

## The research collective: A new tool for research synthesis

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# Objective of the presentation

To report on a research collective on primary healthcare (PHC) conducted in Quebec in 2004



# The team of investigators

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- Groupe de recherche sur l'équité d'accès et l'organisation des services de santé de 1re ligne (GREAS 1)
- Groupe interuniversitaire de recherche sur les urgences (GIRU)
- Réseau d'appui aux Transformations des Services de Première ligne (RATSPL)
- Direction de santé publique de Montréal (DSP)
- Institut national de santé publique du Québec (INSPQ)

# The collective's objectives

1. Describe the current situation in Quebec with regards to accessibility, continuity, comprehensiveness and responsiveness of primary healthcare (PHC)
2. Identify factors associated with variations in these phenomena as well as their impact on emergency room (ER) utilization, responsiveness, health and costs

# The collective's objectives (cont'd)

3. Analyze implementation processes and contextual factors ⇒ draw useful lessons for decision-makers

# Approach

## Main features

Collective  $\neq$  systematic review of the literature

- Direct contribution of researchers
- Participation of decision-makers
- Timeliness of the findings: studies under way or recently completed (unpublished)
- Context-linked

# Definition of research collective

"A knowledge synthesis resulting from effective exchanges between researchers and decision-makers about results emerging from ongoing or recently completed studies on a given subject and their application under specified contextual conditions" (Pineault et al., 2005)

# Approach (cont'd)

## Selection of studies

Proposed

+ 90



← Selection criteria

Retained

30

Participation rate: 100%

# Selection criteria

- Focus on PHC organization (exep. social services, hospital care...)
- Be recent: still under way or recently terminated
- Have results to present

# Role of researchers and investigators

## Researchers

Responsible for presenting the results of the 30 studies

## Investigators

Responsible for the synthesis

# Approach (cont'd)

## Steps followed:

- Project description sheets ⇨
  - standardized
  - jointly elaborated (April 2004)
  - completed by researchers (May 2004)
- Presentation of projects ⇨ information sharing session (researchers, investigators, and decision makers (June 17, 2004))

# Approach (cont'd)

- Revision of project description sheets by researchers (links with others' research) (July 2004)
- Identification of the recurrent themes and development of an analytical framework (August-September 2004)
- Cross-sectional reading of the description sheets by identified themes (August-September 2004)

# Approach (cont'd)

- Integration and synthesis (August-September 2004)
- First draft of the summary report prepared by investigators and sent to researchers for validation (October 2004)
- Final draft of the report (November 2004)
- Total: 8 months

# Approach (cont'd)

## Material used

- 30 project description sheets
- Material of the presentations (June 17)
- Notes taken during discussions with decision makers (June 17)

# Deliverables

- Summary report
  - According to CHSRF "1.3.25" format

# Deliverables (cont'd)

- CD-rom containing :
  - key messages and summary
  - the summary report (25 pages)
  - additional information on methods
  - the 30 project description sheets
- In French and English ("head to tail" format)

# Quantitative/qualitative nature of the studies\*

|                              | N         | %            |
|------------------------------|-----------|--------------|
| Quantitative                 | 12        | 40.0         |
| Qualitative                  | 10        | 33.3         |
| Quantitative and qualitative | 8         | 26.7         |
| Total                        | <u>30</u> | <u>100.0</u> |

\* Determined by P.I.

# Assessing strength of evidence in the collective: Basic principles

- Confidence in the authors' / investigators' judgment based on implicit and explicit criteria
- Reproducibility of the synthesis process

# Criteria for assessing strength of evidence in the collective

- Number of studies associated with a specific result / convergence and coherence
- Methodological quality of studies (internal validity)
- Generalizability of studies (external validity)

# Assessment of internal validity by researcher

|  | Little                   | Somewhat                 | Very much                | N.A.*                    |
|--|--------------------------|--------------------------|--------------------------|--------------------------|
| Internal validity : how confident are you about the strength of the relationship between your variables based notably on : | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| • Research design  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| • Sample size (statistical power)  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| • Intervention analysis (logic/theory of intervention)   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| • Implementation analysis (synergy, antagonism with contextual elements)   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| • Other:   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

# Assessment of external validity by researcher

|   | Little                   | Somewhat                 | Very much                | N.A.*                    |
|---|--------------------------|--------------------------|--------------------------|--------------------------|
| External validity: how easily can your results be applied in other contexts based notably on :  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| • Size of reference population, diversity of studied cases  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| • Statistical inference (inference from sample to study population)   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| • Implementation analysis (can implementation conditions be found in another context, or be replicated)   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| • Intervention analysis (theoretical inference stemming from the fact that the studied intervention is based on an explicit intervention theory which can be applied in other contexts) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| • Other:  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

# Applicability assessed by researchers

|   | Little                   | Somewhat                 | Very much                | N.A.*                    |
|---|--------------------------|--------------------------|--------------------------|--------------------------|
| Applicability: how easily can your results be used by decision-makers based on what you know to be constraints or barriers, or elements facilitating their application: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Describe constraints:   |                          |                          |                          |                          |
| Describe facilitating elements:   |                          |                          |                          |                          |
| *N.A.: Not applicable   |                          |                          |                          |                          |

# Scores on internal validity as assessed by researchers

|        | Number   | %           |
|--------|----------|-------------|
| Low    | 6        | 20.0        |
| Medium | 13       | 43.3        |
| High   | 11       | 36.7        |
|        | <hr/> 30 | <hr/> 100.0 |

# Scores on external validity as assessed by researchers

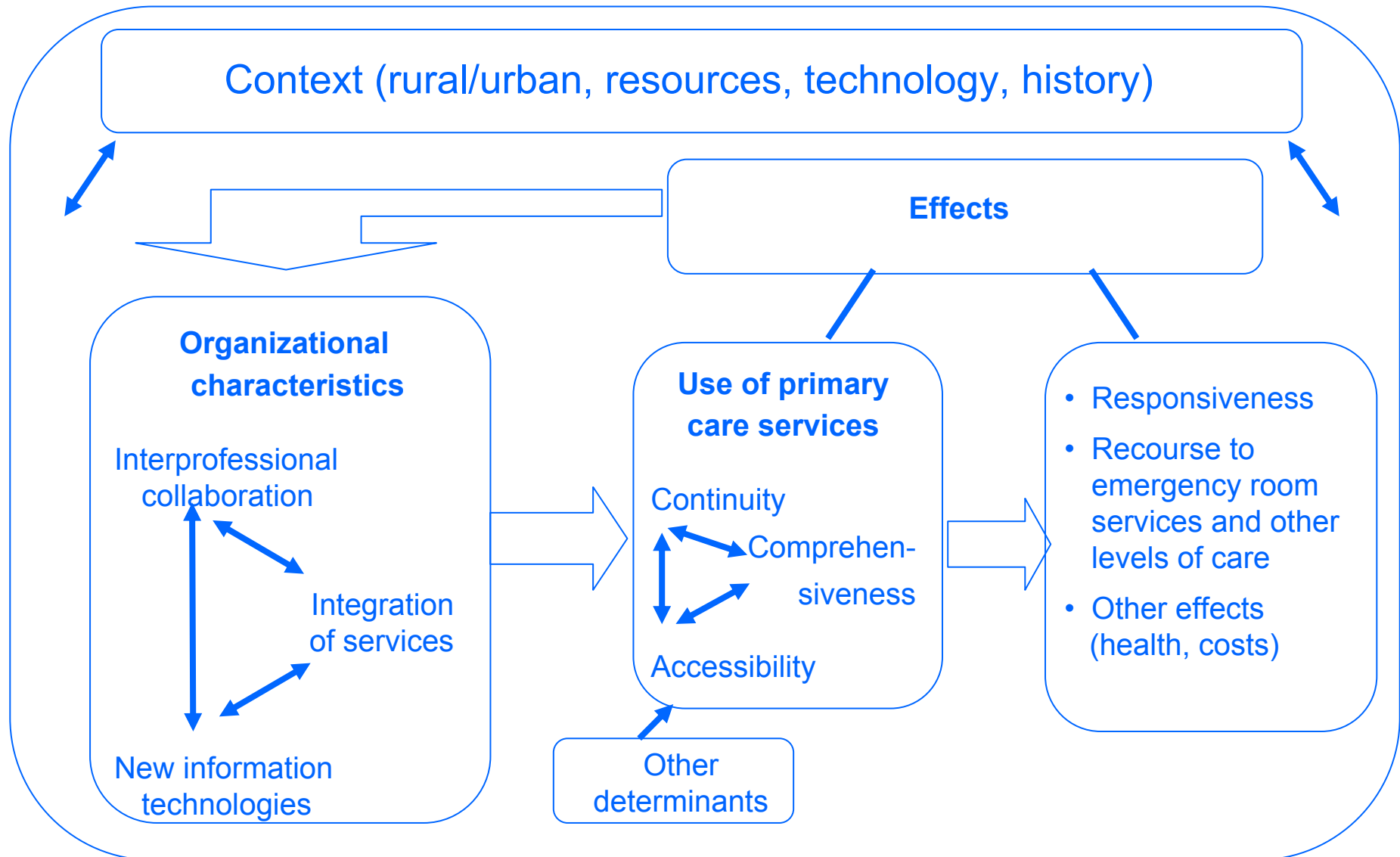
|        | Number   | %         |
|--------|----------|-----------|
| Low    | 6        | 20        |
| Medium | 15       | 50        |
| High   | 9        | 30        |
|        | <hr/> 30 | <hr/> 100 |

# Applicability of results by decision makers as assessed by researchers

|        | Number | %     |
|--------|--------|-------|
| Low    | 2      | 6.7   |
| Medium | 13     | 43.3  |
| High   | 15     | 50.0  |
|        | <hr/>  | <hr/> |
|        | 30     | 100.0 |

**Main messages to decision-makers**

# Figure 1. Analytical framework



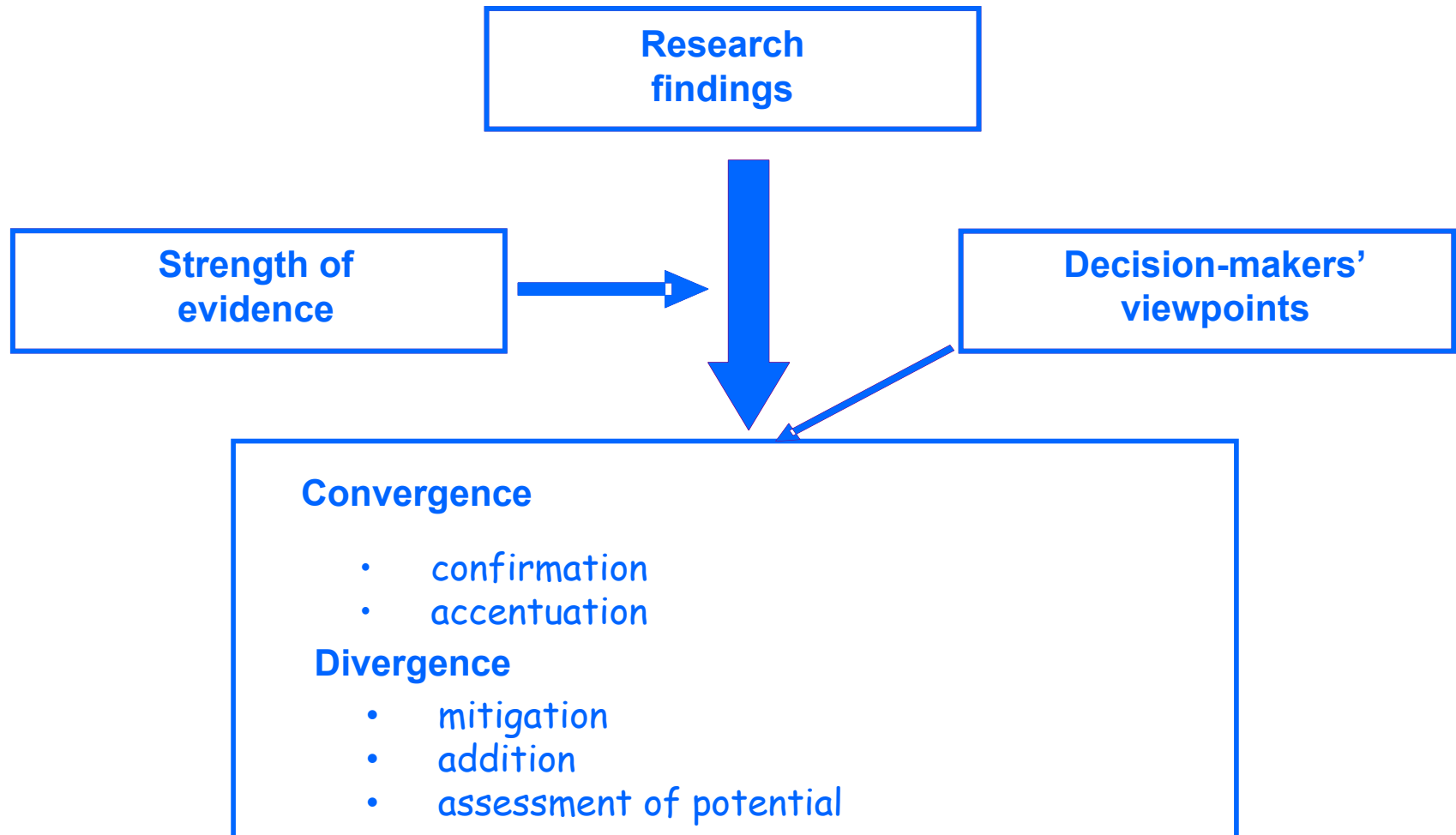
# Key messages to decision-makers

- The target of PHC changes should not be solely accessibility but rather a balance between continuity and accessibility.
- The implementation of integrated health services should seek quality improvement of services rather than cost reduction, at least in the short term.
- Strategies for implementing such changes should centre primarily on professional practices rather than solely on organizational structures.

# Key messages to decision-makers (cont'd)

- It is essential to create a climate of trust and respect among concerned actors.
- Whereas a general framework is necessary at the central level to ensure coherence, sufficient room must be left for autonomy and initiative at the local level.
- The participation of physicians in these projects is essential and deserves special attention and effort.

# Figure 2. Algorithm for the integration of researchers' findings and decision-makers' viewpoints



# Points raised by decision-makers

1. Accessibility/continuity
2. Integration of physicians
3. Disease or case management
4. PHC not adapted to complex problems
5. Urban/rural differences
6. Bottom up/top down strategies

# Points of convergence and divergence between researchers and decision-makers

## Viewpoints expressed by decision-makers

Balance between accessibility and continuity

Urban / rural differences

Integration of physicians

## Convergence / divergence with researchers' findings

Convergence  
(confirmation effect)

Convergence  
(confirmation effect)

Convergence  
(accentuation effect)

# Points of convergence and divergence between researchers and decision-makers (cont'd)

## Viewpoints expressed by decision-makers

## Convergence / divergence with researchers' findings

PHC not adapted to complex problems

Convergence  
(accentuation effect)

Disease or case management

Divergence  
(addition effect)

Legislative and structural measures as facilitators for changing professional practices

Divergence  
(mitigation and assessment of potential effects)

# Discussion/Conclusion

Factors associated with use of synthesis by decision-makers (Lavis et al., 2005)

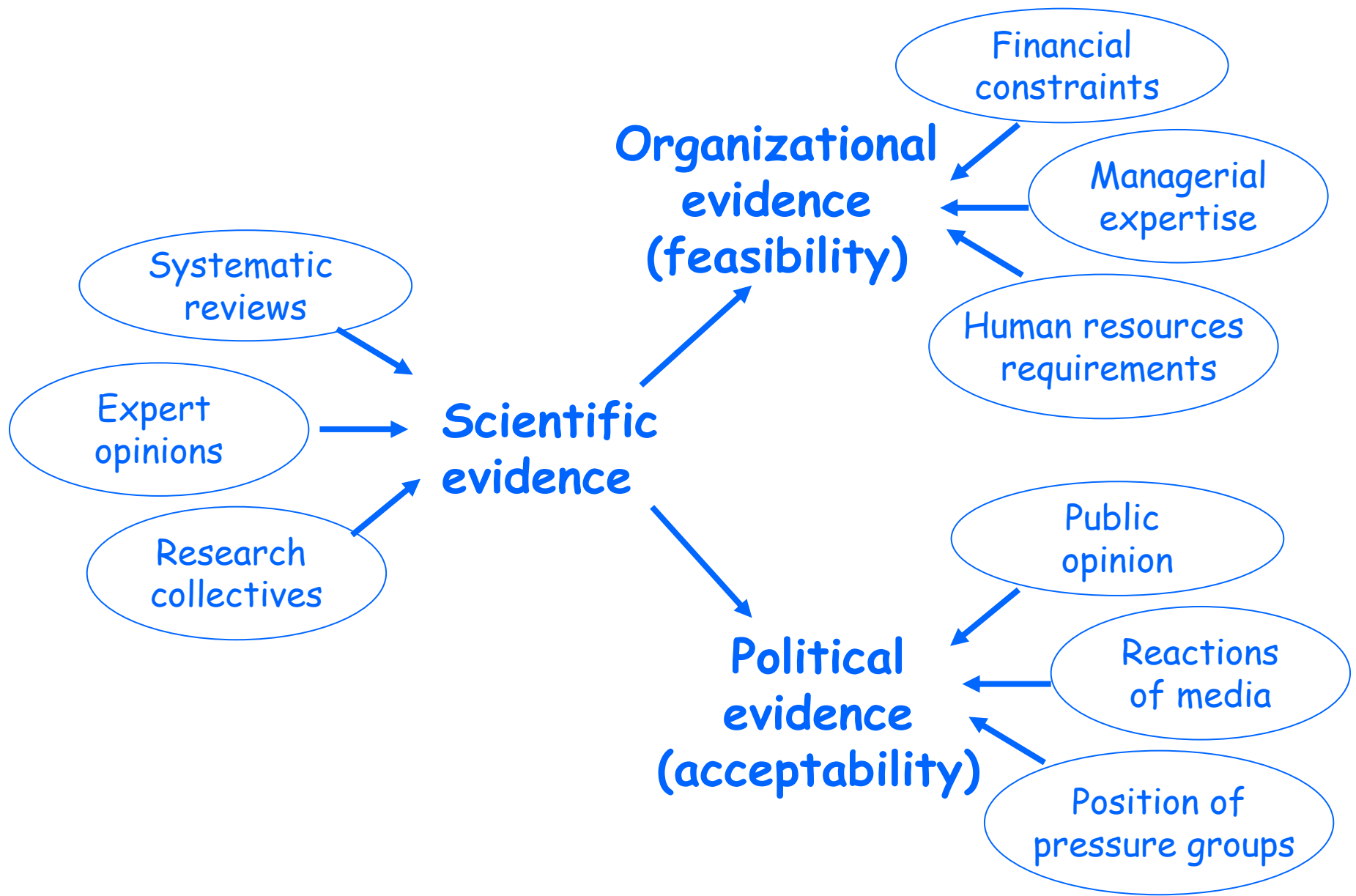
- timing and timeliness
- attributes of the context
- user-friendly presentation (1-3-25 form)

# Discussion/Conclusion (cont'd)

- confidence in researchers' competence and integrity
- precautions in formulating recommendations
- interaction between researchers and decision-makers

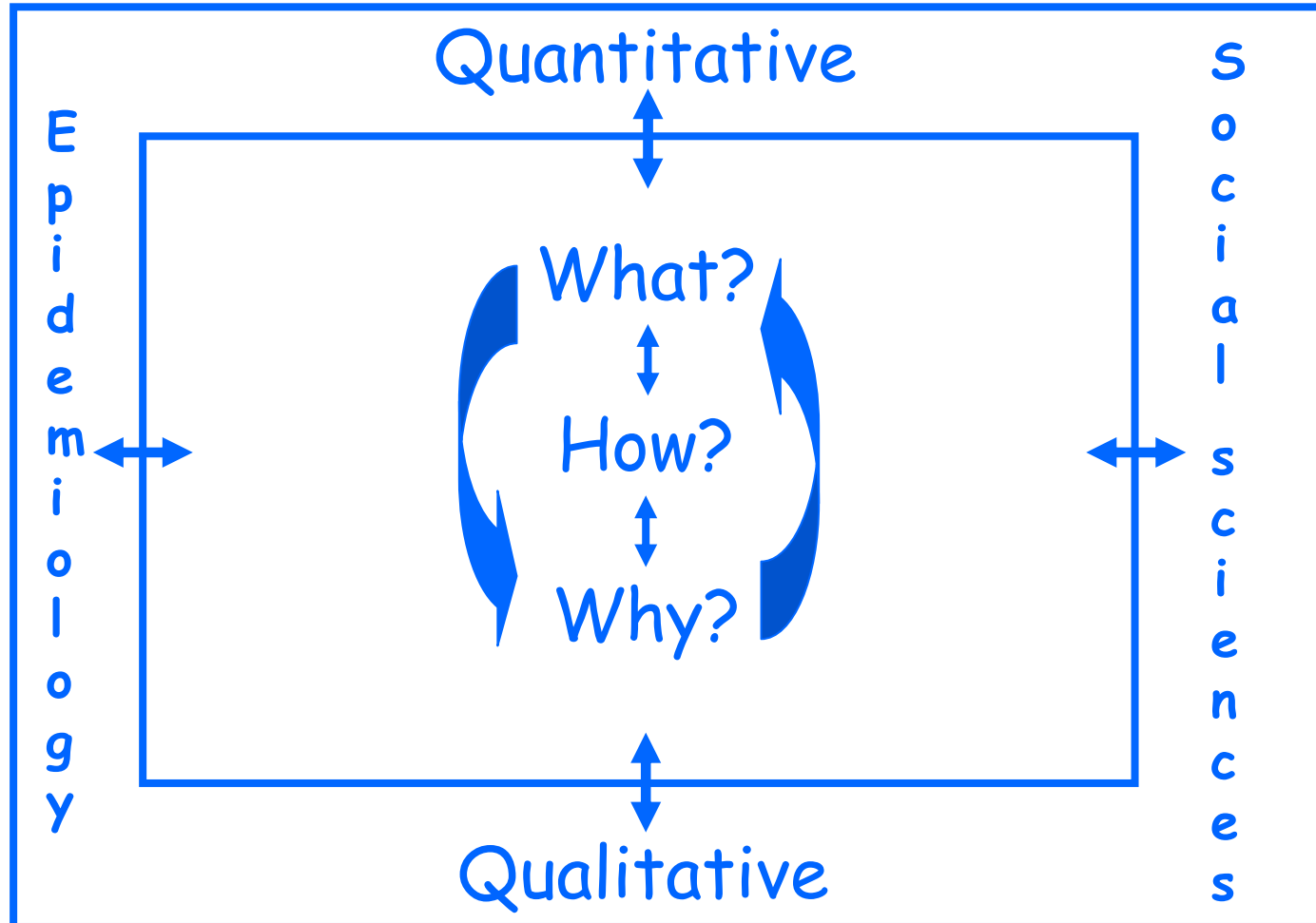
## Discussion/Conclusion (cont'd)

Scientific evidence: A necessary but not sufficient condition for organizational and political evidence?



Adapted from Klein referred to in What Counts? Report of the 6th CHSRF Annual Invitational Workshop, March 2004.

# A dynamic approach more adapted to complexity



# Report available, in English and French, from

- [www.greas.ca](http://www.greas.ca)
- [www.chsrf.ca](http://www.chsrf.ca)
- [www.giru.ca](http://www.giru.ca)