HPAC COURSE · MODULE 1

Research

From a question you care about to a poster people stop for.

Health Professions Affinity Community · Student research track

WHERE WE ARE GOING

By the end of this module you can...



Ask a question worth answering

Turn something you notice in your school or neighborhood into a question that data can actually speak to.



Find and judge evidence

Know where health evidence lives, and how to tell a solid source from a confident one.



Give credit cleanly

Paraphrase, cite, and stay on the right side of the line, including when you use AI.



Know when ethics review applies

Recognize human subjects research before you are standing in the middle of it.



Build and defend a poster

Design for a reader ten feet away, then talk about it for sixty seconds without notes.

HOW THE PIECES FIT

The arc of a student project

1

Notice

Something in your community bothers you or interests you.

2

Ask

Sharpen it into one answerable question.

3

Gather

Find what is already known, and what your community knows.

4

Check

Ethics, consent, credit.

5

Share

Poster, pitch, and what happens next.

Most projects fail at step two, not step five. A vague question produces a vague poster no matter how good the design is.

FACILITATOR MOVES

Introducing students to research

Why

Research is how a community argues with a statistic that has been written about it. Start there, not with method.

Who

Show real people doing it. Nurses, epidemiologists, community health workers, students one year ahead of them.

Where

Campus tours, lab visits, a conference poster hall, a health department. Proximity does more than a lecture.

Participation

Their question, their data, their name on the poster. Scaffold the process, not the topic.

Past HPAC teams have taken on teen depression, food access, elder isolation, vaping, and maternal care in counties that lost their delivery unit. None of those started as an assignment.

STEP 2, THE HARD ONE

A question you cannot finish with one search

Stops at a fact

What is diabetes?

Is vaping bad for you?

How many people in Ohio are uninsured?

Answered by a source. Useful to know, not enough to build on.

Opens a project

Why do students at our school skip breakfast when it is free?

What would make our teammates actually use the counselor's office?

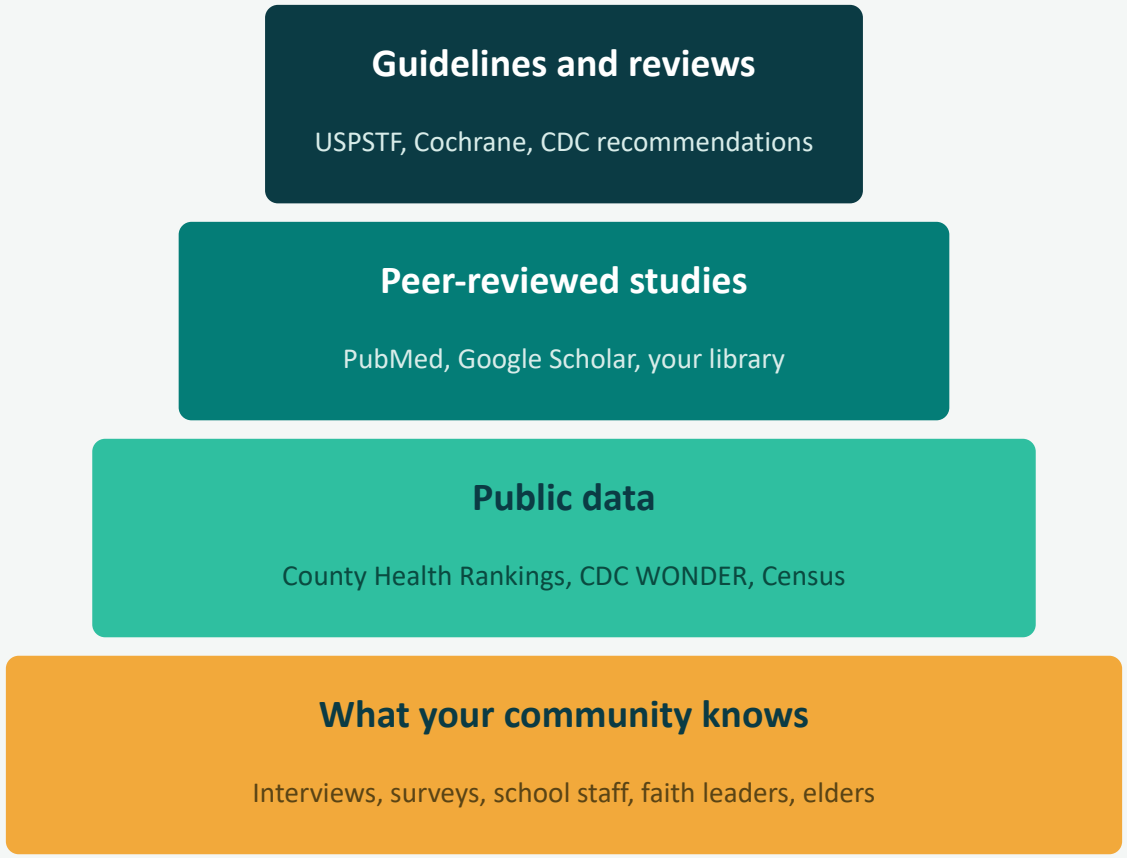
Which blocks in our neighborhood have no place to buy fresh food, and who decides that?

Needs evidence plus people. That is where you come in.

Test: if a search bar can close the question, it is background, not your project.

FINDING IT

Where the evidence lives



Read the pyramid twice

- Top down, it tells you how settled a claim is. A guideline has already weighed hundreds of studies.
- Bottom up, it tells you what any of it means here. A national statistic cannot tell you why your classmates skip breakfast.
- The base is not the bottom. It is the layer that makes the rest usable in your community.

Start free: PubMed, County Health Rankings, and your county health department's dashboard will carry most student projects.

EVALUATING WHAT YOU FIND

Five questions before you trust a source

Who

Who wrote it, and what do they gain if you believe it?

What

Is this evidence, opinion, or an ad wearing a lab coat?

When

Health guidance ages. Anything older than five years needs a second look.

Where

Where was it published, and would that publisher lose anything by being wrong?

Why

Why does this page exist? To inform, to sell, or to recruit you?



Newer red flags

- Confident text that cites nothing, or cites sources that do not exist
- One dramatic finding that no other study supports
- Journals that email you asking for a fee to publish your work
- Screenshots of studies. Go find the study.

Read laterally: leave the page and see what other sources say about the source.

USING OTHER PEOPLE'S WORK

Citation: giving credit on purpose

Why it matters

- It shows the reader your claim rests on something.
- It lets them go check you, which is the whole deal in science.
- It credits the people who did the work first.
- Using someone's words or sentence shape without saying so is plagiarism, even when the facts are right.

Paraphrase in four moves

1. **Read until you could explain it to a friend**
   If you cannot say it out loud, you are not ready to write it.
2. **Close the source**
   Put it away. Face down. Then write your version from memory.
3. **Compare**
   Check yours against the original for meaning, and for phrases that crept in.
4. **Mark and log**
   Quote marks on anything borrowed exactly. Log the source now.

Purdue OWL
owl.purdue.edu

ZoteroBib
zbib.org, no account needed

Zotero
for a project with 20+ sources

Google Scholar
the quote icon gives you the citation

NEW RULES, SAME ETHIC

Using AI without lying about it

Reasonable

- Explain a term you got stuck on
- Suggest search words for PubMed
- Tighten a sentence you already wrote
- Quiz you on your own material

Only with checking

- Summarizing an article you have not read
- Any statistic it hands you
- Any citation it produces, always verify it exists
- Draft language you then rewrite in your voice

Not okay

- Text pasted in as your own writing
- Made-up data or invented quotes
- A reference list you never opened
- Anything your teacher or IRB told you not to use

If you used it, say so.

A line in your methods or acknowledgments is enough: which tool, which version, what you used it for. Check your school's policy first, since some do not permit it at all.

ETHICS REVIEW

The IRB, in plain language

An Institutional Review Board is a group that reviews research involving people before it starts, and can approve it, require changes, or stop it.

Protects participants

Especially people who cannot easily say no: minors, patients, prisoners, anyone dependent on the person asking.

Requires informed consent

People must understand what you are asking, what happens to their answers, and that they can stop.

Weighs risk against value

Including risks students forget: privacy, embarrassment, and what happens when a small community can identify itself.

The point is not paperwork. It is that people trusted you with something, and the review is how that trust gets kept.

ASK BEFORE YOU COLLECT ANYTHING

Am I doing human subjects research?

1 Is it systematic?

A plan, a method, repeated the same way across people.

+

2 Is it about people?

You are collecting data from or about living individuals, including surveys and interviews.

+

3 Is it meant to generalize?

You intend to say something beyond this one group, in a paper, a poster, or a presentation.

All three yes

Stop and talk to the IRB before you collect data. Approval after the fact is not a thing, and data gathered without it usually cannot be used or published.

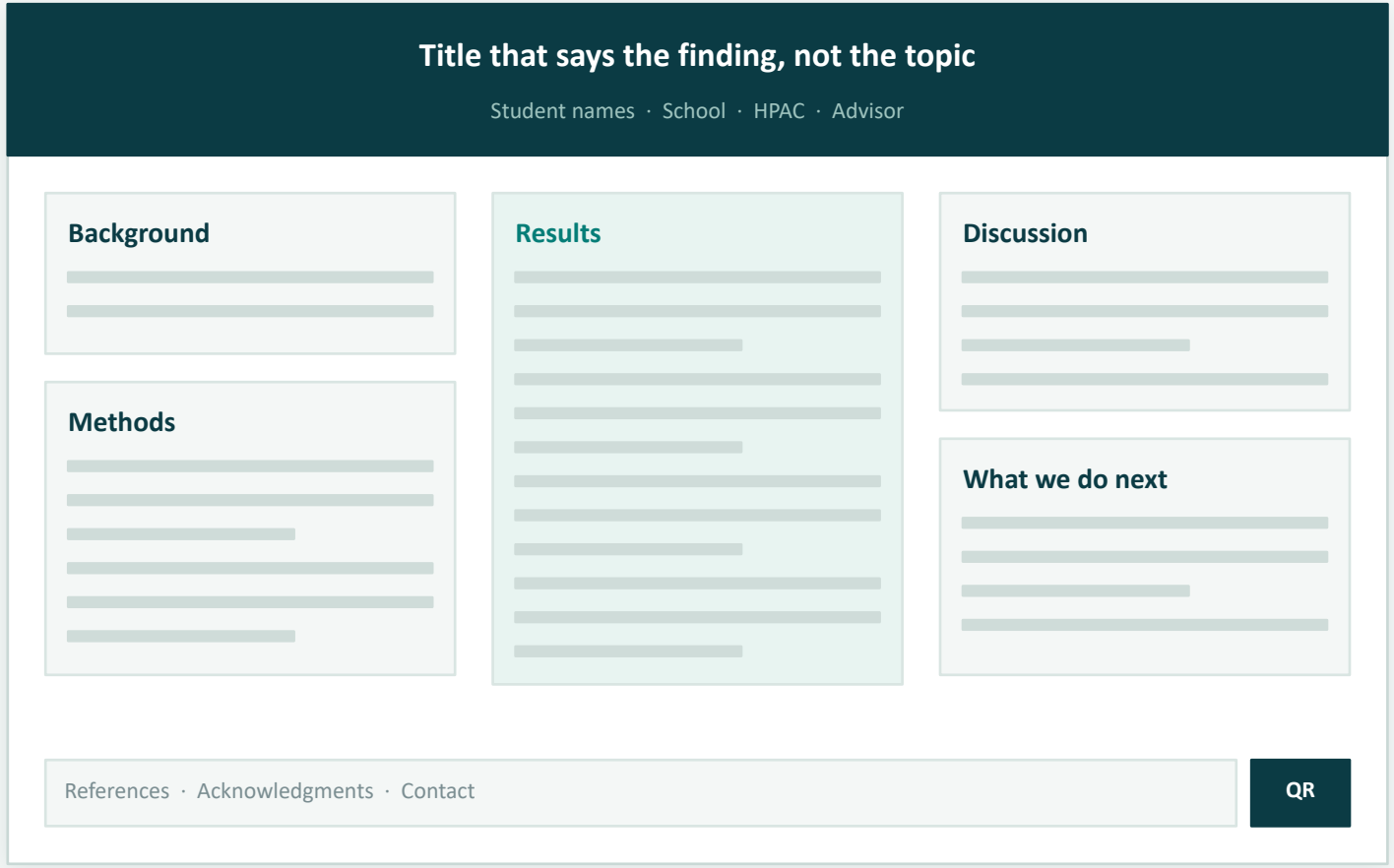
Probably not research

Classroom exercises, quality improvement, and program evaluation done to improve your own program usually fall outside. Usually is not always. Ask anyway, in writing, and keep the answer.

Minors need parent or guardian permission plus the young person's own assent. Both, not either.

BUILDING IT

Anatomy of a poster



1 **Title**

Give away the finding. A reader decides in three seconds whether to walk over.

2 **Results in the middle**

The widest column, at eye level. It is what people came for.

3 **One figure that carries the story**

If you only have room for one graphic, make it the one your conclusion depends on.

4 **Credit and contact**

Names, school, advisor, funder, and a QR code to your full write-up.

MAKING IT READABLE

Design for a reader who is standing

3

seconds

to earn a stop from someone walking past

10

feet

the distance your title and headline must survive

800

words

a practical ceiling for the whole poster

1

message

if they remember one sentence, which one?

Sizes that work

Title 85pt and up · Section headers 36 to 48pt · Body 24 to 32pt · Captions no smaller than 18pt

Print one section at full size and tape it to a wall. Back up ten feet. That is your real test.

Contrast and color

Dark text on light background. Not light on light, not text over a photo.

Two colors plus one accent. Never let color be the only thing distinguishing two lines on a chart, since roughly one in twelve men cannot tell red from green.

ONE DESIGN DECISION WORTH ARGUING ABOUT

Lead with what you found

Topic-first

An Examination of Breakfast Participation Rates Among Secondary Students in an Urban District, 2024-2025

The reader has to assemble the point themselves. Most will not.

Finding-first

Free breakfast is served. Two thirds of students still skip it, and the reason is the schedule.

one figure

The point lands from ten feet. The details are there for the people who ask.

Check the conference rules first. Some judging rubrics still expect the traditional headings, in which case keep the sections and put the finding in the title.

CRITIQUING POSTERS

The good, the bad, and the ugly

The good

- Clear, concise writing
- Color and images add meaning instead of decoration
- Enough context for a stranger
- Summary, references, and acknowledgments present
- One idea per section

The bad

- No visible structure, so no entry point
- Text and graphics too small to read standing up
- Key information missing: sample, method, limits
- Figures with no labels or units

The ugly

- Text overload. It reads like a book someone hung on a wall
- Or a ghost town: three sentences floating in white space
- Images that do not connect to anything
- Five fonts, seven colors, no hierarchy

Critique is a skill you practice on other people's work so you can use it on your own.

PRACTICE CRITIQUE

Score it before a judge does

What you are judging	Weak (1)	Solid (3)	Strong (5)
Title	Names a topic	Names a question	Names the finding
Readability at 10 feet	Have to lean in	Title and headers carry	Whole story carries
One clear message	Several competing	One, buried	One, unmissable
Figures	Decorative or unlabeled	Labeled and relevant	Carries the argument alone
Method and limits	Absent	Stated	Stated and honest about what it cannot show
Credit	No references	References listed	References, funders, community partners, contact

Give each poster a number in every row, then say one sentence about the lowest score. That sentence is the feedback.

YOUR SIXTY SECONDS

Someone stops at your poster. Go.

15 sec

Who you are and what you wanted to know

20 sec

What you did, in one breath

15 sec

What you found, the actual number

10 sec

What should change because of it

Bring to the next session

- One question your team cares about, written as a sentence
- Two sources you found, with citations already logged
- One sentence on whether you will be collecting data from people, and who you asked about it

Where to look

- pubmed.ncbi.nlm.nih.gov
- countyhealthrankings.org
- owl.purdue.edu
- zbib.org