The Dynamic Spaces of Humanized, High-Quality Online Asynchronous Courses

January 18, 2024

The University of Vermont
LARNER COLLEGE OF MEDICINE

Presentation Outline

- Introductions and goals
- About our MPH Program
- Pre-Reading Quiz
- Faculty Share Examples from Teaching Asynchronous Online Courses
  - Active Learning in an online asynchronous Epidemiology course, Elzerie de Jager, MBBS, PhD
  - Humanizing an online Environmental Public Health course, Thomas Griffin, PhD
- Photo Discussion
- Q & A

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Presenters

Jan Carney, MD, MPH

Professor of Medicine

Associate Dean for Public Health & Health Policy

Director of Graduate Health Program

Elzerie de Jager, MBBS, PhD

Assistant Professor

Thomas Griffin, PhD

Assistant Professor

Carolyn Siccama, EdD

Instructional Designer

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Presentation Goals

- Compare and contrast synchronous and asynchronous online learning.
- Identify characteristics of a dynamic asynchronous online discussion.
- Discuss strategies for faculty presence and humanizing online courses.
- Recognize examples of active learning teaching strategies in an asynchronous online course.

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About our Public Health Program

- Master of Public Health – Generalist
- Master of Public Health – Concentration in Global Health Leadership
- Graduate Certificates in Public Health Disciplines
- Division of Public Health in Department of Medicine
- MPH launch 2014
- CEPH accreditation 2021

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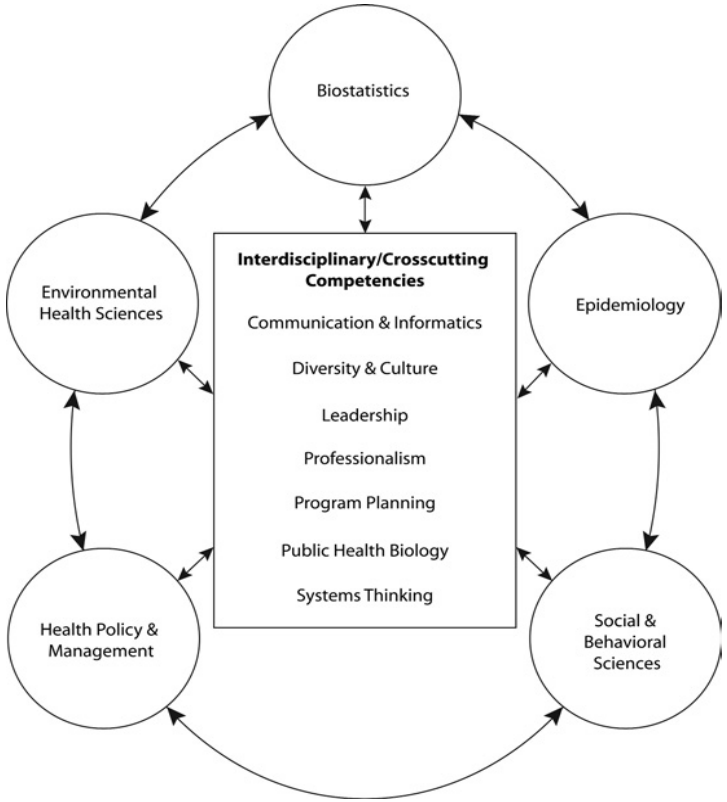
UVM Master of Public Health (MPH)



- **100% Online**
- Generalist program: 42 credits
- National Core Courses: 18 credits
- Advanced Core Courses: 9 credits
- 3 Elective Courses: 9 credits
- MPH Culminating Project Experience: 5 credits
- Applied Practice Experience: 1 credit

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MPH Mission, Vision, Values

- **Mission**
  The program's mission is to prepare skilled and versatile graduates dedicated to improving public health through practice, research, education, and leadership
- **Vision**

  Advancing Health through Education: Innovative. Accessible. Worldwide.

- **Values**

1. Foundation of diversity, equity and inclusion
2. Innovation in education
3. Grounding in evidence-based public health
4. Interdisciplinary learning and practice
5. A culture of lifelong learning

Pre-Reading Articles

- Take 2-3 minutes to refresh knowledge of pre-reading
  - What's the Difference Between Asynchronous and Synchronous Learning?
  - What is Synchronous and Asynchronous Learning?
- Links to reading are in chat

Pre-reading - Readiness Quiz Question 1

1. In which learning type is it more feasible for students from different time zones to actively participate without facing significant challenges?
   - A) Synchronous learning
   - B) Asynchronous learning

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Pre-reading - Readiness Quiz Question 2

1. Why is it crucial for instructors to prioritize student engagement and humanize their teaching approach in asynchronous online courses?
   - A) It fosters a sense of community and connection among students.
   - B) It ensures strict adherence to fixed schedules for all students.
   - C) Asynchronous courses are exempt from the need for engagement.
   - D) Humanizing teaching is only important in synchronous learning environments.

Pre-reading- Readiness Quiz Question 3

1. **Scenario:** In an asynchronous online learning environment, a course instructor is looking for ways to enhance student engagement and promote active learning. The class consists of students from diverse backgrounds and time zones, making it challenging to organize real-time activities (such as zoom meetings). The instructor wants to leverage active learning techniques to ensure that students actively participate and apply concepts on their own time.

- Question: The instructor decides to implement active learning techniques in the asynchronous online course. Which of the following strategies would be most effective in encouraging student engagement and interaction, considering the nature of asynchronous learning?

    A) Weekly live webinars where students can discuss course materials in real-time.

    B) Creating discussion forums for students to post responses to weekly prompts.

    C) Assigning group projects that require synchronous collaboration.

    D) Conducting virtual quizzes during fixed time slots to assess student understanding.

PH Faculty: Elzerie de Jager, MBBS, PhD

- Sharing examples of active learning modalities in Epidemiology 2

Elzerie de Jager, MBBS, PhD

Assistant Professor

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Epidemiology 2 Module Outline

- Module Release Quiz
- Learning Materials
- Applied weekly assessment
  - Interpreting Research Articles
  - SPSS Labs
- YellowDig discussion forum
- Helping students to answer their own questions

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Module release questions – example

Module 6 Release Questions - Preview

Page 1:

1 --
2 --
3 --
4 --
5 --

Quiz Information

Question 4 (Mandatory) (1 point)

Your local department of health wants to support a campaign to encourage youth to wear sunscreen and they consult you as an expert epidemiologist. You believe that the state needs more evidence and so you decide to conduct a case-control study to assess whether or not using sunscreen in the past is associated with current likelihood of skin cancer.

You recruit skin cancer patients and very well matched controls without skin cancer and you ask them to report their past sunscreen use on a long and detailed self-report questionnaire.

What type of bias is most likely to occur?

- ◯ Recall bias
- ◯ Selection bias
- ◯ Temporal bias
- ◯ Surveillance bias

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Applied Weekly assessment – Research Articles

Research

Original Investigation

Parental Cultural Attitudes and Beliefs Regarding Young Children and Television

Wanjiku F. M. Njoroge, MD; Laura M. Elenbaas, BA; Michelle M. Garrison, PhD; Mon Myaing, PhD; Dimitri A. Christakis, MD, MPH

a. Who was included in the study population?
b. What was the study design?

Interpret the Beta coefficient from Model 3 for “Low education/low income” in a full sentence including variable names, the numeric value, and statistical significance

Table 2. Multiple Linear Regressions on TV/DVD

Variable	Time Watching TV/DVD (95% CI), min/wk			
	Model 1	Model 2	Model 3	Model 4
Race/ethnicity				
Non-Hispanic white	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]
African American	207.2 (107.1 to 307.2)[a]	28.3 (−84.0 to 140.6)	−87.5 (−208.3 to 33.3)	−55.3 (−170.9 to 60.4)
Asian American/PI/Hawaiian	68.8 (−24.4 to 161.9)	8.8 (−83.2 to 100.7)	−38.1 (−133.3 to 57.1)	−59.8 (−150.0 to 30.4)
Multiracial/other	74.8 (5.9 to 143.8)[b]	34.1 (−34.4 to 102.6)	39.0 (−27.1 to 105.1)	13.1 (−49.4 to 75.6)
Education-income matrix				
Low education/not low income		48.2 (−45.0 to 141.5)	45.6 (−45.1 to 136.4)	61.9 (−23.2 to 146.9)
Medium education/not low income		1 [Reference]	1 [Reference]	1 [Reference]
High education/not low income		−81.0 (−139.6 to −22.4)[a]	−67.8 (−123.1 to −12.4)[b]	−47.6 (−100.6 to 5.4)
Low education/low income		272.7 (179.0 to 366.4)[a]	135.3 (31.1 to 239.5)[a]	91.3 (7.5 to 190.1)
Medium-high education/low income		37.6 (−51.6 to 126.7)	−9.4 (−107.9 to 89.0)	−26.4 (−120.8 to 68.0)
Girl			−36.5 (−85.1 to 12.1)	−35.1 (−81.3 to 11.0)
Child with TV in bedroom			200.5 (98.9 to 302.2)[a]	149.3 (51.3 to 247.4)[a]
Only child			105.3 (47.7 to 162.8)[a]	72.0 (17.2 to 126.8)[b]
Average time in primary child care, h/wk			−1.9 (−3.7 to 0.0)[b]	−1.4 (−3.2 to 0.4)
“My spouse/partner and/or my child’s other caregivers support me in reducing TV for my child” and expects positive effects from educational TV				−70.6 (−129.2 to −12.0)[b]
Disagree/neutral to both statements				1 [Reference]
Agree to at least 1 statement				71.5 (−1.7 to 144.7)
Agree to both statements				100.5 (24.0 to 176.9)[a]
Confidence in ability to limit exposure to TV[c]				
Disagree/neutral to both statements				1 [Reference]
Agree to at least 1 statement				−82.3 (−162.3 to −2.3)[b]
Agree to both statements				−224.2 (−295.9 to −152.6)[a]
Observations, No.	596	580	511	507
No. of sites	3	3	3	3

Abbreviations: DVD, digital video disc; PI, Pacific Islander; TV, television.

[a] $P < .01$.

[b] $P < .05$.

[c] (1) “I feel confident that I can keep my child busy with activities that do not include exposure to TV” and (2) “I feel confident that I can make my child watch less than 1 hour of TV a day.”

Interpret the Beta coefficient from Model 3 for "Low education/low income" in a full sentence including variable names, the numeric value, and statistical significance

For parents with low education/low income, their child's average number of TV/DVD minutes per week is 135 higher than parents with Medium education/not low income, controlling for the confounding effects of race/ethnicity, child's sex, TV in bedroom, only child status, and average time in primary child care, and this association is statistically significant at p<.01 (also okay to quote the 95% CI and comment on how it does not include 0.0).

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	3	3	3	

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Applied Weekly assessment – SPSS

Given a dataset and a data dictionary

1. Add variable labels
2. Run an analysis
3. Interpret results

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	6.105[a]	1	.013		
Continuity Correction[b]	5.998	1	.014		
Likelihood Ratio	6.091	1	.014		
Fisher's Exact Test				.014	.007
Linear-by-Linear Association	6.104	1	.013		
N of Valid Cases	11627				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 1253.90.

b. Computed only for a 2x2 table

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YellowDig Discussion forum - Q&A

Hi guys! I'm hoping to start my exam 2 prep in the next few days (if not today) and I wanted to see if anyone else has found the concept of multiplicative vs additive interaction to be the trickiest one so far this course. I feel like I've had a solid grasp on most concepts in the course, but I still don't feel confident about this one. If anyone feels differently, would you be willing to share resources you found to be the most helpful in explaining this concept? Thanks all!

I have also found this topic to be very difficult as well. For me, it has helped to think of it in pharmacy terms. Additive interaction would be that you get the benefit of Drug X + Drug Y. However, multiplicative would be that when taking Drug X and Drug Y the combined effects work together to cause an effect on the user that is greater than the individuals benefit of the drugs individually. I'm not sure if this helps, but framing it in this way was what made sense to me.

Hi - thank you for your response to this! I have also been having a hard time with recognizing the difference between additive and multiplicative interaction when in practice, so I think this explanation will be helpful to me!

1

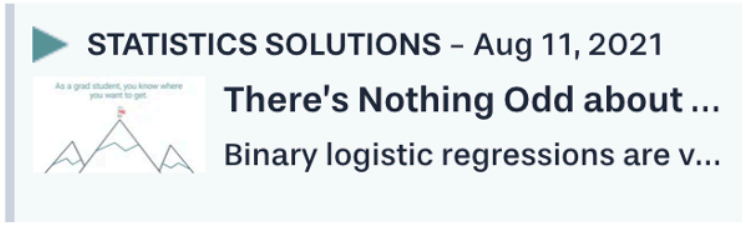
Reply

YellowDig Discussion forum - Sharing resources

Hi Everyone!

In the past two labs I've had some trouble with mixing up or incorrectly identifying interpretations between binary and continuous variables. I found a resource that broke it down more clearly for me and wanted to share it!

https://www.statisticssolutions.com/theres-nothing... 2



thank you for sharing this resource with everyone! It can be so challenging to identify interpretations between binary and continuous variables, I am definitely going to use this in my review! Thanks again this is so helpful.

Reply

Thank you so much for sharing this resource with the entire class. This is definitely something i've been struggling with as well and I look forward to going through this resource. Please share more resources you come across!

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Helping students answer their own questions

- Leading students to the right answer rather than giving them an answer
  → Provide hints or clues
  → Use real life examples
  → Provide resources to answer questions
  → Positive reinforcement to keep trying

Teaching evaluation feedback

I really appreciate the extra effort professor de Jager made to clarify questions. In one case I expected just a basic summary–style reply from her about a question I had, but instead I was provided several resources that went further in depth than the original reading to address a subtlety in the math that I had intuited but couldn't explain. It was the difference between "this is the rule" and "this is the deeper reason behind the rule" answer. I appreciated that her response to my question was not "you are not understanding this" but rather, "here is the reason why you are having those thoughts and this math will explain it while also showing the reason that the rule we go by applies."

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PH Faculty: Thomas Griffin, PhD

- Sharing examples of active learning modalities in Environmental Public Health

Thomas Griffin, PhD

Assistant Professor

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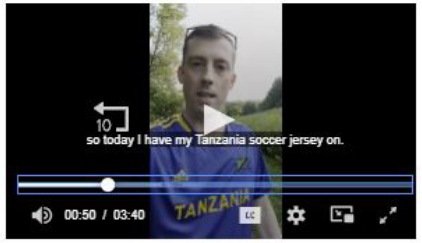
Humanizing the course with Personalized Videos

Welcome to Module 1

Module 1: Ecology, Ecosystems, and OneHealth

Module Overview

Module 1 Introduction
Welcome to Environmental Public Health 2! This semester will be a natural extension of EPH 1, but you'll notice that we will take a more in-depth look at complex topics in environmental health. To begin with, this week we'll learn more about Ecology, Ecosystems, and how it all fits together in a concept known as OneHealth.



Learning Objectives

By the end of this module, you will be able to:

- Describe the relationship between ecology, ecosystems and health.
- Define and give examples of ecosystems services.
- Describe how health conditions are impacted by ecosystem services.
- Explain how ecological economics is relevant to health and environmental policy.
- Explore the concept of OneHealth

To achieve this module's objectives, complete the following:

- **Read/Watch:** The learning materials on next page

Complete the following tasks as directed to apply what you've learned. Please note the due dates for each task and check out the Activities page for more details.

By Sunday 11:59 PM

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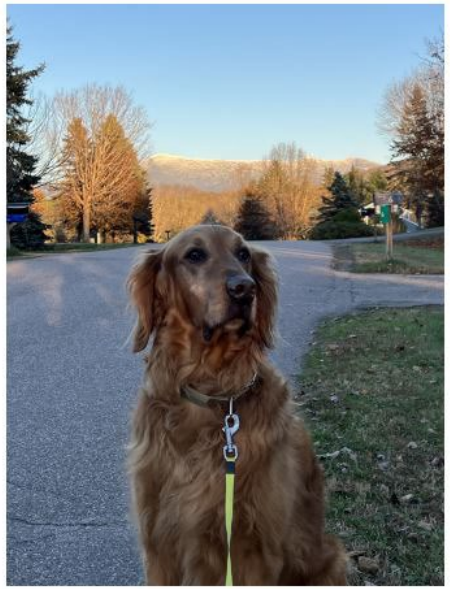
Humanizing with words of encouragement

MODULE 8: BUILT ENVIRONMENT PHOTO

Thomas Griffin Facilitator
10/31/2023 EDT

Hi everyone (@community),

I just wanted to pop in and say what an excellent job you all are doing. I love seeing all of the interactions on your posts among one another. I'm a bit late to the party due to some recent travels, but took this photo of Guinness today in my built environment. For Halloween, he dressed up as a 'behaved dog' for a few minutes while modelling in front of some early snow on Mt. Mansfield. Cheers to November and continued excellence as you all head into the closing weeks of the semester!



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Making Connections with Students

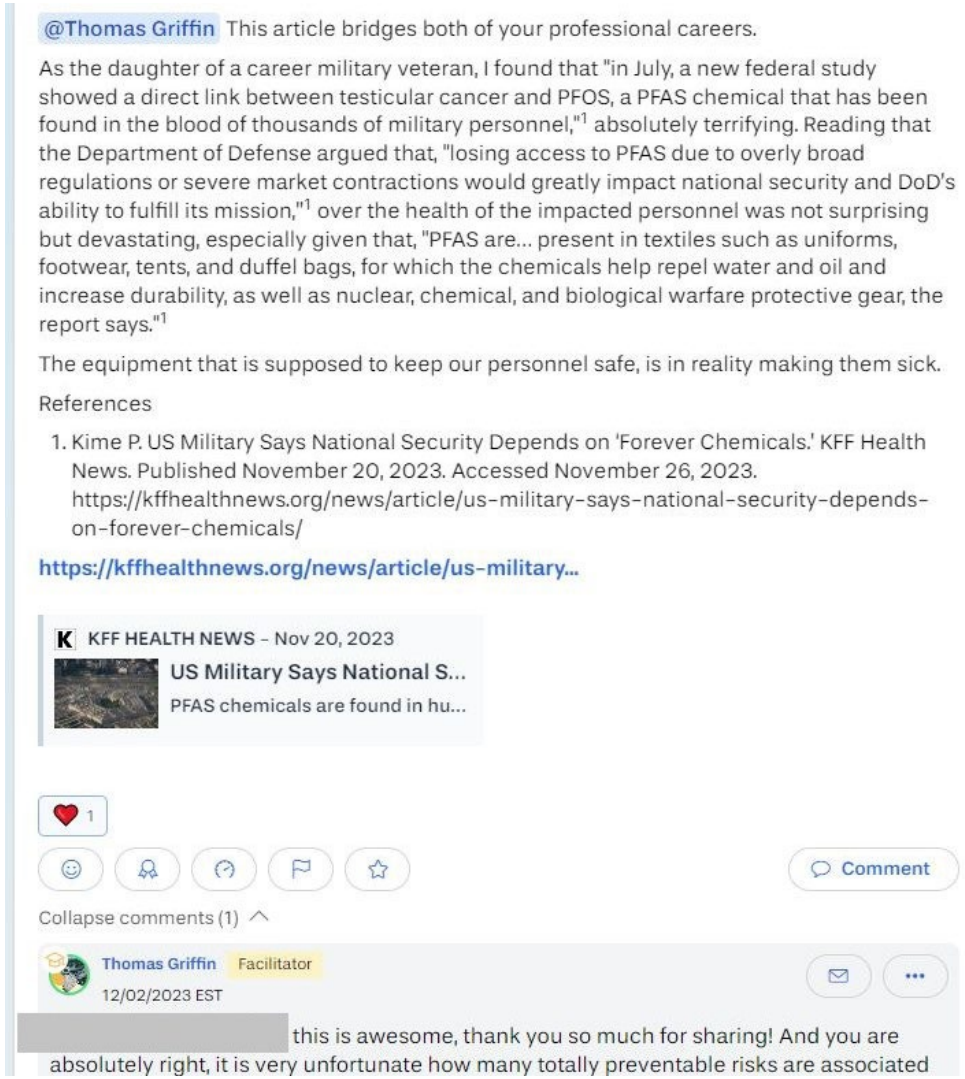

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Photo Discussion

- Concept of Photo Discussion and PhotoVoice
- Prepare for discussion
- For each photo, consider the following:
  - What Public Health concerns are raised by this picture?

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What Public Health concerns are raised by this picture?

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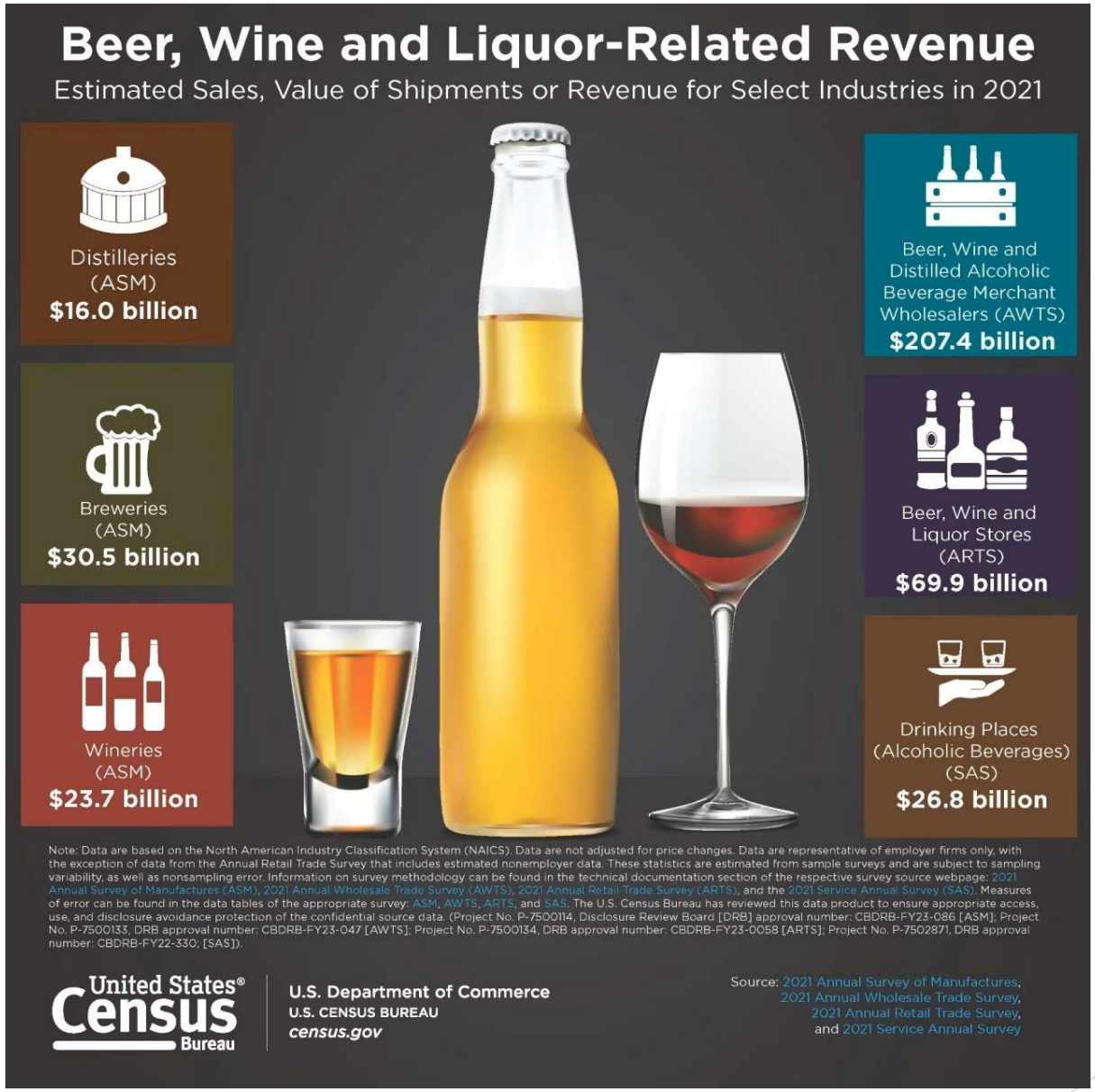
What Public Health concerns are raised by this picture?



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What Public Health concerns are raised by this picture?

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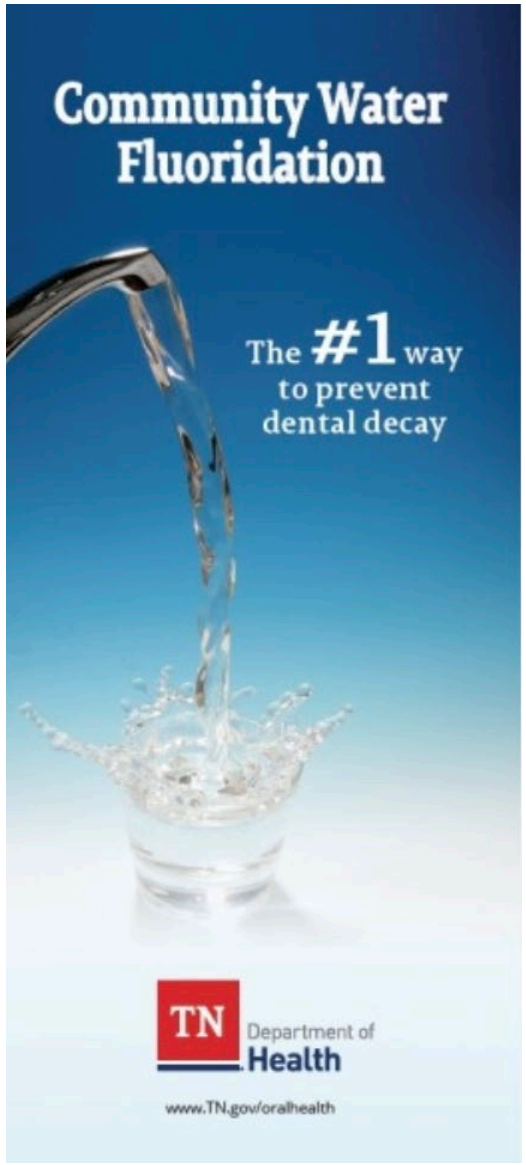
What Public Health concerns are raised by this picture?



What Public Health concerns are raised by this picture?

Wrap up: Q & A

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Resources

Pre-Reading Articles

- What's the Difference Between Asynchronous and Synchronous Learning?
- What is Synchronous and Asynchronous Learning?

Active Learning

- Active learning at LCOM

YellowDig

- YellowDig Discussion Software
- YellowDig For Instructors – Information from UVM Knowledge Base

Photo Discussion/PhotoVoice

- PhotoVoice
- Boston University PhotoVoice Initiatives