MOVING FROM EFFICACY TO EFFECTIVENESS & IMPLEMENTATION: THE GUIDELINE IMPLEMENTATION PROCESS

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University of Calgary
Alberta, CANADA
Disclosure of Interests

- Hoffman La-Roche – investigator initiated research grant
Objectives

1. Describe the Knowledge-to-Action cycle as a framework to implement knowledge into practice
2. Use the KDIGO CKD guidelines as an example of guideline implementation
3. Describe an approach for adaptation of guidelines to facilitate uptake in LMIC
What do we know about dissemination and uptake of guidelines?

Steps: Awareness, Agreement, Adoption, Adherence

<table>
<thead>
<tr>
<th>Steps</th>
<th>% Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Awareness</td>
<td>90-98%</td>
</tr>
<tr>
<td>Agreement</td>
<td>67-70%</td>
</tr>
<tr>
<td>Adoption</td>
<td>46-78%</td>
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<tr>
<td>Adherence</td>
<td>30-35%</td>
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</table>
The need for improved uptake of the KDIGO glomerulonephritis guidelines into clinical practice in Canada: a survey of nephrologists

Sean Barbour\textsuperscript{1,2,3}, Monica Beaulieu\textsuperscript{1,2,3}, Jagbir Gill\textsuperscript{1,2,3}, Gabriela Espino-Hernandez\textsuperscript{2}, Heather N. Reich\textsuperscript{4} and Adeera Levin\textsuperscript{1,2,3}

Up to 45\% reported treatment strategies not in keeping with KDIGO GN guidelines
Evidence-practice gap

< 50% of Canadians receive appropriate preventative care

25% receive care that is unnecessary or harmful
CKD Guidelines: An Example

KDIGO 2012 Clinical Practice Guideline for the Evaluation and Management of Chronic Kidney Disease

VOLUME 3 | ISSUE 1 | JANUARY 2013
http://www.kidney-international.org
Step 1: Identify evidence-practice gap

Management of CKD in primary care
Step 2: Adapt CPG for local use

ADAPTE process (www.adapte.org)
- int’l collaboration aimed at facilitating efficient, high quality adapted CPG
- learning modules + tools available

Management of CKD in primary care
Review

A systematic review and quality appraisal of international guidelines for early breast cancer systemic therapy: Are recommendations sensitive to different global resources?

S. Gandhi, S. Verma, J.-L. Ethier, C. Simmons, H. Burnett, S.M.H. Alibhai

- Recommendations are not made with consideration of different global resources

- Recommendations are poor at evaluating implementation barriers and resources
The ADAPTE process

<table>
<thead>
<tr>
<th>PHASES</th>
<th>TASKS</th>
<th>ASSOCIATED MODULES</th>
</tr>
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<tbody>
<tr>
<td>Set Up Phase</td>
<td>PREPARE FOR ADAPTE PROCESS</td>
<td>Preparation</td>
</tr>
<tr>
<td>Adaptation Phase</td>
<td>DEFINE HEALTH QUESTIONS</td>
<td>Scope and Purpose</td>
</tr>
<tr>
<td></td>
<td>SEARCH AND SCREEN GUIDELINES</td>
<td>Search and Screen</td>
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<tr>
<td></td>
<td>ASSESS GUIDELINES</td>
<td>Assessment</td>
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<tr>
<td></td>
<td>DECIDE AND SELECT</td>
<td>Decision and Selection</td>
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<tr>
<td></td>
<td>DRAFT GUIDELINE REPORT</td>
<td>Customization</td>
</tr>
<tr>
<td>Finalization Phase</td>
<td>EXTERNAL REVIEW</td>
<td>External Review</td>
</tr>
<tr>
<td></td>
<td>PLAN FOR FUTURE REVIEW AND UPDATE</td>
<td>Aftercare planning</td>
</tr>
<tr>
<td></td>
<td>PRODUCE FINAL GUIDELINE</td>
<td>Final Production</td>
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</tbody>
</table>

www.adapte.org
Finalization Phase

External Review

Plan for Future Review and Update

Produce Final Guideline

Draft Guideline Report

Scope and Customization

External Review

Aftercare Planning

Final Production

Customization
Step 3: Assess barriers to uptake

**CPG Framework for Improvement**

- structured framework for identifying, describing and removing barriers to CPG implementation

- (barrier = reverse facilitator)

Management of CKD in primary care
Multiple barriers block translation of evidence into practice

**The Provider**
- Lack of motivation/clinical inertia
- Lack of awareness or knowledge of the evidence
- Disagreement with the intervention
- Lack of self-efficacy
- Overemphasis on potential side effects

**The Patient**
- Preferences/expectations/knowledge
- Patient adherence
- Competing promotional influences

**The Setting/System**
- Access to health care
- Affordability (for the individual and the system)
- Emphasis on acute symptoms rather than prevention
- Lack of time or resources
- Lack of incentives to change
- Lack of opinion leaders

Majumdar et al, JACC 2004;43:1738-42
<table>
<thead>
<tr>
<th>Patient-level Barriers</th>
<th>Physician-level Barriers</th>
<th>Health System-level Barriers</th>
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<tbody>
<tr>
<td><strong>Understanding kidney disease</strong></td>
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<tr>
<td>Have you ever been told you have kidney disease?</td>
<td>Have you ever had a blood test (serum creatinine) to check your kidney function?</td>
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<tr>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
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<tr>
<td>No</td>
<td>No</td>
<td>Not sure</td>
</tr>
<tr>
<td>Not sure</td>
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<tr>
<td><strong>Physician-level Facilitators</strong></td>
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### A PATIENT SURVEY TO UNDERSTAND KIDNEY DISEASE AND ITS MANAGEMENT

**Demographics**
1. First 3 digits of your postal code: __ __ __
2. Age: □ Under 50 years □ 50-64 years □ 65-74 years □ 75 years and older
3. Do you have diabetes? □ Yes □ No

**Understanding of kidney disease**
4. Have you ever been told you have kidney disease? □ Yes □ No □ Not sure
5. Have you ever had a blood test (serum creatinine) to check your kidney function? □ Yes □ No □ Not sure
6. Have you ever had your urine tested for protein? □ Yes □ No □ Not sure
7. If yes, was the protein in your urine higher than normal? □ Yes □ No
8. Do you feel that you have enough information to help you manage your kidney disease? □ Yes, definitely □ Yes, somewhat □ No, I need more information

**Care for kidney disease**
9. How easy is it for you to make an appointment to see your doctor or healthcare provider? □ Very easy □ Easy □ Difficult □ Very difficult
10. Would it be a problem for you to have your urine tested at a laboratory every 6-12 months? □ Yes □ No
11. If yes, what are some of the problems you might face? Tick all that apply. □ I don’t know where the nearest lab is □ I don’t know how to make an appointment □ The lab hours are not convenient for me □ Distance – too long to travel to nearest lab □ Travel to lab – don’t have a car (would need to take public transit, cab, arrange for a ride, etc) □ I have to wait too long at the lab □ Other (specify):

**Cost**
12. How satisfied are you with the service provided to you when you go to the laboratory? □ Very satisfied □ Satisfied □ Unsatisfied □ Very unsatisfied
13. Do you have a drug plan that covers all or part of the cost of drugs needed for your treatment? □ Yes □ No
14. In the last 12 months, how often have you had difficulty paying for services, equipment or medications you need to help you manage your health? □ Always □ Usually □ Sometimes □ Never

**Management of kidney disease**
15. How satisfied are you with the level of information your health team shares with you about your kidney disease? □ Very satisfied □ Satisfied □ Unsatisfied □ Very unsatisfied
16. Do you feel that you have adequate access to your own health information (for example lab test)? □ Strongly agree □ Agree □ Disagree □ Strongly disagree

Circle one for each of the following 2 questions:
17. How would you rate your understanding of...?

<table>
<thead>
<tr>
<th>Causes of kidney disease</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Importance of medication to treat kidney disease</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Importance of blood tests to monitor kidney disease</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
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18. Which of the following would make it easier for you to obtain lab results and treatment advice regarding your kidney disease?

| Lab results mailed to my home | 1 | 2 | 3 | 4 | 5 |
| Lab results sent by email | 1 | 2 | 3 | 4 | 5 |
| Lab results sent by text messaging to my cell phone | 1 | 2 | 3 | 4 | 5 |
| Lab results called to my home phone | 1 | 2 | 3 | 4 | 5 |
Step 4: Design an intervention

Cochrane Effective Practice and Organization of Care (EPOC) group
- international network focusing on interventions that improve the delivery, practice and organization of health care services

Rx for Change Database:
http://www.cadth.ca/en/resources/rx-for-change/database/intervention

Management of CKD in primary care
Direct vs mediated interventions:

KT intervention targeted to:

- Patient
- Provider

Intent to influence:

- Pt knowledge, skills, behavior, and/or health outcomes
- Provider knowledge, skills, and/or behavior
Examples of patient-direct & patient-mediated interventions

Patient-direct:

- Educational materials
- Mass media campaigns
- Patient decision aids
- Self-monitoring
- Enhancing adherence
- Electronic interventions (eHealth)

Patient-mediated:

- Question cards to prompt asking questions
- Patient decision aids
- Patients providing reports to providers
- Patients reporting results to providers (BP, A1c)
Community-Based Interventions to Promote Blood Pressure Control in a Developing Country

A Cluster Randomized Trial

Tazeen H. Jafar, MD, MPH; Juanita Hatcher, PhD; Neil Poulter, MD; Muhammad Islam, MSc; Shiraz Hashmi, MD; Zeeshan Qadri, MSc; Rasool Bux, MSc; Ayesha Khan, MSc; Fahim H. Jafary, MD; Aamir Hameed, MD; Ata Khan, MD; Salma H. Badruddin, PhD; and Nish Chaturvedi, MD, for the Hypertension Research Group

Supporting middle-cadre health care workers in Malawi: lessons learned during implementation of the PALM PLUS package

Sumeet Sodhi\textsuperscript{1,2,3*}, Hastings Banda\textsuperscript{4}, Damson Kathyola\textsuperscript{5}, Martias Joshua\textsuperscript{5,6}, Faye Richardson\textsuperscript{1}, Emmay Mah\textsuperscript{1}, Hayley MacGregor\textsuperscript{7}, Emmanuel Kanike\textsuperscript{1}, Sandy Thompson\textsuperscript{1}, Lara Fairall\textsuperscript{8}, Eric Bateman\textsuperscript{8}, Merrick Zwarenstein\textsuperscript{1,8}, Michael J Schull\textsuperscript{1,9,10,11}
Lessons learned:

Health care worker support
• Regular, sustained peer-support

Trainer and mentor support
• Build training capacity

Health system support
• Small budget for in-service training
Designing an intervention

Planning Meeting with Stakeholders and End-Users
May 2, 2012

AGENDA:
To develop innovative strategies for the implementation of CKD guidelines"
Clinical Pathway

Why a clinical pathway?

• Coordination & continuity of care enhanced
• Increase clinic efficiency
• Improve patient safety
• Increase team function

www.CKDpathway.ca
Steps 5 & 6: Monitor use & evaluate outcomes

Monitor & Evaluate Outcomes:
- Cluster RCT
- Stepped-wedge RCT
- Time-series

Management of CKD in primary care
Step 7: Sustain knowledge use

Factors to consider:

- Health needs & benefits
- Adaptability / alignment of the intervention
- Resources & leadership
- Stakeholder support

Management of CKD in primary care
Monitor Knowledge Use

Adapt Knowledge to Local Context

Assess Barriers/Facilitators to Knowledge Use

Select, Tailor, Implement Interventions

Evaluate Outcomes

Sustain Knowledge Use

Select, Tailor, Implement Interventions

Assess Barriers/Facilitators to Knowledge Use

Adapt Knowledge to Local Context

Identify Problem
Identify, Review, Select Knowledge

Synthesis

Products/Tools

Knowledge Inquiry

KNOWLEDGE CREATION
It takes ~17 years to get evidence into practice

Demonstrate it works (efficacy)

Show it works in clinical practice (effectiveness / implementation)

Keep it working (sustainability)

Spread it system-wide (scalability)
Summary:

Dissemination and uptake of CPGs are poor

The Knowledge-to-Action cycle can be used as a framework to implement knowledge into practice

The ADAPTE process can be used to adapt guidelines to the local context for LMIC
Thank you!