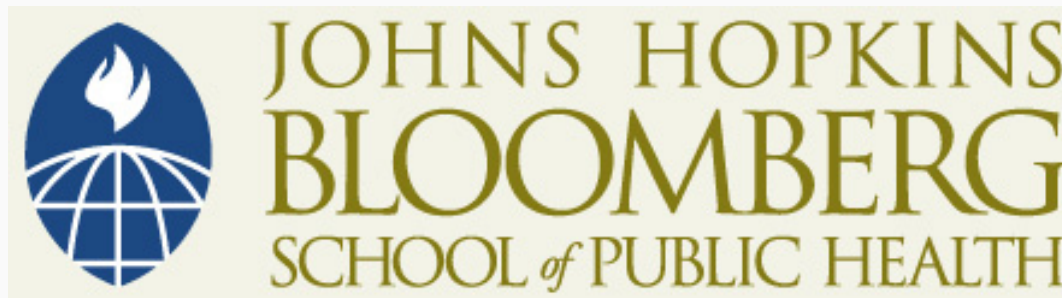


This work is licensed under a [Creative Commons Attribution-NonCommercial-ShareAlike License](https://creativecommons.org/licenses/by-nc-sa/4.0/). Your use of this material constitutes acceptance of that license and the conditions of use of materials on this site.



Copyright 2007, The Johns Hopkins University and Lynda Burton. All rights reserved. Use of these materials permitted only in accordance with license rights granted. Materials provided "AS IS"; no representations or warranties provided. User assumes all responsibility for use, and all liability related thereto, and must independently review all materials for accuracy and efficacy. May contain materials owned by others. User is responsible for obtaining permissions for use from third parties as needed.



JOHNS HOPKINS  
BLOOMBERG  
SCHOOL *of* PUBLIC HEALTH

## *Introduction to Health Services Research*

---

Lynda Burton, ScD  
Johns Hopkins University



JOHNS HOPKINS  
BLOOMBERG  
SCHOOL *of* PUBLIC HEALTH

## *Section A*

---

Definitions

# *Health Services Research—Defined*

- The Institute of Medicine, defines Health Services Research (HSR) as an inquiry to produce knowledge about the ...
  - Structure
  - Process, or
  - Effects (outcomes)
- ... Of personal health services

## *Two Criteria for an HSR Study*

- The study deals with some features of structure, process, or effects on personal health care
- At least one of the study's features is related to a conceptual framework other than that of contemporary biomedical science

# *Examples of Structure*

- Structure
  - Physician workforce requirement
  - Structure of the delivery system

# *Examples of Process*

- Process
  - Use of different types of services
  - Access

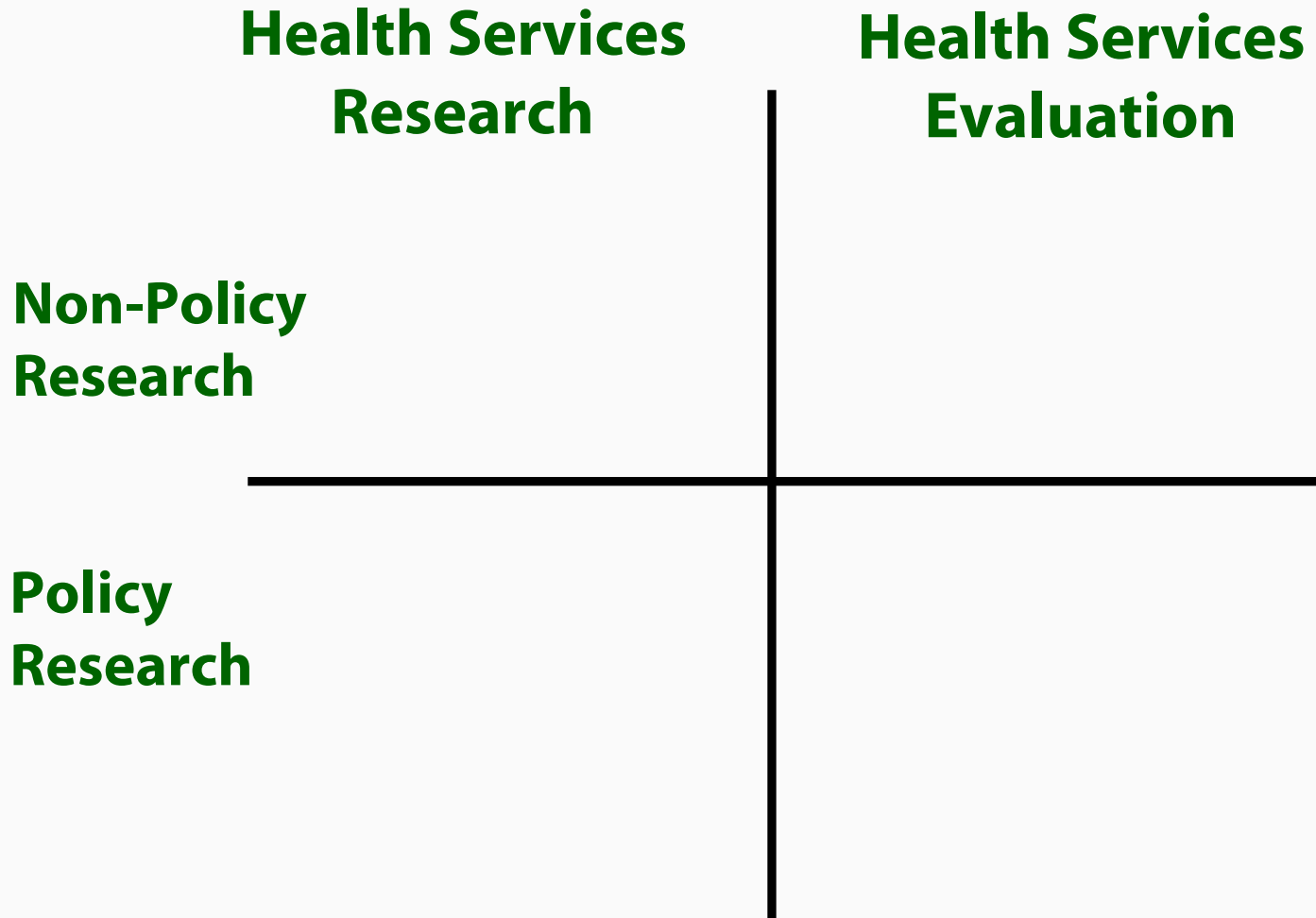
# *Examples of Outcomes*

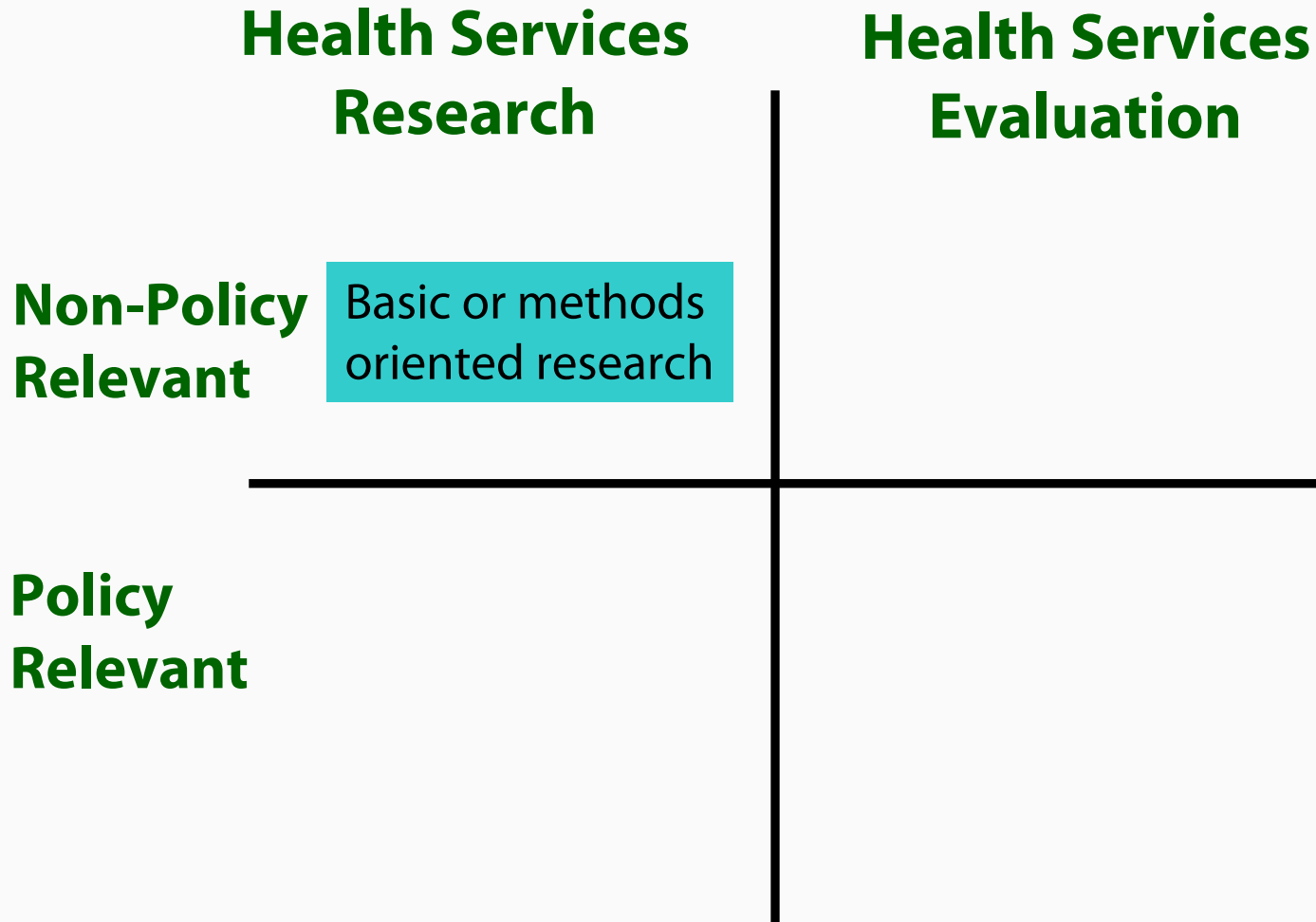
- Outcomes
  - Changes in health, functional status
  - Change in symptomatology, severity
  - Satisfaction with care



# *Examples of Outcomes*

- Outcomes
  - Changes in health, functional status
  - Change in symptomatology, severity
  - Satisfaction with care
  - Costs of care
  - Quality of life



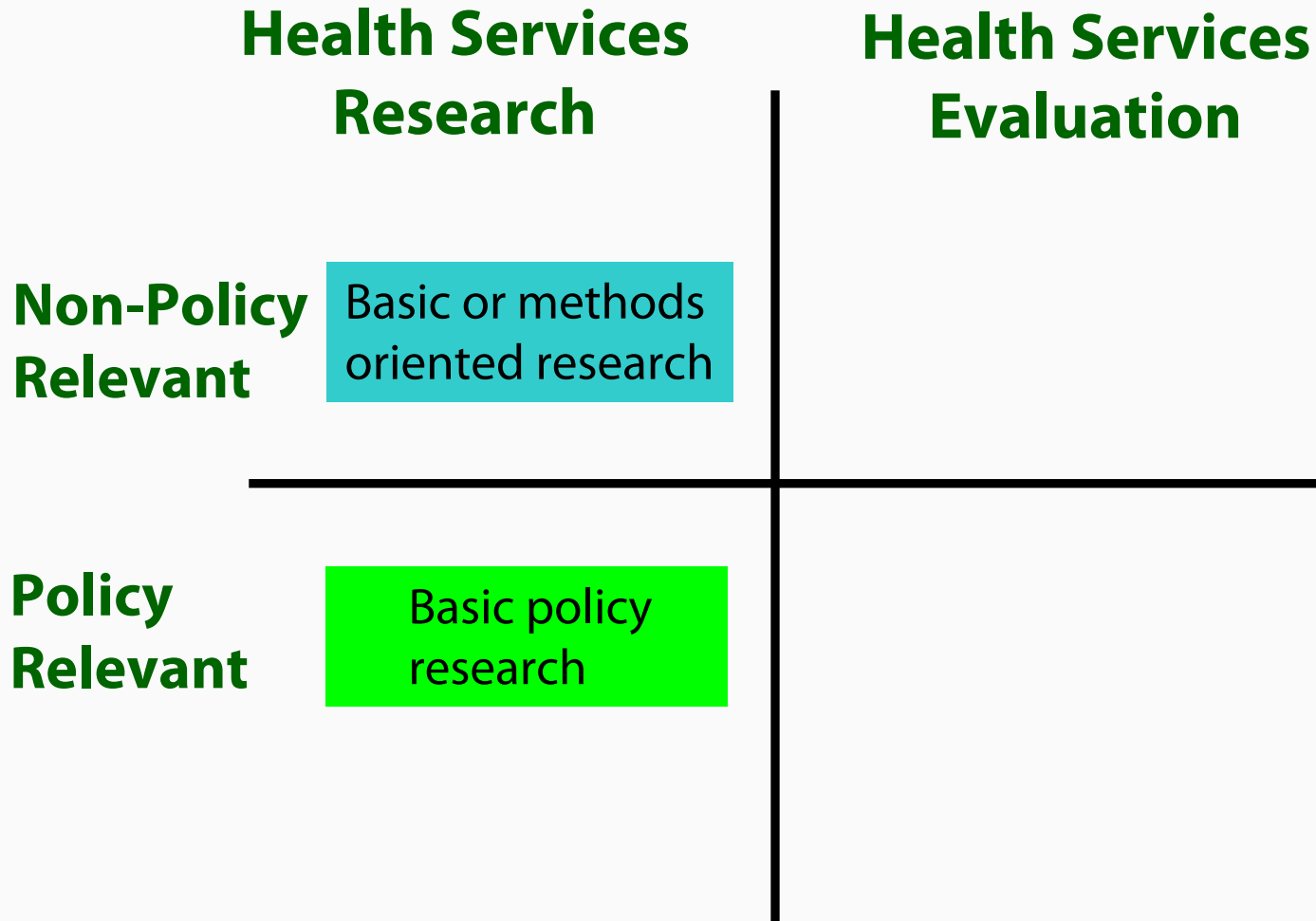


## *Basic or Methods-Oriented HSR*

- The application of scientific method for the purpose of advancing knowledge and understanding regarding an aspect of the health services system
- The primary purpose of this research is to contribute to the further development of “disciplinary” knowledge

## *Basic or Methods-Oriented HSR: Examples*

- Developing methods to measure quality of home health care
- Developing measure of global health (SF 36)
- Developing measure of patient satisfaction
- Inferring quality of hospital care from hospital claims data
- Revising Medicare physician payment structure



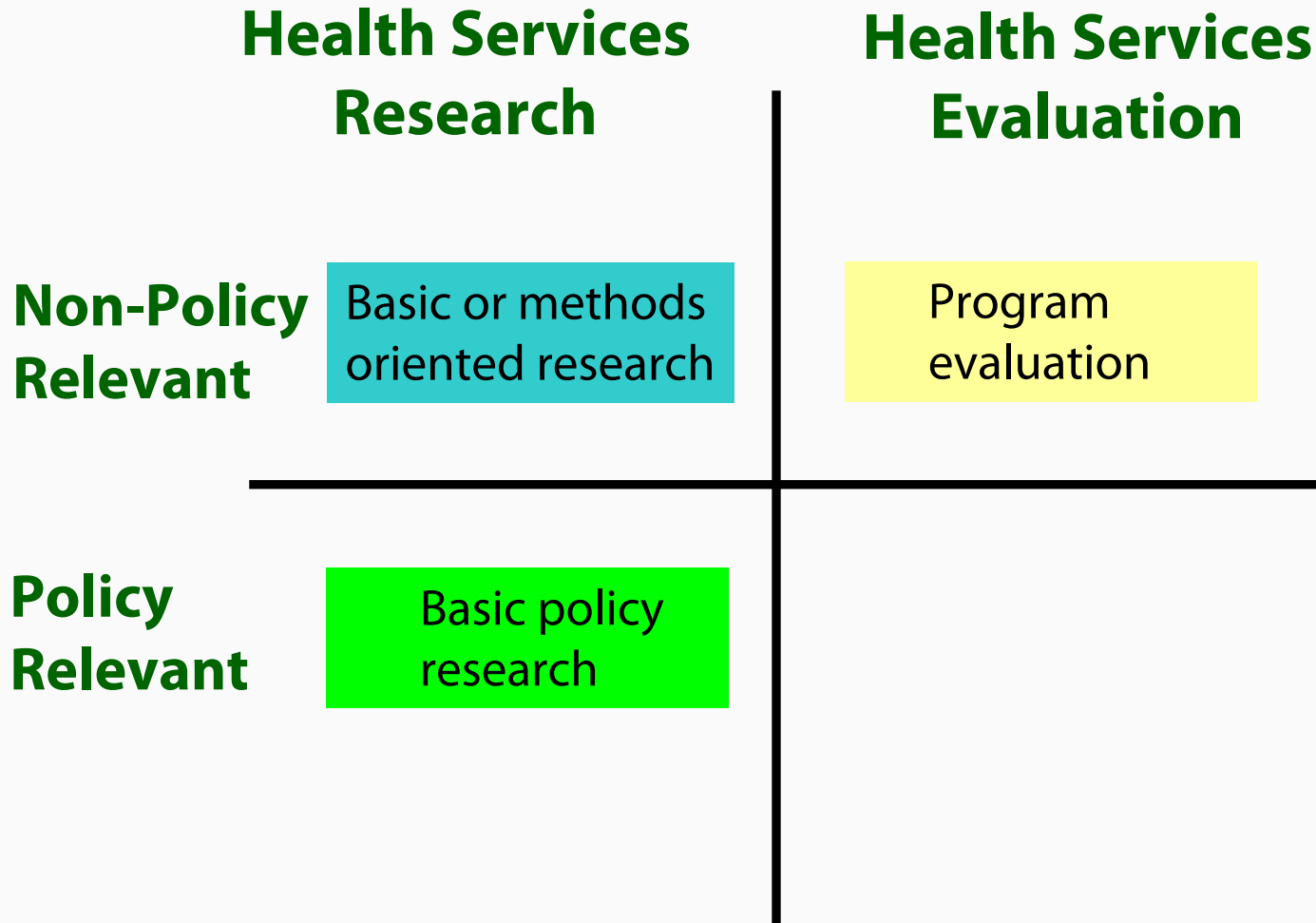
- Research into specific problems, issues or delivery modes within the health services system, the results of which are to be used directly by those individuals responsible for making decisions that affect the health care of an identifiable group of persons

# *Health Policy Research and Evaluation: Examples*

- Can addition of a general preventive visit for older Medicare beneficiaries result in better outcomes?
- Can care for acutely ill older persons in a “home hospital” reduce complications?
- What method of risk-adjusting payments for Medicare managed care patients will result in a more equitable payment structure?



# Health Program Evaluation

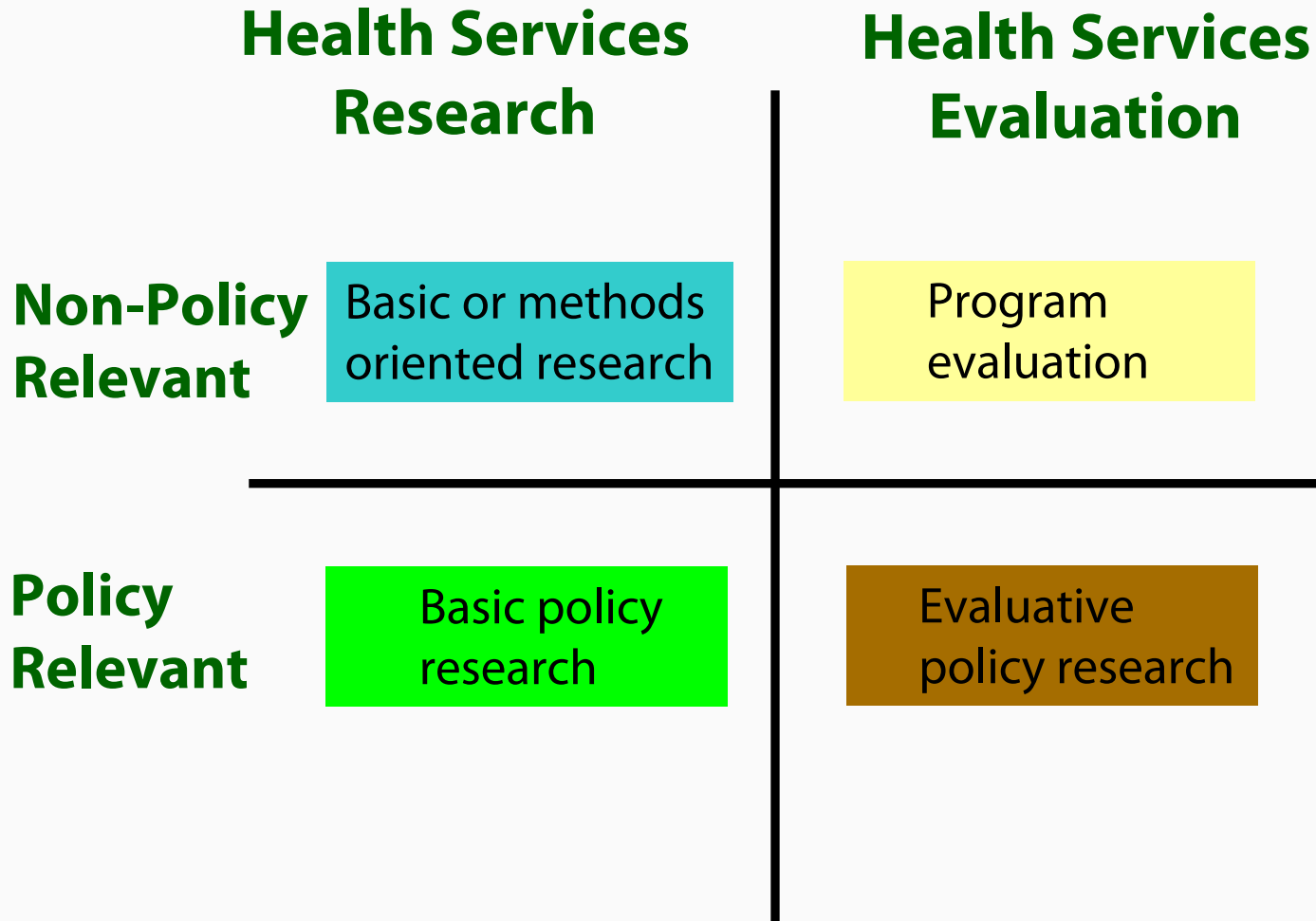


- The application of scientific methods, or approximations, in assessing the degree to which an organized set of health care related activities has reached its intended objectives

# *Health Program Evaluation: Examples*

- Does a school-based asthma program increase child and family knowledge of asthma and reduce acute incidents requiring ER visits?
- Can a Veterans Administration-based hospice program improve the quality of life of participants?
- Elder health—are outcomes better in a capitated system?

# Evaluative Policy Research



# *Evaluative Policy Research*

- Research into the effect on outcomes (health, costs, satisfaction, utilization of services) of specific policies that have been put into place by government

# *Evaluative Policy Research: Examples*

- Effectiveness of cancer screening
  - Prostate cancer
  - Breast cancer
- Effect of regionalization of medical services
  - CAT scanners
  - Neonatal intensive services
- Effect of change in health insurance benefits on use of medical care and health outcomes

- An activity that involves the compilation of the results of health services research and evaluation and other information
- The goal of this activity is to develop and assess alternative strategies for dealing with a specific problem associated with the delivery of health care to an identifiable population group

## *Determining if HSRE Is Policy Relevant—Some Criteria*

- How important is the question being addressed to the decision makers?
- Are the patient/consumer population groups that are being studied of direct concern to the decision makers?
- Are the results of the study generalizable to other situations and settings?





JOHNS HOPKINS  
BLOOMBERG  
SCHOOL *of* PUBLIC HEALTH

## *Section B*

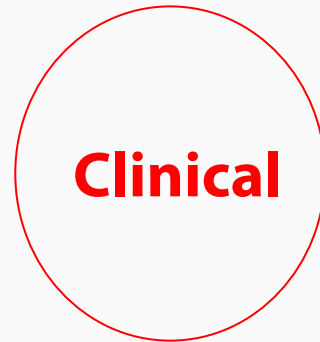
---

Categorizing HSRE

# *Different Ways to Categorize HSRE*

- By level of subject matter ...
  - Clinical
  - Institutional
  - Systemic environmental
- By content
- By use

# *Levels of Health Services Research*



Health Problems

Social, Political,  
Economic Problems

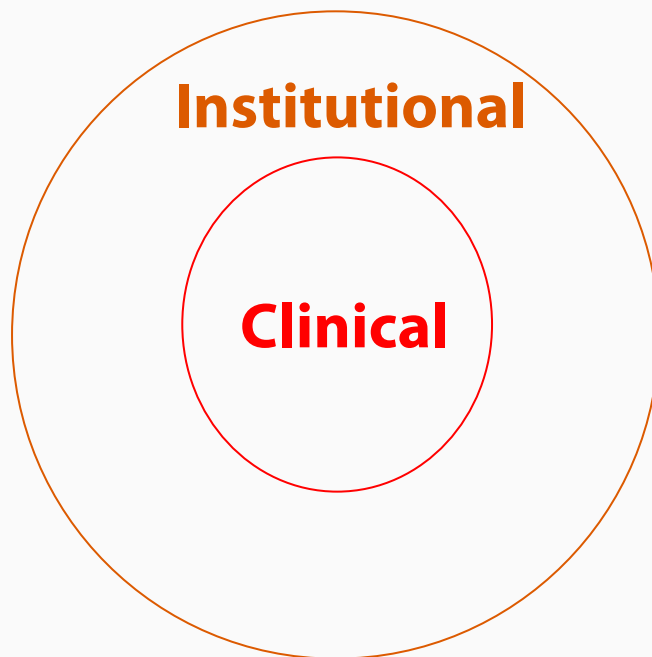
# *Clinically-Oriented Studies*

- Attempt to discover the characteristics of provider and patients and combinations of resources employed in practice settings that affect the process and outcome of care

## *Clinically-Oriented Studies (Examples)*

- Physician attitudes toward prevention
- Physician response to being “cued” regarding a patient’s score on a depression scale
- Use of midwives
- Outcomes of caring for acutely ill older persons in a “home hospital”

# *Levels of Health Services Research*



Health Problems

Social, Political,  
Economic Problems

# *Institutionally-Oriented Studies*

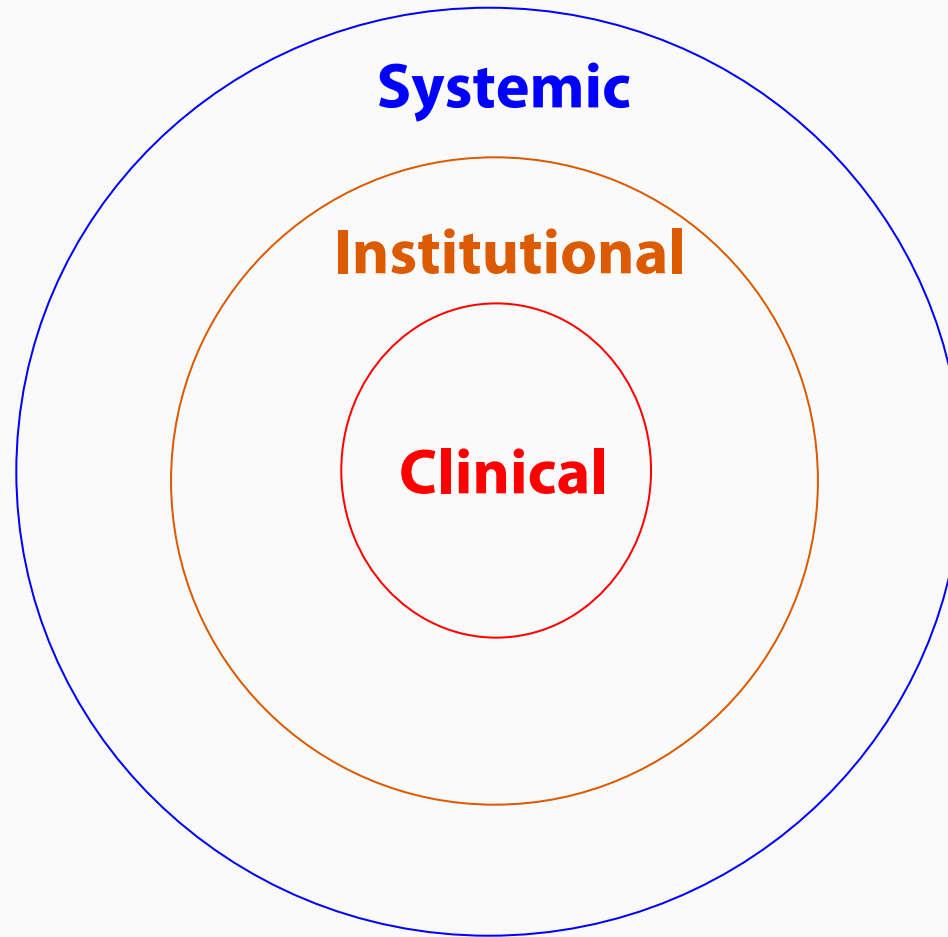
- Same as clinically-oriented studies except the focus is on organizational and administrative features

## *Institutionally-Oriented Studies (Examples)*

- Effect of size and location of nursing home on incidence of decubitus ulcers
- Comparison of rates of surgical procedures by hospital
  - Example—Caesarean sections
- Comparison of heart surgery survival rates between high- and low-volume hospitals
- Home hospital



# *Levels of Health Services Research*



Health Problems

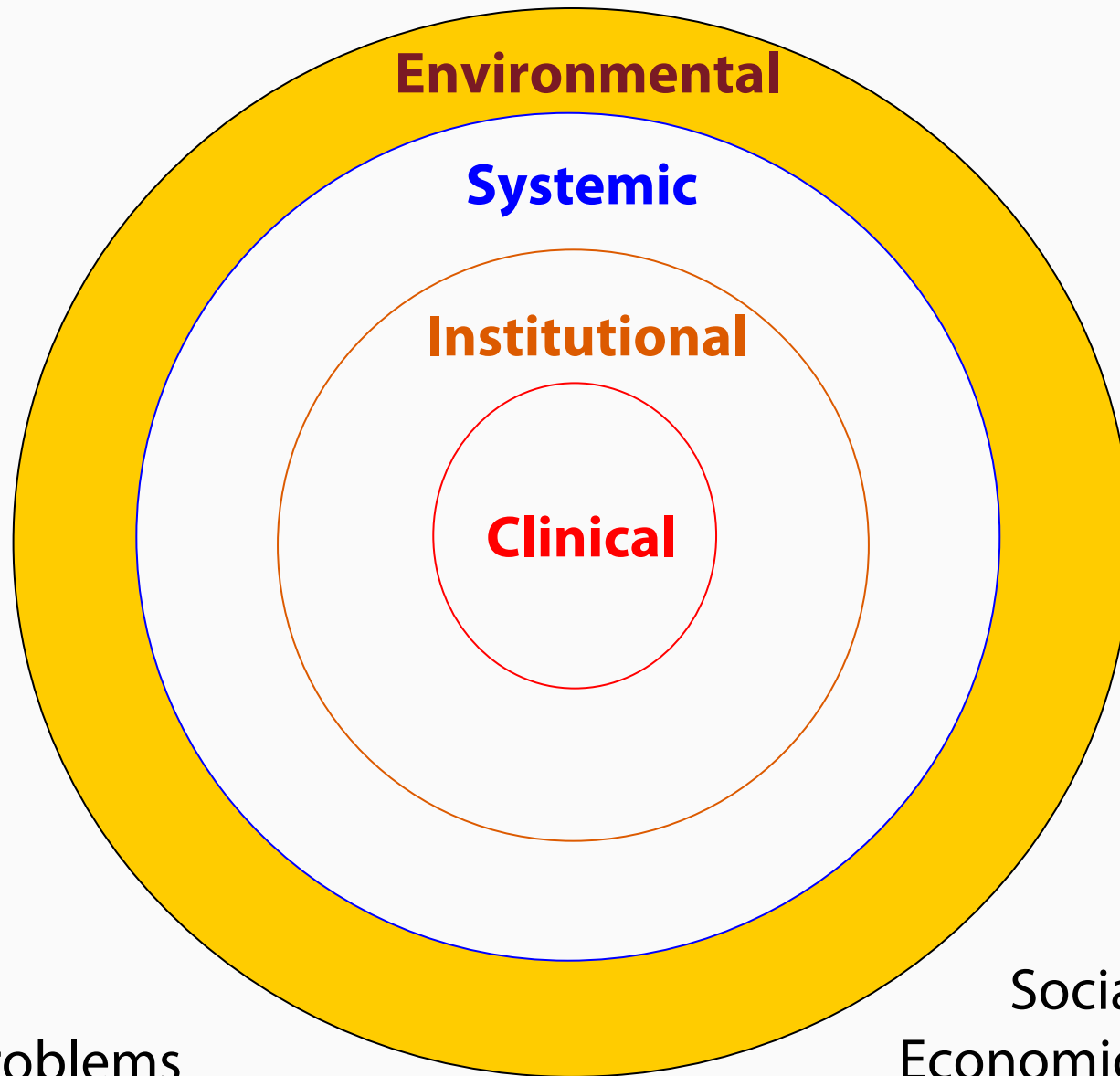
Social, Political,  
Economic Problems

- Deal with features of health services system that affect the inter-relationship among providers, institutions, and patient populations

# *Systemic Studies (Examples)*

- Regionalization of trauma centers
- Access to care in HMOs vs. FFS
- Change in costs to Medicare from growth in out-patient surgery
- Effect of HEDIS reports on consumer behavior in HMOs

# Levels of Health Services Research



Health Problems

Social, Political,  
Economic Problems

- Seek to understand the circumstances and events in the larger social, political, and economic context that shape the health services system and define its societal functions

# *Environmental Studies (Examples)*

- Association of mortality and poverty
- Effect on mental health of children of violence
- Cultural differences in end of life decision-making
- Effect of social insurance (Medicare) on health of older persons

# *Content Areas*

- Organization and financing of care
- Clinical evaluations and outcomes of care
- Quality of care
- Patient satisfaction with care
- Provider and consumer behavior
- Work force and training issues

# *Examples of Uses*

- Evaluation of new technologies
- Problem solving
- Evaluation of interventions



## *Uses: Evaluation of Innovations and Technologies*

- For these types of projects, the issues are largely clear
- Problems are understood and alternatives have been identified

# Evolution and Diffusion of Health Care Technology

## Biomedical Research

Basic research



Applied research



Application

→ Transfer

→ Diffusion



System impact

## Health Services Research

## *Uses: Problem Solving*

- Problem identification—usually descriptive
- Problem specification—quantifies and identifies factors presumed to contribute to a problem
- Assessment of alternative interventions—identifies intervention strategies and assesses the relative cost and effect of these strategies

## *Uses: Evaluation of Implementation Process*

- Attempts to assess the degree to which program operates as intended and to identify causes and consequences of deviations

## *Uses: Evaluation of Effects*

- Measures the extent to which interventions attain stated objectives
- Identifies their unanticipated consequences
- Explains how the effects came about

# *The Scope of Health Services Research*

- The HSR field is not usually considered a distinct academic discipline
- The field gains coherence by concentrating on a distinct set of questions and problems
  - Outcomes
  - Methodology and study design
  - Population based
  - Primary and secondary data collection
  - Survey research

# *The Scope of Health Services Research*

- In general it is an “applied” field
- The body of knowledge blends many theoretical academic disciplines

# *General Types of Research*

- Organization and financing of care
- Clinical evaluations and outcomes research
- Quality of care
- Patient satisfaction
- Provider and consumer behavior
- Work force and training issues



# *Difficulties in Carrying Out HSR*

- Complexity of problems addressed
- Variable nature of methods of disciplines
- General weak nature of data systems
- Difficulty of establishing truly experimental designs in real world settings

# *Major Funding Sources for HSR*

- Agency for Health Care Research and Quality (AHRQ, formerly AHCPR)
- Center for Medicare/Medicaid Studies (CMS, formerly HCFA)
- National Institutes of Health
- Veterans Administration
- Foundations interested in health policy
- Private associations

# *Types of Health Services Research*

- Descriptive studies
  - The objective is to estimate quantitative parameters that apply to groups of individuals or organizations

# *Types of Health Services Research*

- Analytic studies
  - The objective is to answer cause-and-effect questions
  - It requires theoretical models and ways of demonstrating that causal interpretations are logically consistent with what is already known