



Research **vs.** Standard of Care

Considerations for the Design &
Implementation of your Study

Claudette Cooper, MHA, RN, CHRC

Trauma Research Nurse

Harborview Injury Prevention & Research Center

ITHS: Clinical Research Education Series (CRES)

June 2012



Issues to be Considered in Research vs. Standard of Care

The Nuremberg Code (1947)

Declaration of Helsinki (1964)

The Belmont Report (1979)

Clinical Equipoise

... we will look at the critical aspects
and how to operationalize them.

Objectives

- What is the difference between research and standard of care?
- How do you define this difference in the study protocol?
- How can you balance the roles and responsibilities of research vs. standard of care?



Research vs. Standard of Care

Jazz



Classical



What is the difference
between research and
standard of care?



STANDARD

Anything serving as a type or pattern to which other like things must conform (Stedman's Medical Dictionary)

STANDARD OF CARE

The level at which the average, prudent provider in a given situation would managed the patient's care under the same or similar circumstances. (Webster's New World Medical Dictionary)

National Cancer Institute

at the National Institutes of Health

standard of care (STAN-durd ... kayr)

Treatment that experts agree is appropriate, accepted, and widely used.

Also called best practice, standard medical care, and standard therapy.

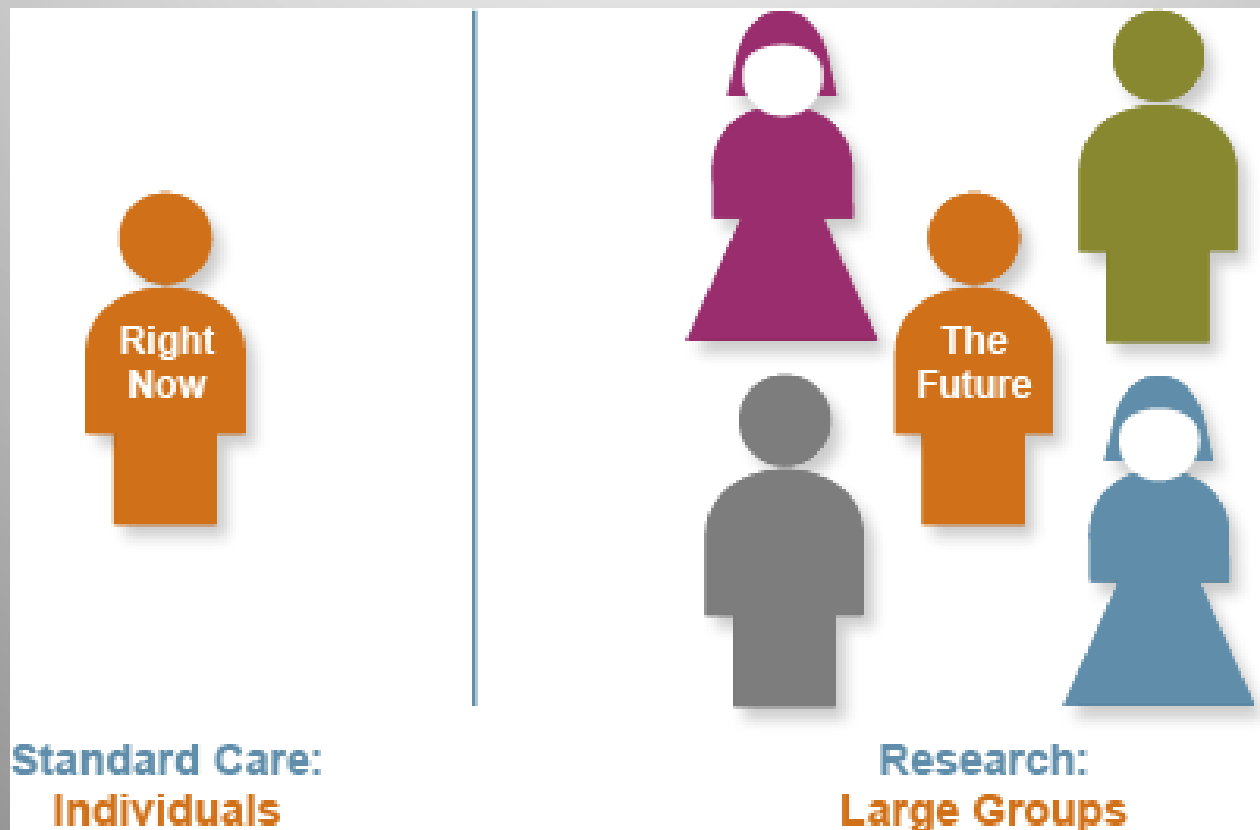
National Cancer Institute

at the National Institutes of Health

research study (reh-SERCH STUH-dee)

A scientific study of nature that sometimes includes processes involved in health and disease. For example, clinical trials are research studies that involve people. These studies may be related to new ways to screen, prevent, diagnose, and treat disease. They may also study certain outcomes and certain groups of people by looking at data collected in the past or future.

Research is done to help find out if a treatment or procedure is good for a large group of people with a certain disease or condition. Research helps to answer questions for the *future* health of those populations. **Standard medical care**, however, focuses on *individual* needs in the *present*.



What is the difference between research and standard of care?

- Line is sometimes unclear, but it is an important distinction.
- Important not to confuse research with standard of care.
- Departure from standard of care is not necessarily research.

Line is sometimes unclear, but it
is an important distinction.





Research

Standard
of care

Departure from
standard of care
is not necessarily
research.



What is the difference between research and standard of care?

- **Practice** refers to interventions designed solely to benefit an individual patient and have a reasonable expectation of success.
- **Research** is an activity designed to test a hypothesis and contribute to generalizable knowledge

What makes Research different from “Standard of Care”

- Involves human subjects
- Tests an “intervention” – be it a product, procedure or health care system....in order to improve standard of care!
- Measures effects over a period of time
- Most have a comparison CONTROL group
- Must have method to measure intervention
 - *– this is captured in the protocol and this must be stuck to meticulously if the question is to be answered!!*
- Focuses on unknowns: effect of intervention
- Must be done before a treatment is part of standard of care
- Standard of Care is all about clinical judgement decision/flexibility – research need to stick with the protocol, no deviation – within your clinical judgement

Case Example

The New England Journal of Medicine

© Copyright, 2000, by the Massachusetts Medical Society

VOLUME 342

MAY 4, 2000

NUMBER 18



VENTILATION WITH LOWER TIDAL VOLUMES AS COMPARED WITH
TRADITIONAL TIDAL VOLUMES FOR ACUTE LUNG INJURY
AND THE ACUTE RESPIRATORY DISTRESS SYNDROME

THE ACUTE RESPIRATORY DISTRESS SYNDROME NETWORK*



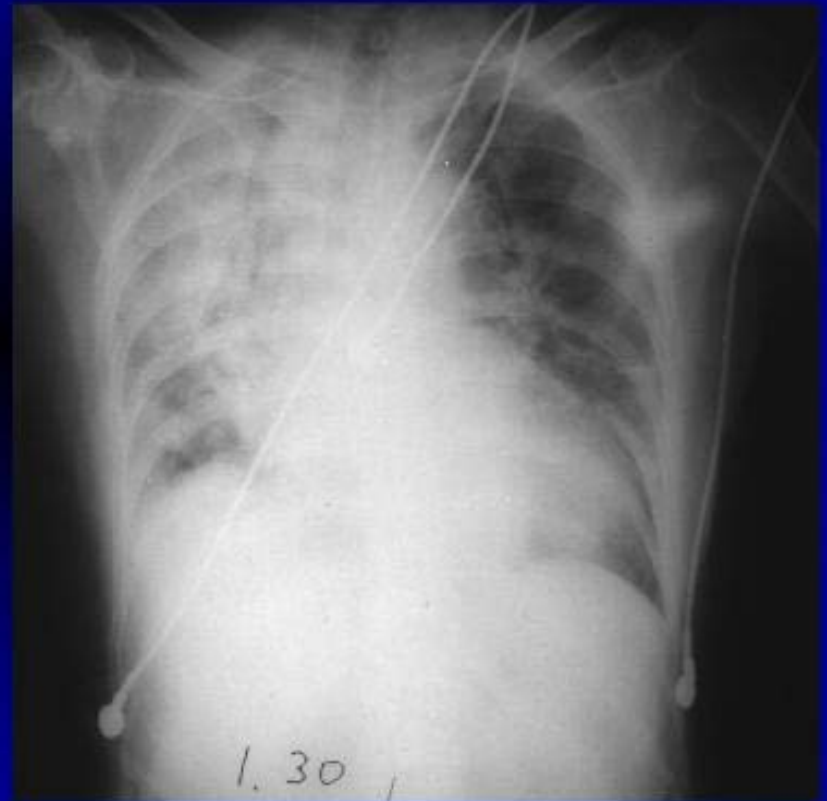
History of the ARDS Network

In order to hasten the development of effective therapy for Acute Respiratory Distress Syndrome (ARDS), the National Heart, Lung, and Blood Institute, National Institutes of Health, initiated a clinical network to carry out multi center clinical trials of ARDS treatments. The ARDS Network was established as a contract program in 1994 following a national competition.

Chest X-ray of ARDS patient



Normal



ARDS

ARDS network study

Acute Onset of:

1. $\text{PaO}_2/\text{FiO}_2 \leq 300$
2. Bilateral infiltrates consistent with pulmonary edema on frontal chest radiograph
3. Requirement for positive pressure ventilation via endotracheal tube.
4. No evidence of left atrial hypertension.

Patients age > 18 with no exclusion criteria were randomized to tidal volumes of 12 mL/kg or 6 mL/kg.

Study Results

- Study stopped after 2nd interim analysis (861 subjects).
- Reduction of mortality by 22%.

First treatment for ARDS other than supportive care.

After Publication

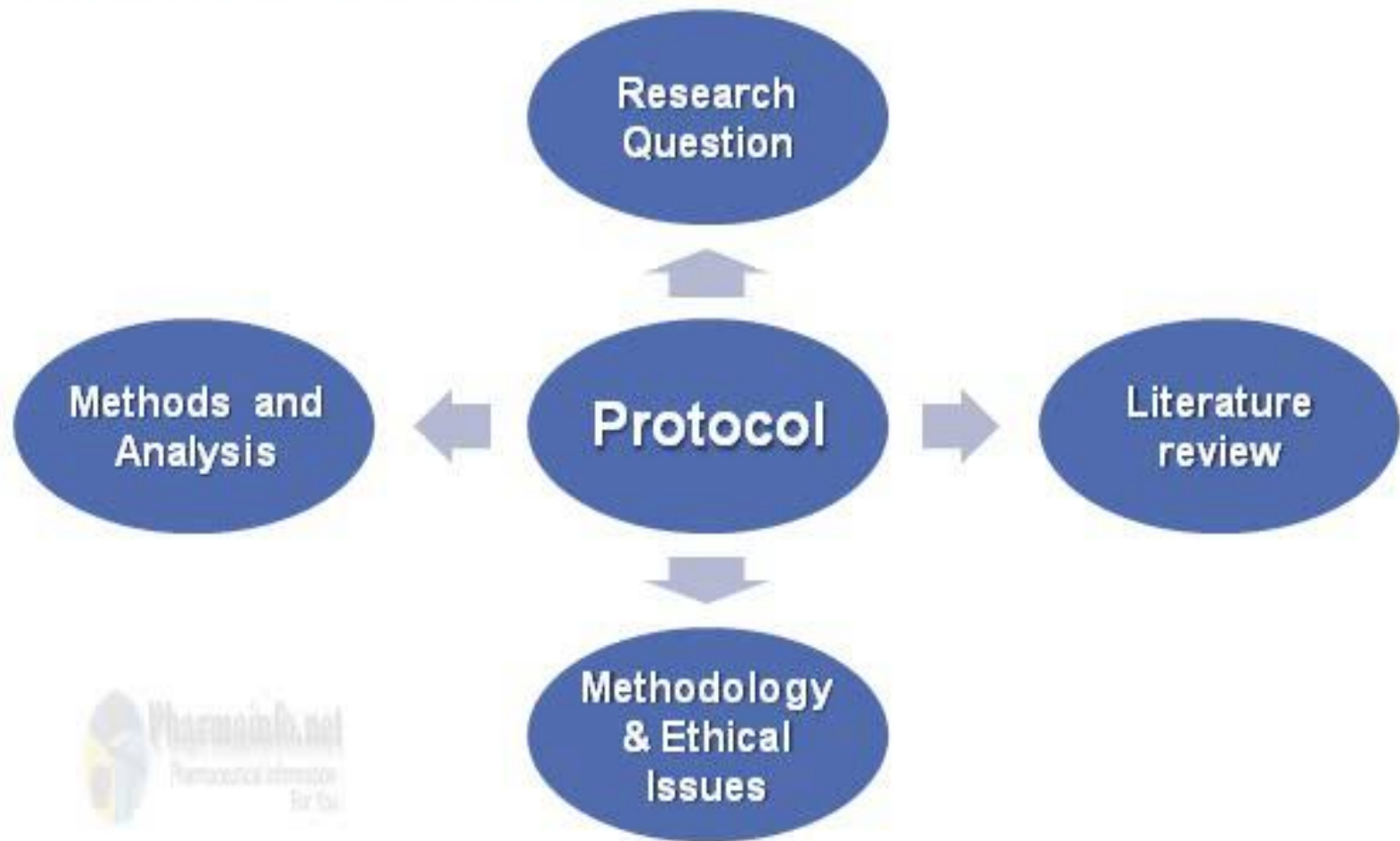
The “Control” group that was used in the study was challenged.

But, the Network demonstrate how they defined it in subsequent publications.

How do you define this
difference in the study
protocol?



PROTOCOL???



Where in the protocol is SOC discussed?

- **Background and Significance**

Briefly give the background to the present proposal, critically evaluate existing knowledge, and specifically identify the gaps which the project is intended to fill. Cite literature and include a list of references.

Defining Standard of Care

THE EVIDENCE PYRAMID



Websites Used for Standard of Care

- www.nhlbi.nih.gov
- www.ahrq.gov
- www.guideline.gov
- www.americanheart.org
- www.nice.org.uk



Clinical Research Protocol

Clearly define the standard of care (SOC) of the population from the beginning.

- Would the subject receive this care absent the clinical trial?
- Can you back yourself up in the literature?
- Does local SOC differ from national standards/guidelines?
- Documentation of protocol deviations

Documentation of Protocol Deviations

- 21 CFR 312.23(a)(6)(ii) states, "A protocol for a Phase 2 or 3 investigation should be designed in such a way that if the sponsor anticipates that some deviation from the study design may become necessary as the investigation progresses, alternatives or contingencies to provide for such deviation are built into the protocols at the outset. For example, a protocol for a controlled short-term study might include a plan for an early crossover of nonresponders to an alternative therapy."



Documentation of protocol deviations

Subject safety is #1.

What do you need to do to protect the subject?

- **Expected** protocol deviations
 - If the possibility of certain deviations are known then include them in the protocol – track them
- **Unexpected** protocol deviations
 - Track them extra carefully – look for a pattern



How can you balance the
roles and responsibilities
of research **vs.** standard
of care?






Conflict of Interest

Clinician?


Clinician Researcher?



A B C D E

Clinician

- ✓ acting in the best interests of the individual patient medically



A B C D E

Clinical researcher

- ✓ answering questions
- ✓ testing hypotheses

To benefit humanity in
general.

You have a great responsibility not only to the subjects in front of you but to patients you will never meet.



Questions

