Opportunities in CKD Research

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Outline

- Gaps in CKD care
- Opportunities
  - Intensity of Care
  - Clinical Decision Support
  - Shared Decision Making
What Do We Know?

Many with CKD not even aware

KEEP Study
• 10,813 people at high risk of CKD
• 49 states
What Do We Know?

If identified not receiving recommended tx

<table>
<thead>
<tr>
<th></th>
<th>Stage of CKD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Stage 3a (n=25,016)</td>
</tr>
<tr>
<td>BP &lt;130/80</td>
<td>39.4%</td>
</tr>
<tr>
<td>Prescription for ACE/ARB in last year</td>
<td>49.6%</td>
</tr>
<tr>
<td>LDL &lt;100</td>
<td>43.8%</td>
</tr>
<tr>
<td>NSAID in chart past year</td>
<td>14.3%</td>
</tr>
</tbody>
</table>

PBRN with 120 practices in 38 states
What’s Important to Primary Care?

3 studies

– Upstate NY/ UK/ Wisconsin
– Focus groups or interviews
Barriers

Guidelines
- Lack of awareness of CKD guidelines
- Guidelines not flexible for different patients
- Lack of trust of guidelines

Systems
- Systems designed for acute not chronic care
- Lack of decision support tools
- Distribution of work within the practice team
- Multiple physicians (specialists)
- Access to Nephrology
Barriers

**Provider**
- Desire for more CKD practice guidance
- Variability in the treatment of complications
- Uncertainty of timing for nephrologist referral
- Identifying and discussing CKD in older people and patients with stage 3A

**Patient/Society**
- Lack of recognition of importance of CKD
- Nonadherence to treatment plans
Opportunities/ Controversies

Labeling older patients with Stage 3 CKD

VIEWPOINT

An Age-Calibrated Classification of Chronic Kidney Disease

Richard Glassock, MD
Geffen School of Medicine, University of California-Los Angeles
Laguna Niguel, California.

VIEWPOINT

Chronic Kidney Disease in Older People

Andrew S. Levey, MD
Division of Nephrology, Tufts Medical Center, Boston, Massachusetts.

Should current guidelines be changed to require age calibration for diagnosis and classification of chronic kidney disease? — No.

Chronic kidney disease (CKD) is a global public health problem. The prevalence of CKD is increasing due to the aging of the population and the rising incidence of obesity and diabetes. Current guidelines for the diagnosis and classification of CKD are based on the estimated glomerular filtration rate (eGFR) and albuminuria. However, there is growing evidence that age-related changes in renal function and albuminuria can lead to misclassification of CKD in older people.

The problem is that age-associated changes in renal function and albuminuria can lead to misclassification of CKD in older people. For example, a 70-year-old patient with an eGFR of 70 mL/min/1.73 m² and albuminuria may meet the criteria for Stage 3 CKD, but this patient may not have a significant risk of kidney disease.

One potential solution to this problem is to develop age-calibrated classification systems for CKD. Such systems would take into account the normal age-related changes in renal function and albuminuria. This would help to avoid over-diagnosis of CKD in older people.

However, there are also potential pitfalls to consider. First, age-calibrated classification systems may become overly complex and difficult to apply in clinical practice. Second, there is concern that age-calibrated classification systems may lead to over-treatment of older people with CKD.

In conclusion, developing age-calibrated classification systems for CKD is an important area for future research. However, it is important to carefully consider the potential benefits and risks of such systems before they are implemented in clinical practice.
Diagnosing Older Patients with CKD

- Majority of older patients Stage 3
- Increased mortality with decreasing eGFR
- Relative increase in mortality lower with increasing age
- No evidence that treatment will decrease risk in older patients
Potential Questions

- Should the diagnosis of CKD change in older patients?
- What are the harms in diagnosing older patients with CKD?
- Should guideline recommendations for care change based on age?
Opportunities/ Controversies

Role of clinical decision support/ EHR in improving CKD care
Clinical Decision Support

- Registries alone
  - Mixed results

- Integrated Solutions
  - Case managers
  - Computer decision support
  - Academic detailing/audit and feedback
  - Improvement in process measures

- No evidence for improvement in patient outcomes
Potential Questions

- What is the best design of CDS to support CKD care?
- How do you best incorporate CDS into clinic workflow to maximize benefit?
- Who should use the CDS?
- Can e-consults improve care while minimizing nephrology visits?
Opportunities/ Controversies

- Shared decision making in CKD diagnosis and treatment
Shared Decision Making (SDM)

Information Exchange
- Physician informs patient about
  - Treatment options
  - Benefits and risk of each option
- Patient provides physician with
  - Values, preferences, lifestyle, beliefs
  - Knowledge about illness and its treatment

Deliberation

Deciding on Treatment

Charles, Social Science and Medicine 1999
SDM – Presenting Risk to Patients

- Avoid the use of qualitative descriptors
  - High risk, low risk
- Use event rates or natural frequencies to describe risks
- Express benefits in absolute terms
  - Absolute risk reduction
- Add graphical representations
  - Bar Charts or Icon Arrays

Zipkin, Annals of Internal Medicine 2014
SDM – Determining Quality of Decision

Decisional conflict scale used in research

- Decisional conflict increases when person:
  1) feels uninformed about the alternatives, benefits and risks
  2) is unclear about personal values
  3) feels unsupported in making a choice or pressured to choose on course of action.

Higher conflict scores correlates with delaying vaccinations or mammograms
B. Considering the option you prefer, please answer the following questions:

<table>
<thead>
<tr>
<th></th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neither Agree Or Disagree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I know which options are available to me.</td>
<td>[0]</td>
<td>[1]</td>
<td>[2]</td>
<td>[3]</td>
<td>[4]</td>
</tr>
<tr>
<td>2. I know the benefits of each option.</td>
<td>[0]</td>
<td>[1]</td>
<td>[2]</td>
<td>[3]</td>
<td>[4]</td>
</tr>
<tr>
<td>3. I know the risks and side effects of each option.</td>
<td>[0]</td>
<td>[1]</td>
<td>[2]</td>
<td>[3]</td>
<td>[4]</td>
</tr>
<tr>
<td>4. I am clear about which benefits matter most to me.</td>
<td>[0]</td>
<td>[1]</td>
<td>[2]</td>
<td>[3]</td>
<td>[4]</td>
</tr>
<tr>
<td>5. I am clear about which risks and side effects matter most.</td>
<td>[0]</td>
<td>[1]</td>
<td>[2]</td>
<td>[3]</td>
<td>[4]</td>
</tr>
<tr>
<td>6. I am clear about which is more important to me (the benefits or the risks and side effects).</td>
<td>[0]</td>
<td>[1]</td>
<td>[2]</td>
<td>[3]</td>
<td>[4]</td>
</tr>
<tr>
<td>7. I have enough support from others to make a choice.</td>
<td>[0]</td>
<td>[1]</td>
<td>[2]</td>
<td>[3]</td>
<td>[4]</td>
</tr>
<tr>
<td>8. I am choosing without pressure from others.</td>
<td>[0]</td>
<td>[1]</td>
<td>[2]</td>
<td>[3]</td>
<td>[4]</td>
</tr>
<tr>
<td>9. I have enough advice to make a choice.</td>
<td>[0]</td>
<td>[1]</td>
<td>[2]</td>
<td>[3]</td>
<td>[4]</td>
</tr>
<tr>
<td>10. I am clear about the best choice for me.</td>
<td>[0]</td>
<td>[1]</td>
<td>[2]</td>
<td>[3]</td>
<td>[4]</td>
</tr>
<tr>
<td>11. I feel sure about what to choose.</td>
<td>[0]</td>
<td>[1]</td>
<td>[2]</td>
<td>[3]</td>
<td>[4]</td>
</tr>
<tr>
<td>12. This decision is easy for me to make.</td>
<td>[0]</td>
<td>[1]</td>
<td>[2]</td>
<td>[3]</td>
<td>[4]</td>
</tr>
<tr>
<td>13. I feel I have made an informed choice.</td>
<td>[0]</td>
<td>[1]</td>
<td>[2]</td>
<td>[3]</td>
<td>[4]</td>
</tr>
<tr>
<td>14. My decision shows what is important to me.</td>
<td>[0]</td>
<td>[1]</td>
<td>[2]</td>
<td>[3]</td>
<td>[4]</td>
</tr>
<tr>
<td>15. I expect to stick with my decision.</td>
<td>[0]</td>
<td>[1]</td>
<td>[2]</td>
<td>[3]</td>
<td>[4]</td>
</tr>
<tr>
<td>16. I am satisfied with my decision.</td>
<td>[0]</td>
<td>[1]</td>
<td>[2]</td>
<td>[3]</td>
<td>[4]</td>
</tr>
</tbody>
</table>
Shared Decision Making

- What is the best measure to determine if a patient made the “correct” decision?
- At what point in the process should clinical decision aids be used?
- How will true shared decision making impact quality of care metric performance?
Diagnosis of CKD in older patients
Clinical Decision Support and the EHR to improve CKD care
Shared Decision Making


References


References


Table 3. Examples of Common Numerical Methods of Risk Communication to Show Risk for Stroke With Drug A Versus Placebo

<table>
<thead>
<tr>
<th>Method</th>
<th>Placebo</th>
<th>Drug A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Event rate</td>
<td>24%</td>
<td>16%</td>
</tr>
<tr>
<td>Natural frequency</td>
<td>24 out of 100</td>
<td>16 out of 100</td>
</tr>
<tr>
<td>ARR (can be stated as natural frequency or event rate)</td>
<td>–</td>
<td>8% or 8 out of 100</td>
</tr>
<tr>
<td>RRR</td>
<td>–</td>
<td>33%</td>
</tr>
<tr>
<td>NNT</td>
<td>–</td>
<td>13</td>
</tr>
</tbody>
</table>

ARR = absolute risk reduction; NNT = number needed to treat; RRR = relative risk reduction.
Bar Charts

Bar Graph Showing Total Population: Drug A Reduces Risk for Stroke in Total Population

- Stroke
- No stroke

Icon Arrays

Two-Icon Arrays: Risk for Stroke With Drug A Versus Placebo

Incremental Risk Icon Array: Risk for Stroke

- Stroke with drug A
- Stroke with no treatment
- No stroke