Review Exercises

Introducing...

Social Epidemiology

→ Comprehensive Care

→ PDSA Cycle

Aya Goto
Age Adjusted Prevalence of Diabetes* Among Adults by Education in NYC, 2004

Prevalence & 95% CI

*  (1) A fasting glucose of $\geq 126$ mg/dL, or (2) report that a health care provider had told them that they had diabetes (other than during pregnancy for women).

Data from: New York City Department of Health and Mental Hygiene, EpiQuery website for NYCHANCES data
What is “prevalence”?  
What is “95%CI”?  
What is the main result?  
What is the clinical implication?  
How would you change your practice?
Study among 626,264 patients receiving primary care in Canada

<table>
<thead>
<tr>
<th>Social complexity factors (extracted)</th>
<th>0 factor</th>
<th>1 factor</th>
<th>2 factors</th>
<th>3 factors</th>
<th>4 factors</th>
<th>More than 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teen mother</td>
<td>0.95</td>
<td>0.86</td>
<td>0.70</td>
<td>0.69</td>
<td>0.52</td>
<td></td>
</tr>
<tr>
<td>Mental disease</td>
<td>1.00</td>
<td>0.95</td>
<td>0.86</td>
<td>0.70</td>
<td>0.69</td>
<td>0.52</td>
</tr>
<tr>
<td>Income assistance</td>
<td></td>
<td></td>
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<tr>
<td>Frequent moving</td>
<td></td>
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</tbody>
</table>

What is this study design?
What is “odds ratio”?
What is the main result?
What is the clinical implication?
How would you change your practice?
Health record strategy for comprehensive care

Table 1. Institute of Medicine Phase 2 Report: Summary of Candidate Domains for Inclusion in All Electronic Health Records

- Race/ethnicity*
- Education
- Financial resource strain
- Stress
- Depression*
- Physical activity
- Nicotine use/exposure*
- Alcohol use*
- Social connections/social isolation
- Exposure to violence: intimate partner violence
- Neighborhood characteristics (eg, median income within census tract)

*Already routinely captured in electronic health records.

New outcomes for comprehensive care

“The World Health Organisation (WHO) in 1948 defined health as a "a state of complete physical, mental, and social well being not merely the absence of disease or infirmity". ... it clearly indicates what should be the goal of health care intervention. ... Modern medicine is slowly beginning to recognise the importance of the perspective of the patient in health care and more investigations are needed to understand the importance of the inter-relationships among health needs, satisfaction, and quality of life.”

PDSA cycle: Implementing at the organizational level

Plan: Plan a change or test aimed at improvement
Do: Carry out the change on a small scale
Study: Examine the results
Act: Adopt the change, and run through cycle again

Example of applying PDSA cycle

**PLAN**
Introducing auditing

**DO**
1. Three repeated audits of diabetes management by 15 GPs.
   - Diabetes management relating to screening for complications
   - Prescribing patterns to control blood sugar, BP and cholesterol
2. General practitioners reflected on the experience.

**SEE**
Changes in GP behaviors and patient outcomes over the 3 years

**ACT**
Implement the periodic auditing widely?

DO ← How do you design?