Follow Up: Healthcare Provider Impact on Disparities: Racism
Learning to Use Evidence Guides to Assess Research Literature
02/02/2015
• **Injustice in a Community Context** has been the TITAN theme for 2014 – 2015
• Evidence of race/ethnic disparities was found in the fall journal club reviews across a wide range of health status, health behavior, health care use, and health screening outcomes, within both low- and high-income groups.

• Income also played a role in the discussion related to disparities.
• We reviewed racial and ethnic explicit and implicit biases in medical interactions.
• In looking for possible solutions, one suggestion was to increase the diversity of health care workers. The numbers are daunting with less than 17% of the professions reviewed being minority.
• So then we move to continued education
• Educational interventions are most likely to be effective when they occur at multiple levels.
• Provider discrimination
• Increased understanding
• Team building consideration.
• Self regulation of bias, with sufficient practice, can become automatic
• The goal of improving knowledge and understanding regarding this topic leads to this review on racism for spring journal group.
Appraising Evidence From Systematic Reviews

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Objectives

• Be able to
  – Demonstrate evidence literacy
    • Recognize different types of secondary (synthesis) literature
    • Apply Users’ Guides for Systematic Reviews
      – Recognize major threats to validity of evidence synthesis and pooling of study results
      – Explain sources of heterogeneity in syntheses
  – Demonstrate evidence numeracy
    • Explain cumulative confidence intervals
Synthesis Goals

• What is the evidence like?
  – Defining a body of evidence
  – Finding and cataloging the evidence
  – Classifying how evidence was generated

• What does the evidence say?
  – Cumulative results
  – Most recent answers

• What does the evidence mean?
  – Decision models
  – Placing in context
• **Systematic Reviews**
  – Structured overview with explicit approach to controlling bias
    • Clearly defined question, inclusion criteria, search strategy, and appraisal rules, critical assessment and evaluation of research (*Relevance and quality filters*)
    • Not simply a summary

• **Meta-analysis**
  – Type of systematic review that uses quantitative methods to combine results from multiple studies
    • Pooling of quantitative results
    • Yields summary estimate of effect size and confidence interval around that summary estimate
Being Systematic

- Ask
  - Define the question
- Acquire
  - Conduct a literature search
  - Select sources
  - Gather citations
  - Filter using inclusion and exclusion criteria
- Appraise
  - Data abstraction
  - Data analysis
- Apply
  - Summary effect statement
Systematic Review Process: Ask

• Define the question
  – Specify the inclusion and exclusion criteria
    • Population
    • Intervention or exposure
    • Outcome
    • Methodology (including time, language, publication restrictions)
The publication of the landmark report “Unequal Treatment” in 2002 recognized racism as a key driver of racial/ethnic disparities in healthcare. It impacts medical treatment, health service utilization and patient-provider interactions.
• Racism can be defined as phenomena that maintain or exacerbate avoidable and unfair inequalities in power, resources or opportunities across racial, ethnic, cultural or religious groups.
• Racism can be expressed through
  – Beliefs
  – Emotions
  – Behaviors/Practices

Occurs at three levels
- Internalized
- Inter-personal
- And systemic/institutional
This review focused on interpersonal racism. It reviewed world-wide evidence (from 1995 forward) for racism among healthcare providers, while also comparing existing measurement approaches to emerging best practice.
Systematic Review Process: Acquire

- Conduct a literature search
  - Decide on information sources
  - Identify titles and abstracts
- Apply inclusion and exclusion criteria to titles and abstracts
  - Obtain full articles and do the same
  - Select final eligible articles
Paradies, et al - Acquire

- The following databases and electronic journal collections were searched for studies published between January 1995 and June 2012; Medline, CINAHL, PsycInfo, Sociological Abstracts, Author’s own reference databases and reference lists of included studies were also searched.
- Published empirical studies of any design measuring healthcare provider racism in the English language (including theses and dissertations).
- Racism as reported by patients was beyond the scope of the review.
• Inclusion or exclusion criteria described.
• Table 1 lists studies used. Identifies setting, provider profession, # of participants, provider racial/ethnic background, patient racial/ethnic background (real or hypothetical), provider measurement approach, main finding/outcomes, limitations and study quality.
# Being Systematic

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Narrative Review</th>
<th>Systematic Review</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical question</td>
<td>Seldom reported, or addresses several general questions</td>
<td>Focused question specifying population, intervention or exposure, and outcome</td>
</tr>
<tr>
<td>Search for primary articles</td>
<td>Seldom reported; if reported, not comprehensive</td>
<td>Comprehensive search of several evidence sources</td>
</tr>
<tr>
<td>Selection of primary articles</td>
<td>Seldom reported; if reported, often biased sample of studies</td>
<td>Explicit inclusion and exclusion criteria for primary studies</td>
</tr>
<tr>
<td>Evaluation of quality of primary articles</td>
<td>Seldom reported; if reported, not usually systematic</td>
<td>Methodologic quality of primary articles is assessed</td>
</tr>
<tr>
<td>Summary of results of primary studies</td>
<td>Usually qualitative nonsystematic summary</td>
<td>Synthesis is systematic (qualitative or quantitative; if quantitative, this is often referred to as meta-analysis)</td>
</tr>
</tbody>
</table>
Systematic Review Process: Appraise

• Create data abstraction
  – Data abstraction: participants, interventions, comparison of interventions, study design
  – Results
  – Methodologic quality
  – Assess agreement on validity assessment
Paradies, et al - Appraise

- Data abstraction approach identified
- Variables included were
  - Study design and objectives;
  - Method of measurement, constructs measured, type of tool;
  - Healthcare provider and patient characteristics using PROGRESS-PLUS18
  - Healthcare setting (e.g. primary care, tertiary);
  - Country and language of study; and
  - Study outcomes (reporting of PROGRESS-PLUS at outcome).
Paradies, et al - Appraise

- The quality of each eligible study was assessed using the Health Evidence Bulletin Wales critical appraisal tool adapted from the Critical Appraisal Skills Programme (CASP) (http://hebw.cf.ac.uk/projectmethod/appendix5.htm#top).
Systematic Review Process: Appraise

- Conduct data analysis
  - Determine method of generating pooled estimates across studies
  - Generate pooled estimates (if appropriate)
  - Explore heterogeneity, conduct subgroup analysis (if appropriate)
  - Explore possibility of publications bias
Results

• 37 studies published between 01/1995 and 06/2012 met the inclusion criteria.
• Statistically significant evidence of racist beliefs, emotions or practices among healthcare providers in relation to minority groups was evident in 26 of these studies. No particular patterns emerged by country, study population, healthcare setting or measurement approach.
Measurements

- Self-completed surveys were the most commonly utilized direct measurement approach.
- Vignettes are indirect measures that infer bias in diagnosis, recommended treatment or patient characteristics (i.e. practices/behaviors) from differential response to hypothetical situations that are identical except for the race/ethnicity of the patients involved.
• The Implicit Association Tests (IATs) reviewed here evaluated Black-White race generally; stereotypes about Blacks being uncooperative; stereotypes about Blacks being medically uncooperative; race in relation to compliant patients; and race in relation to the quality of medical care.

• 5 studies used both direct and indirect measures of racism.
Eleven vignette based studies found that race influences the medical decision making of healthcare practitioners in relation to minority groups. Eight studies found no association.

Four studies utilizing the IAT found that implicit racial bias existed among healthcare providers in the absence of explicit bias.
Four studies using direct measures showed evidence of racism, while two studies did not find such evidence.
• Study quality was assessed in relation to the following areas: clarity of aims, appropriateness and rigor of design and analysis, including risk of bias, and relevance of results.

• The majority of studies were of moderate quality. All studies were cross-sectional, therefore limiting causal inference.
• Major methodological limitations of studies were:
  
  small sample sizes
  – low response rates
  – non-representative samples
  – threats to internal validity due to social desirability
  – not controlling for confounders
  – using non-randomised samples
  – and utilizing limited statistical analysis.

  – Thirty of the thirty-seven studies were conducted in the United States, limiting generalizability of results.
Over two-thirds of studies included in this review found evidence of racism among healthcare providers. This includes racist beliefs, emotions and behaviors/practices relating to minority patients.
Did the Review include explicit and appropriate eligibility criteria?

**Were Eligibility Criteria Appropriate?**

Are results likely to be similar across the range of patients included (e.g., older and younger, sicker and less sick)?

Are results likely to be similar across the range of interventions or exposures studied (e.g., higher dose, lower dose; test interpreted by expert or nonexpert)?

Are results likely to be similar across the range of ways the outcome was measured (e.g., shorter or longer follow-up)?

Did it turn out that results were indeed similar across the range of patients, interventions, and outcomes (i.e., studies all showed similar results)?
Validity

• Was the search for relevant studies detailed and exhaustive?
  – Bibliographic databases
    • MEDLINE, EMBASE
  – Trials databases
    • eg, Cochrane Central Register of Controlled Trials, ClinicalTrials.gov, ISRCTN Register
  – Citation tracking
    • Science Citation Index (Web of Science)
  – Unpublished studies
    • Key informants, theses
Validity

- Was biased selection and reporting of studies unlikely?
  - Key question
    - Are the search strategies identified?
  - Best practice
    - Details of keywords, sources, searches, years, and citations retrieved
Validity

• Were the primary studies of high-methodologic quality?

➤ Key questions
  • Were there clear methodological criteria?
  • Were all included studies assessed by these criteria?

– Best practices
  • Standardized checklists
  • Domain-specific checklists
  • Key criteria
Validity

• Were the primary studies of high-methodologic quality?

<table>
<thead>
<tr>
<th>Therapy</th>
<th>• Were patients randomized?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Was follow-up complete?</td>
</tr>
<tr>
<td>Diagnosis</td>
<td>• Was the patient sample representative of those with the disorder?</td>
</tr>
<tr>
<td></td>
<td>• Was the diagnosis verified using credible criteria that were independent of the items of medical history, physical examination, laboratory tests, or imaging procedures under study?</td>
</tr>
<tr>
<td>Harm</td>
<td>• Did the investigators demonstrate similarity in all known determinants of outcome or adjust for differences in the analysis?</td>
</tr>
<tr>
<td></td>
<td>• Was follow-up sufficiently complete?</td>
</tr>
<tr>
<td>Prognosis</td>
<td>• Was there a representative sample of patients?</td>
</tr>
<tr>
<td></td>
<td>• Was follow-up sufficiently complete?</td>
</tr>
</tbody>
</table>
Paradies, et al - Validity

- Variation in methodology was addressed extensively in data analysis. It was reviewed and several differences were commented upon in the discussion.
Validity

• Were assessments of studies reproducible?
  ➢ Key question
    • Is an explicit approach used to extract data from the primary studies?
  – Best practice
    • All significant details of research design, population, intervention, outcome, results, and missing information presented
Validity

• Were assessments of studies reproducible?
  ➢ Key question
    • Was selection carried out through double-blind process?
  ➢ Best practices
    • Two or more reviewers select and appraise
    • Look for agreement beyond chance
    • Separate selection from data abstraction
Paradies, et al - Validity

- Coding of studies not discussed.
- Summary of study characteristics identified (see Table 1)
Applicability

• How can I apply the results?
  – Were all patient-important outcomes considered?
  – Are any postulated subgroup effects credible?
  – What is the overall quality of the evidence?
  – Are the benefits worth the costs and potential risks?
Paradies, et al - Limitations

- Studies included in the review were almost solely conducted with physicians in the US. As a result, meaningful comparison of differences in racism between provider categories was not possible.
- Only 5 studies utilized both direct and indirect approaches. Direct and indirect measures each have limitations that can be minimized by including both approaches in the same study.
• Although central to social identity theory (a key psychological theory of racism) and despite calls to study in-group favoritism among healthcare providers, only one study included in the review assessed both in-group favoritism and out-group derogation.

• In-group favoritism is defined as positive orientations towards one’s own racial/ethnic group, while out-group derogation constitutes negative orientations towards other racial/ethnic groups.
Applicability

• What is the overall quality of the evidence?
  ➢ Key questions
    • Does the interpretation provide a clear summary?
    • Is the conclusion clearly justified by the data?
  – Best practice
    • Does the conclusion state the basis for judgments, put the results in context, and identify areas for new research?
• Asking health care providers to assess their own level of racism through items such as “When working with minority individuals, I am confident that my conceptualization of client problems do not consist of stereotypes and biases” is likely to trigger strong social desirability bias that threatens response validity.
Applicability

- Are the benefits worth the costs and potential risks?
  - Does the average effect size cross a test or therapeutic threshold?
• Although no measures identified in this review assessed this, stereotyping is a cognitive process that can’t be effectively suppressed or denied, but rather needs to be recognized and accepted to avoid discriminatory behavior.
Explicit prejudice reduction requires cognitive change through egalitarianism-related, non-prejudicial goals and increased awareness of contemporary racism, whereas implicit prejudice reduction requires decreased fear of, and positive contact with, members of a specific group.
Despite a burgeoning interest in racism as a contributor to these disparities, we still know relatively little about the extent of healthcare provider racism or how best to measure it. This review provided evidence that healthcare provider racism exists, and demonstrates a need for more sophisticated approaches to assessing and monitoring it.
Summary

• Key points
  – A good Systematic Review is the best place to start when seeking evidence about the effects of health interventions.
Users’ Guides to the Medical Literature Education Guides

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• So what are possible solutions to address the acknowledged racism?
• The authors state that a more rigorous, sophisticated and systematic approach to monitoring racism among health care providers is needed.

• Also recommended are the implementation and evaluation of multi-strategy, evidence-based, anti-racism approaches that dispel false beliefs and counter stereotypes, build empathy and perspective taking, develop personal responsibility and positive group norms, as well as promote intergroup contact and intercultural understanding within healthcare settings is also required.
• Enhancing cultural competence of students through online videos?
• Bridging the Gap project – University of British Columbia
• Advocacy as a more explicit part of health care provider training.

• A curriculum on marginalized populations should ask trainees to identify power differentials, why they occur, and how they are replicated in the provision of medical care.
Medical school example – each noon rounds presenter was asked to additionally answer three questions during their presentation: 1). How do the social determinants of health pertain to your topic? 2). How are certain groups at increased risk? and 3). What are advocacy opportunities for physicians at the clinical or policy level?
Interdisciplinary Collaboration

Specific Multicultural course work
Experiential Learning

• Opportunities for student experiences outside the acute care hospital experience for students to contextualize their patients’ situations.
• Increased diversity of the health care workforce. This has been identified as a federal health care priority.

• Increased community based health care providers.

• The discussion comes full circle.


