KDIGO Overview

Bertram Kasiske, MD
Mandaluyong City
April 23, 2014
KDIGO Overview

- What is KDIGO?
- What is a clinical practice guideline?
- How does KDIGO produce guidelines and conferences?
- How are we doing (results of a survey)?
Kidney Disease: Improving Global Outcomes (KDIGO) was founded in 2003 and incorporated in Belgium as a foundation in the public interest. After almost 10 years of stellar management by the US National Kidney Foundation, on October 1, 2012, KDIGO became a wholly independent and truly global organization, committed to improving outcomes for patients with kidney disease worldwide.
KDIGO leadership

Co-chairs: Bertram Kasiske  USA
         David Wheeler  UK

Exec Committee: Josef Coresh  USA
                Angel de Francisco  Spain
                Kai-Uwe Eckardt  Germany
                Michel Jadoul  Belgium
                Saraladevi Naicker  South Africa
                Gregorio Obrador  Mexico
                Yusuke Tsukamoto  Japan
                Christoph Wanner  Germany
                Helena Zakharova  Russia

Treasurer: Nathan Levin  USA

Staff: John Davis, CEO
      Danielle Green, Managing Dir
      Michael Cheung, Chief Science Officer
      Tanya Green, Communications Dir
Improving the care and outcomes of kidney disease patients worldwide through the development and implementation of global clinical practice guidelines.
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- What is KDIGO?
- What is a clinical practice guideline?
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The term “practice guideline” likely came from the mountain climbing practice of marking best paths with rope.

1990: “systematically developed statements to assist practitioner and patient decisions about appropriate health care for specific clinical circumstances”

2011: “statements that include recommendations intended to optimize patient care that are informed by a systematic review of evidence and an assessment of the benefits and harms of alternative care options.”
Guidelines are not ...
The volume of evidence is too great for clinicians to know. Clinicians cannot be expected to judge study quality. Disclosing the lack of evidence can stimulate research.
Guidelines should be trustworthy!

Clinical Practice Guidelines We Can Trust

For more information visit www.iom.edu/cpgstandards
Eight IOM standards for developing trustworthy guidelines

- Establishing Transparency
- Management of Conflict of Interest
- Guideline Development Group Composition
- Clinical Practice Guideline–Systematic Review Intersection
- Establishing Evidence Foundations for and Rating Strength of Recommendations
- Articulation of Recommendations
- External Review
- Updating

Guidelines should

- be based on a **systematic review** of the existing evidence;
- be developed by a knowledgeable, **multidisciplinary panel** of experts and representatives from key affected groups;
- consider important patient **subgroups and patient preferences**, as appropriate;
- be based on an explicit and **transparent** process that minimizes distortions, biases, and conflicts of interest;
- provide a clear explanation of the logical relationships between alternative care options and health outcomes, and provide ratings of both the **quality of evidence** and the **strength** of the recommendations; and
- be **reconsidered and revised** as appropriate when important new evidence warrants modifications of recommendations.

KDIGO adheres to IOM standards for trustworthy guidelines

- The need for a guideline originates from stakeholders.
- Public comment is sought.
- Work Group members include adequate domain expertise, stakeholder and international representation.
- An independent Evidence Review Team is used.
Grading the quality of the evidence and the strength of recommendations

- 2 components of final grade → granularity and transparency
- Evidence quality influences, but does not dictate the strength of a recommendation
- "Neutral" alphanumeric code

<table>
<thead>
<tr>
<th>Quality of evidence</th>
<th>High</th>
<th>A</th>
<th>Strength of recommendation</th>
<th>1</th>
<th>Corresponds to &quot;strong&quot; in GRADE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moderate</td>
<td>B</td>
<td></td>
<td></td>
<td>2</td>
<td>Corresponds to &quot;weak&quot; in GRADE</td>
</tr>
<tr>
<td>Low</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very low</td>
<td>D</td>
<td></td>
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e.g. (Grade 1C) or (Grade 2D) … 8 options

Option to include statements that are not graded
Clinical practice guidelines influence physician practice, quality measures, and insurance coverage decisions. Given this influence, clinical practice guidelines need to be developed with greater transparency and accountability. The committee recommends that professional societies and other groups that develop practice guidelines not accept direct industry funding for guideline development and generally exclude individuals with conflicts of interest from the panels that draft the guidelines. In addition, these groups should make public their conflict of interest policies, their funding sources, and any financial relationships panel members have with industry.
KDIGO adheres to IOM standards for trustworthy guidelines

- The need for a guideline originates from stakeholders.
- Public comment is sought.
- Work Group members include adequate domain expertise, stakeholder and international representation.
- An independent Evidence Review Team is used.
- Conflicts of interest are managed.
- No direct, single-industry sponsorship of a guideline.
KDIGO Overview

• What is KDIGO?
• What is a clinical practice guideline?
• How does KDIGO produce guidelines and conferences?
• How are we doing (results of a survey)?
Core KDIGO guideline lifecycle

- Controversies Conferences
- Clinical Practice Guidelines
- Implementation Task Force
- Clinical Practice Conferences
- Revision & Updates
Controversies Conferences

Controversies Conferences examine significant nephrology topics that result in a published position paper to share with the community.
**Impact of Controversies Conferences**

**New Terminology**
- NKF-K/DOQI definition of CKD

**WHO Collaboration**
- Growing recognition of CKD as a global public health problem
- Renal Working Group developed ICD-11 codes recruited and managed by KDIGO

**New Research**
- CKD Prognosis Consortium (CKD-PC)
- An international research group, composed of investigators who share data for the purpose of collaborative meta-analyses to study prognosis in CKD
Clinical Practice Guidelines are international evidence-based guidelines in nephrology developed by KDIGO.
Published KDIGO guidelines

Hepatitis C  April 2008
Mineral Bone Disorder  July 2009
Transplant Recipient  Oct 2009

Acute Kidney Injury  March 2012
Glomerulonephritis  June 2012
Anaemia  August 2012

Blood Pressure in CKD  November 2012
Diagnosis and Management of CKD  January 2013
Lipid Management  November 2013
Evidence Review Center for this guideline is the AHRQ Center at the University of Minnesota. This guideline is being written in collaboration with The Transplantation Society (TTS). It will cover the care, selection, risk assessment and prognosis of the living kidney donor.

**TTS Representatives**

Patricia Adams  
USA  

Lorenzo Gallon  
USA  

**Work Group Co-Chairs**

Amit Garg  
Canada  

Krista Lentine  
USA  

**Work Group Members**

Josefina Alberu  
Mexico  

Mohamed Bakr  
Egypt  

Josep Campistol  
Spain  

Cathy Garvey  
USA  

Sandeep Gularia  
India  

Andrew Levey  
USA  

Philip K. T. Li  
Hong Kong  

Jose Osmar Medina-Pestana  
Brazil  

Dorry Segev  
USA  

Faissal Shaheen  
Saudi Arabia  

Sandra Taler  
USA  

Kazunari Tanabe  
Japan  

Linda Wright  
Canada  

Martin Zeier  
Germany
RCTs in different fields

- Nervous system
- Cardiovascular
- Cancer
- Nutrition
- Infectious disease
- Immunology
- Respiratory Medicine
- Gastroenterology
- Musculoskeletal
- Dermatology
- Endocrinology
- Hematology
- Nephrology

Palmer et al. AJKD 2011; 58: 335-337
Transplant guideline quality of evidence and strength of recommendations

<table>
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*Example: (Grade 1C) or (Grade 2D) … 8 options
Option to include statements that are not graded

Transplant guideline example
Transplant guideline quality of evidence and strength of recommendations

Graded 198 (80.5%)

Not Graded 45 (19.5%)
Transplant guideline quality of evidence

- C (38.9%)
- D (45.5%)
- B (13.6%)
- A (2.0%)
Transplant guideline strength of recommendations

1
50 (25.3%)

2
148 (74.7%)
Transplant guideline quality of evidence and strength of recommendations
The **Implementation Task Force** promotes awareness, dissemination, adoption & clinical integration of guidelines locally, around the world.
Implementation Task Force members represent 80 countries, and voluntarily work to disseminate and implement KDIGO Guidelines through presentations, and publication of local and regional translations and adaptations.

Chair: Yusuke Tsukamoto, Japan
Task Force responsibilities

- Publish translations and commentaries in countries’ journals in the local language
- Collaborate with local and regional societies on presentations, adaptations and publications
- Include KDIGO on stakeholder meeting agendas
- Develop patient and professional education tools to promote use of KDIGO guidelines in clinical practice
- Integrate KDIGO guidelines into local clinical practice
- Include KDIGO messages in local training programs
Core KDIGO guideline lifecycle

- Controversies Conferences
- Clinical Practice Guidelines
- Revision & Updates
- Clinical Practice Conferences

Clinical Practice Conferences assist in the local dissemination, adaptation and clinical integration of KDIGO guidelines.

Implementation Task Force

Kidney Disease: Improving Global Outcomes
Clinical Conferences

New Delhi Clinical Practice Conference
17 March, 2012
200 local nephrologists
10 KDIGO participants

Shanghai Clinical Practice Conference
4-5 February, 2012
700 local nephrologists
30 KDIGO participants
KDIGO overview

• What is KDIGO?
• What is a clinical practice guideline?
• How does KDIGO produce guidelines and conferences?
• How are we doing (results of a survey)?
KDIGO achievements

- One of few global guideline efforts
- 16 Controversies Conferences to date
- 9 published global guidelines
- Paradigm-changing, including examples of
  - A landmark conference on CKD Prognosis
  - A CKD classification and system
  - Clinical Practice Conferences to ensure practical application of KDIGO guidelines locally
The survey was administered on iPads in the KDIGO booth.
The KDIGO Guideline Implementation Survey was administered from the KDIGO booth at:

- ERA-EDTA – Istanbul, Turkey (May 18-21, 2013)
- WCN – Hong Kong, China (May 31- June 3, 2013)
- ASN Kidney Week – Atlanta, USA (November 6-10, 2013)

The survey was voluntary and respondents were able to skip questions without answering.

With over 340 responses for many questions, this survey provides insight into how KDIGO guidelines are being used globally.
• 88% of the respondents were nephrologists.
• Top 5 countries of respondents:
  1. China
  2. India
  3. The Philippines
  4. Egypt
  5. Saudi Arabia
Do you agree with these statements?

KDIGO guidelines help me make informed decisions when managing patients with CKD.

- 44% strongly agree
- 46% agree
- 8% neutral

KDIGO guidelines are my main source of information when I manage patients with CKD and I try to adapt their recommendations to individual patients.

- 32% strongly agree
- 50% agree
- 14% neutral

n1 = 312, n2 = 314
Do you agree or disagree with these statements?

- As each patient is different, KDIGO guidelines are of limited use to me.
  - 6% strongly agree
  - 23% agree
  - 23% neutral
  - 39% disagree
  - 8% strongly disagree

- KDIGO guidelines are based on the best evidence available.
  - 41% strongly agree
  - 47% agree
  - 8% neutral

- Opinion-based statements, which represent the views of experts, are useful and should be included in the KDIGO guidelines.
  - 22% strongly agree
  - 54% agree
  - 17% neutral
  - 6% disagree

n1 = 309, n2 = 312, n3 = 311
How often do you and your colleagues refer to the KDIGO guidelines to support treatment decisions?

- Frequently: 62%
- Occasionally: 28%
- Only when treating complex patients: 8%
- Only when treating uncomplicated patients: 1%
- Do not use the KDIGO guidelines: 1%

n = 312
Which one of these statements best describes how you and your colleagues use the KDIGO guidelines in the care of patients?

<table>
<thead>
<tr>
<th>Option</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refer to them when making treatment decisions.</td>
<td>42%</td>
</tr>
<tr>
<td>Refer to summary documents or educational tools based on KDIGO guidelines.</td>
<td>36%</td>
</tr>
<tr>
<td>Memorize the KDIGO guideline recommendations and base treatment decisions on them.</td>
<td>21%</td>
</tr>
<tr>
<td>Do not use the KDIGO guidelines when making treatment decisions.</td>
<td>1%</td>
</tr>
</tbody>
</table>

Three choices per user, n = 305
If you and your colleagues do not use the KDIGO guidelines, what other sources of information are used for treatment decisions?

- Medical journals / review articles: 58%
- Up-to-Date / Medscape: 48%
- Internet: 32%
- Local, regional or government nephrology guidelines: 27%
- Knowledge gained from experience: 22%
- Protocols written by our institution: 21%
- Congress presentations: 18%
- Local expert opinion: 16%
- Views of international opinion leaders: 16%
- Other: 1%

(up to two choices per user n = 349)
If you and your colleagues do not use the KDIGO guidelines, what are the main reasons?

<table>
<thead>
<tr>
<th>Reason</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>The guidelines do not reflect the situation in my country</td>
<td>22%</td>
</tr>
<tr>
<td>Lack of time</td>
<td>21%</td>
</tr>
<tr>
<td>Discrepancies when compared to local/internal protocols</td>
<td>16%</td>
</tr>
<tr>
<td>Lack of familiarity with KDIGO guidelines</td>
<td>16%</td>
</tr>
<tr>
<td>Complexity and length of the KDIGO guidelines</td>
<td>14%</td>
</tr>
<tr>
<td>Conflict with reimbursement policies</td>
<td>12%</td>
</tr>
<tr>
<td>The guidelines do not contain enough evidence to make recommendations</td>
<td>8%</td>
</tr>
<tr>
<td>Disagreement with the guideline recommendations</td>
<td>7%</td>
</tr>
</tbody>
</table>

n = 347
How could the presentation of the KDIGO guidelines be improved to better meet your needs?

- No improvement is necessary: 9%
- Publish easy to use tools for quick reference: 39%
- Translate the KDIGO guidelines into your language: 21%
- Shorten and simplify the KDIGO guideline document: 32%

n = 317
In the 2009 KDIGO CKD-MBD Guideline, did the recommendations on phosphorus control influence your treatment of patients?

- Yes, considerably: 58%
- Yes, somewhat: 33%
- Did not refer to them: 8%
- Not really: 0%
- Found them contrary to my clinical judgement: 1%

n = 158
In the 2009 KDIGO CKD-MBD Guideline, the recommendations regarding the use of phosphate binders:

- I did not read them: 4%
- Provided no help in choosing a binder: 7%
- Made me more confused than I had been on the topic: 4%
- Left the issue unclear to me: 13%
- Helped me to determine which binders to use: 72%

n = 164
Did the 2009 KDIGO CKD-MBD Guideline provide sufficient guidance for you regarding the targets for blood levels of calcium, phosphorus and PTH?

- **Yes:** 80%
- **No:** 13%
- **Made me more confused:** 7%

$n = 187$
Implementation survey highlights

• KDIGO Guidelines are used as a primary reference by nephrologists.
• KDIGO Guidelines would be preferred in shorter, more concise formats such as booklets and pocket guides.
• When KDIGO Guidelines are not used, the primary sources for information include peer-reviewed journal articles and Up to Date/Medscape.
• KDIGO Guidelines need to be adapted for local use.
Where do we go from here?

Controversies Conferences
- Examine significant nephrology topics that result in a published position paper to share with the community

Clinical Practice Guidelines
- Develop international, evidence-based guidelines in nephrology

Implementation Task Force
- Promote awareness, dissemination, adoption & clinical integration of guidelines locally, around the world

Clinical Practice Conferences
- Assist in the local dissemination, adaptation and clinical integration of KDIGO guidelines
Thank you …

for your participation and support!