A systematic review of equity issues in epidemiological studies on health inequalities: the case of asthma in adults

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Overview

• Background
• Purpose
• Methods
• Preliminary Results
• Conclusions
Background: Inequity & the Social Gradient

Background: Inequity vs. Inequality

• Moral and ethical dimension to inequity

• Inequitable differences:
  – Unnecessary, avoidable, unfair, unjust (Whitehead, 1991)
  – Potentially shaped by policies (Braveman, 2006)
  – Disadvantaged social groups systematically experience worse health or greater health risks (Braveman, 2006)

• Context is important
Purpose

To examine the extent to which epidemiological studies (cross-sectional & cohort studies) on asthma that identify health inequalities explicitly address the issue of equity.
Methods: Search Strategy

- Systematic search of Medline (Ovid Medline 1950-present)
- *A priori* defined search string

**Keywords:**
- Asthma
- Cohort studies, cross-sectional studies, population surveillance, regression analysis, odds ratio, prevalence
- Socioeconomic factors, health status disparities, healthcare disparities, health service accessibility, inequities, inequalities, gradient, ethnology, ethnic groups, poverty
Methods: Relevance Assessment

Inclusion Criteria:

• Published in English during the years 2005-2009
• Primary research study or original secondary analysis of previously collected data
• Outcome variables include health outcomes directly related to asthma and/or health care utilization patterns directly related to asthma
• Outcome variables restricted to adult populations with asthma or at risk of developing asthma
• Data analysis demonstrates inequalities with respect to the outcome variables measured
• Compares respondents on the basis of: SES and/or gender and/or race/ethnicity and/or place of work and/or place of residence
Methods: Data Extraction

5 Categories of Data Extraction:

- Study information
- Inequalities
- Interventions & future research directions
- Equity issues (objective language count)
- Equity issues (subjective identification)
Preliminary Results

Citations identified
219

Ineligible
198

Eligible
21

Etiological
13

Health services
5

Both
3
Preliminary Results

Inequalities Identified By:

• Education
• Gender
• Health insurance status
• Housing environment (e.g. presence of allergens, use of coal for cooking)
• Job type
• Neighbourhood problem summary score
• Place of residence (rural vs. urban)
• Race/ethnicity
• Socioeconomic status (individual & neighbourhood)
Preliminary Results

Number of articles (n=21) with occurrences of the terms ‘equity’, ‘disparity’, and ‘inequality’

<table>
<thead>
<tr>
<th>Term</th>
<th># of Occurrences</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>0</td>
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<tr>
<td>Equity(ies)/Inequity(ies)</td>
<td>21</td>
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<tr>
<td>(100%)</td>
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<tr>
<td>Equality(ies)/Inequality(ies)</td>
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<tr>
<td>(90.5%)</td>
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<tr>
<td>Disparity(ies)</td>
<td>16</td>
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<td>(76.1%)</td>
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Note: Number of occurrences does not include those in the reference section of the article.
Preliminary Results

Number of occurrences of the terms ‘equity’, ‘disparity’, and ‘inequality’ by country in which the study was conducted

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<th>Term</th>
<th>Total # Articles with 1 ≤ occurrence(s)</th>
<th># of Articles by Country</th>
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<td>Equality(ies)/Inequality (ies)</td>
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<tr>
<td>Disparity(ies)</td>
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<td>0</td>
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</table>

Note: Number of occurrences does not include those in the reference section of the article.
Abbreviations: Aus=Australia; Can=Canada; Swe=Sweden; UK=United Kingdom; US=United States
Preliminary Results

Equity Issue:
“In this study, regardless of atopic status, subjects with a lower educational level had a higher risk of work related asthma. This association may be the consequence of environmental exposure at the workplace. Low educational level may be associated with a lower professional qualification, limiting the working options and rendering the individuals more predisposed to working in high risk places.”

Proposed Intervention:
“Young adults could be screened for early onset bronchial hyperresponsiveness as a powerful preventive tool...Preventive interventions for work related asthma should be aimed especially at people with low schooling.”

Preliminary Results

Selected Equity Issues:

- Access to public or private transport and ambulance service use for asthma (Smith et al., 2009)

- Economic barriers to seeking asthma care (e.g. insurance coverage, sick leave from work, out-of-pocket medical expenses) (Hoffmann et al., 2008)

- Proximity of residence to main road, factory, or chimney (Wilson et al., 2008)
Conclusions

• Although no studies included in this review explicitly use equity terms, many contain some discussion of issues that could be considered equity issues.

• The lens through which health issues are studied and results are discussed may have implications for the types of interventions proposed.
References


