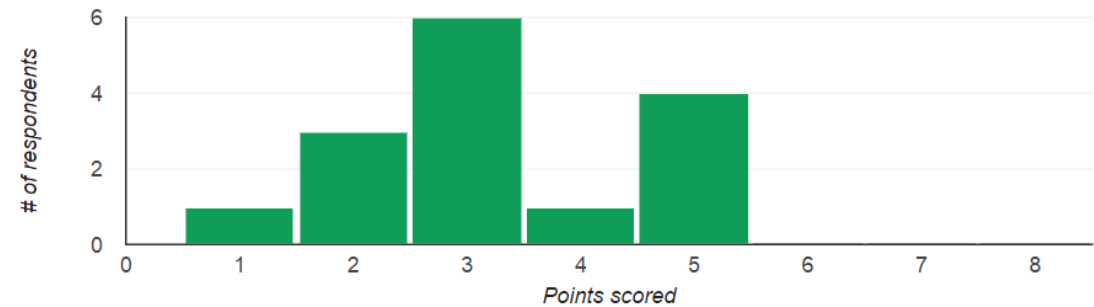
## Autopsy Education

- The dot phrase is available to providers in the UVMHC network
  - It can be used in patient education encounters, or as take-home information at the end of a visit
- The autopsy education presentation was well received

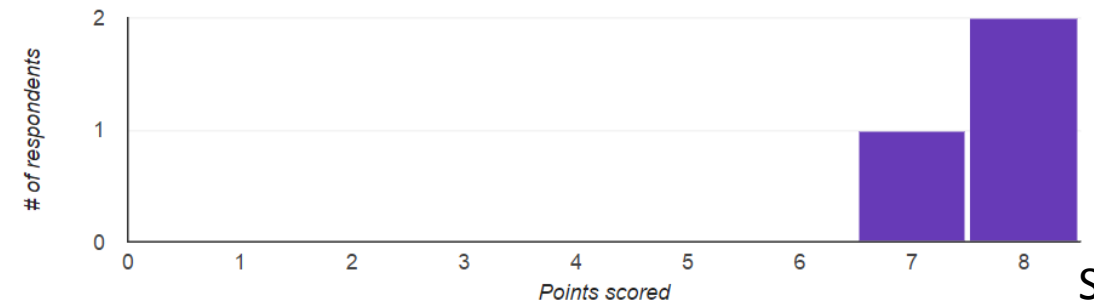
## Death Certificate Education

- Pre-test: Average score of 3.27/8
- Post-test: Average score of 7.67/8

Total points distribution



Total points distribution





# Evaluation of effectiveness and limitations

## Autopsy Education

- The presentation was limited by time and did not include extensive information on the history of autopsy, the mechanisms of autopsy, or UVMHC-specific data on autopsy rates
- The dot phrase might not be a useful intervention for providers

## Death Certificate Education

- The module had not been previously used and did not address certain questions about the EDRS or the specific UVMHC death certificate form
- The post-test was done outside of the presentation, resulting in a poor response rate

# Recommendations for future interventions

## Autopsy Education

- Another educational session with more time to explore personal feelings and goals
- Standardized patient interviews to allow residents to experiment and practice conversations with patients about autopsy
- Track usage of the dot phrase over time

## Death Certificate Education

- Continue to track errors in death certificates
- Apply post-test 6 months after educational module provision to determine the maintenance of knowledge

# Resources

- **Baumgartner A, Anthony D.** The decline of the autopsy in Rhode Island and nationwide: Past trends and future directions. *Rhode Island Medical Journal*. 2016. 36-38.
- **Bieri U, Moch H, Dehler S et al.** Changes in autopsy rates among cancer patients and their impact on cancer statistics from a public health point of view: a longitudinal study from 1980 to 2010 with data from Cancer Registry Zurich. *Virchows Arch*. 2015. 466: 637. doi:10.1007/s00428-015-1734-7
- **Blokker BM, Weustink AC, Hunick MG, Oosterhuis JW.** Autopsy of adult patients deceased in academic hospital: Considerations of doctors and next-of-kin in the consent process. *PLOS one*. 2016. 11(10) doi: 10.1371/journal.pone.0163811.
- **Chariot P, Witt K, Pautot V, Porcher R et al.** Declining autopsy rate in a French hospital: physician's attitudes to the autopsy and use of autopsy material in research publications. *Archive of Pathology and Laboratory Medicine*. 2000. 124(5): 739-745.
- **Hinchliffe SA, Godfrey HW, Hind CR.** Attitudes of junior medical staff to requesting permission for autopsy. *Postgraduate Medical Journal*. 1994. 70(822): 292-294.
- **Liao JM, Singh H.** Reviving the autopsy as a diagnostic error-reduction tool. *Lab Medicine*. 2013. 186-190. DOI: 10.1309/LMI9N2TS8YTQLBDI
- **Souza VL, Rosner F.** Increasing autopsy rates at a public hospital. *Journal of General Internal Medicine*. 1997. 12(5): 315-317.
- **Turnbull A, Martin J, Osborn M.** The death of autopsy? *The Lancet*. 2015. 389(10009): 2141.