Practical Aspects of Knowledge Translation

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Practical Aspects of Knowledge Translation: Illustrations from Osteoarthritis (OA)

- The need: low use of evidence-based therapies (particularly non-pharmacological) for OA
  - 10% of people with knee OA received PT within 5 years prior to joint replacement surgery*
  - 39% of people with knee OA reported ever receiving PT †
  - ~90% of individuals with OA do not meet physical activity recommendations ‡
  - OA quality indicator pass rate: 22.4%§

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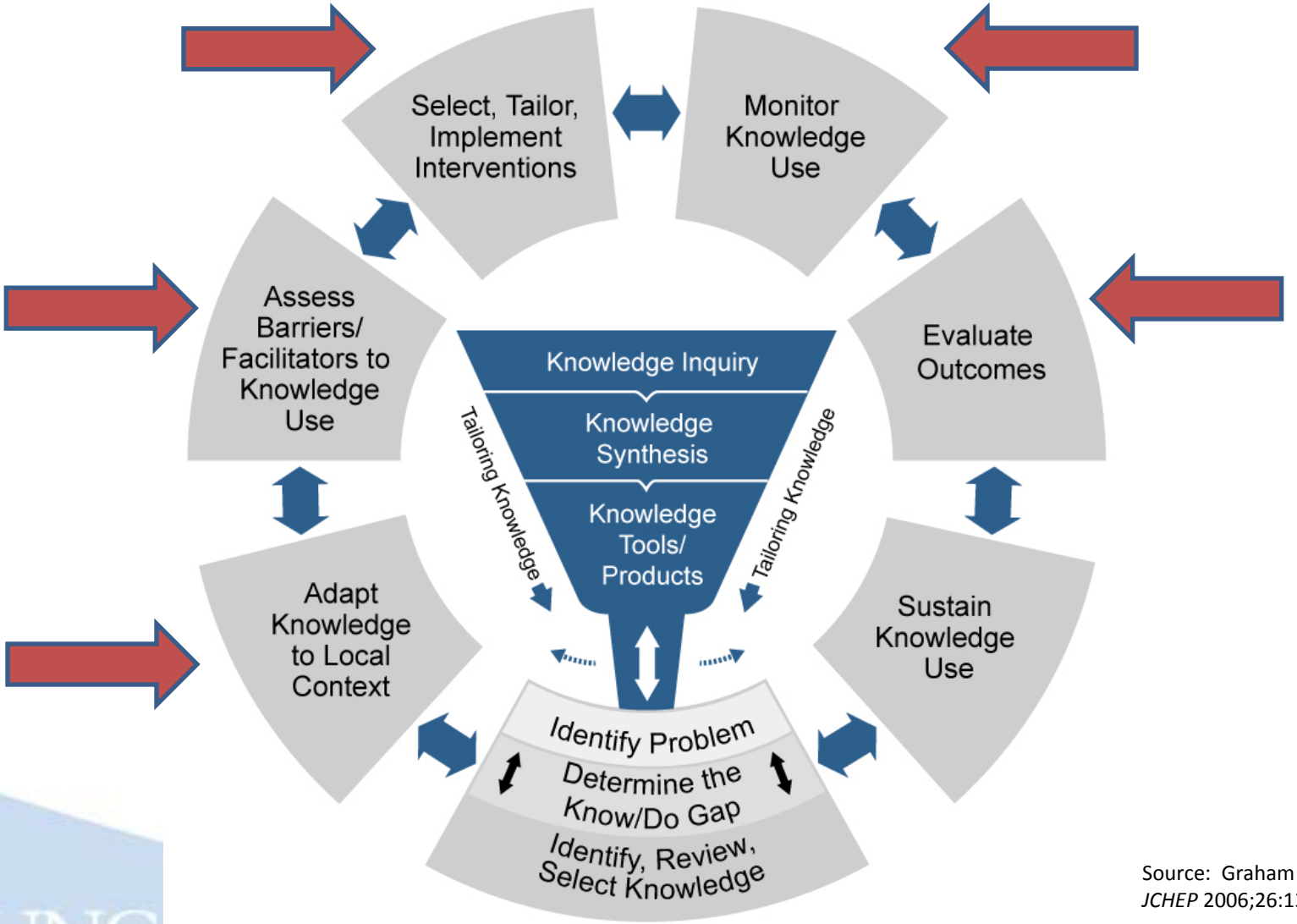
* Dhawan et al., Arthroscopy, 2014; † Allen et al, BMC Musculoskeletal Disorders, 2014, ‡Wallis et al, Osteoarthritis & Cartilage, 2013; §Li et al, J Rheumatol, 2011

Patient and P**R**ovider **I**nterventions for **M**anaging **O**steoarthritis in Primary Care (PRIMO) Studies

- Clinical trials in 2 health care systems:
  - Duke University Healthcare System (Private)
  - Department of Veterans Affairs - Durham, NC, USA
- Objective: examine impact of patient-based, provider-based and combined interventions on outcomes for patients with hip and knee osteoarthritis
- How were studies KT-related?
  - Aimed to impact care and outcomes by facilitating uptake of known effective interventions for OA in primary care setting
  - Action component of KT

The Knowledge-to-Action (KTA) Model



Source: Graham ID et al. *JCHEP* 2006;26:13-24.

Patient and P**R**ovider **I**nterventions for **M**anaging **O**steoarthritis in Primary Care (PRIMO) Studies

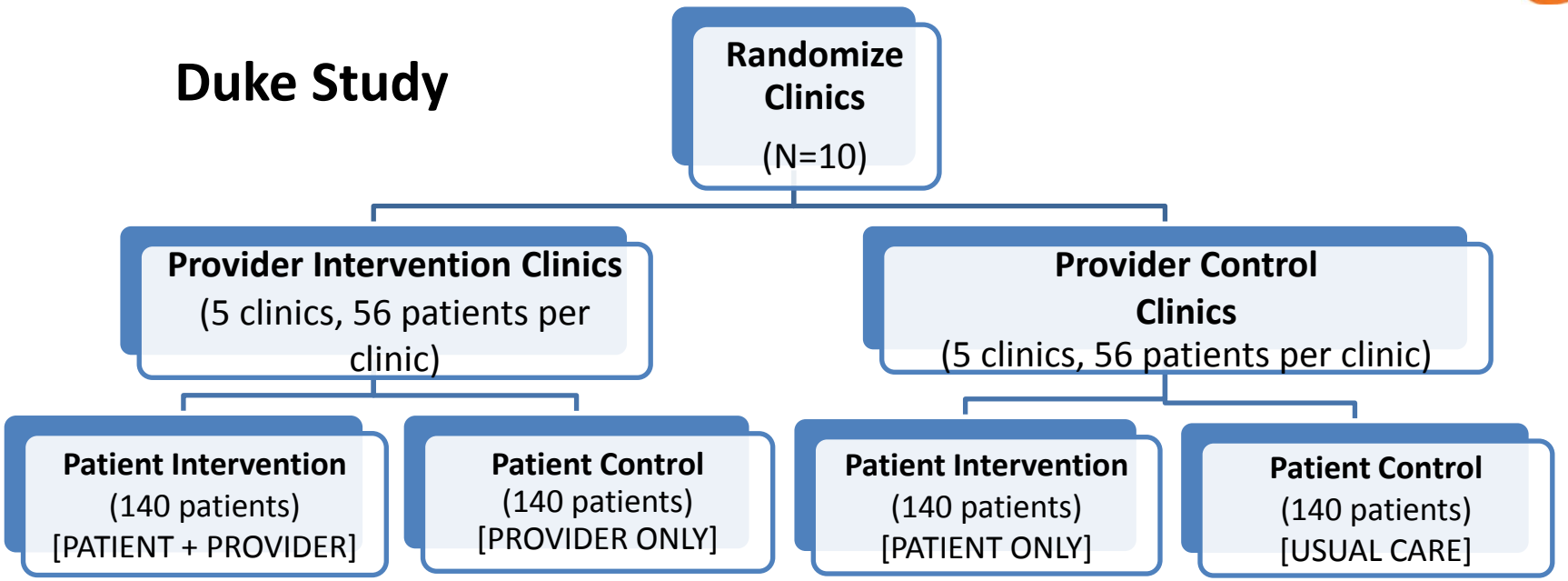
- Adapting knowledge to local context
  - Existing knowledge: evidence for various OA therapies; treatment guidelines
  - Challenge: no practical guidance on when it is appropriate for primary care providers (PCPs) to refer / offer patients specific OA treatments; PCPs stated need for guidance
  - Action: Multi-disciplinary team developed algorithms for determining when specific OA treatments may be appropriate for given patient
- Assess barriers to knowledge use; select / tailor interventions
  - Few provider-based OA intervention studies to draw on; most labor intensive, not practical / scalable
  - Evidence that OA treatment is often "crowded out" of primary care visits
  - How can we facilitate bringing OA into the primary care visit conversation → appropriate referrals?
  - PCPs: major concern about adding to already-busy clinic visits

Patient and P**R**ovider **I**nterventions for **M**anaging **O**steoarthritis in Primary Care (PRIMO) Studies

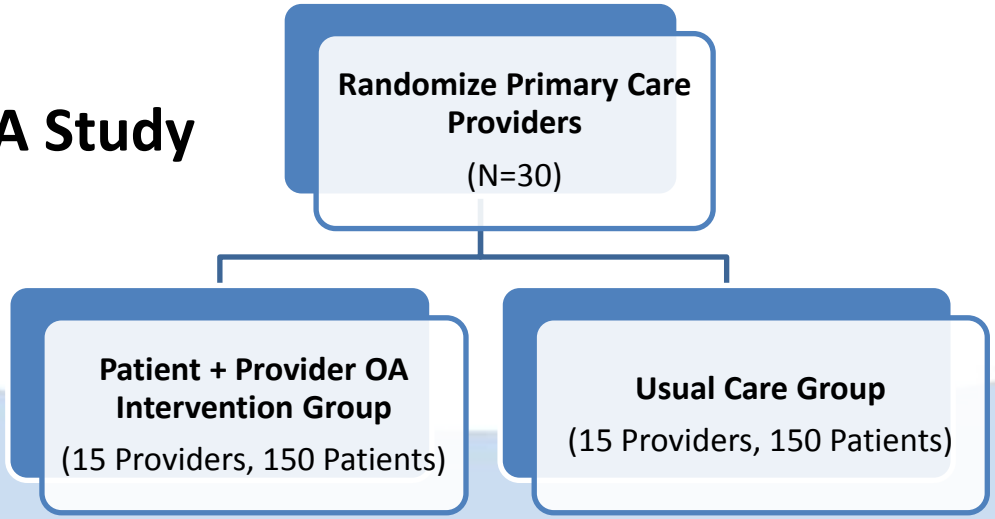
- Assess barriers to knowledge use; select / tailor interventions
  - Approach to PCP intervention: EMR-based, patient-specific OA treatment recommendations delivered to PCPs at the point of care
    - Minimal time requirement by PCPs, but potential to make OA more "visible" during clinic visit
  - Tailoring aspects (PCP recommendations)
    - How they are delivered within EMR
    - When they are delivered in the EMR
    - Handouts to refer patients to physical activity & weight management programs
    - Patient-specific tailoring (algorithms)

Patient and PRovider Interventions for Managing Osteoarthritis in Primary Care (PRIMO) Studies

Duke Study



VA Study



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Allen et al., BMC Musculoskeletal Disorders, 2012

Patient and P**R**ovider **I**nterventions for **M**anaging **O**steoarthritis in Primary Care (PRIMO) Studies

- Evaluate Outcomes: Duke Study

Self-Reported OA Treatments Initiated During the Study Period				
	Usual Care (N=129)	**Patient Intervention (N=128)**	**Provider Intervention (N=140)**	**Patient + Provider Intervention (N=140)**
	N (%) With Treatment	N (%) With Treatment	N (%) With Treatment	N (%) With Treatment
Physical Therapy **Knee OA** **Hip OA**	9 (8.4) 7 (7.1) 2 (10.5)	12 (12.5) 12 (14.0) 0 (0)	16 (13.1) 13 (11.3) 3 (21.4)	9 (9.1) 7 (7.6) 2 (12.5)
Any Knee Brace **Metal Knee Brace**	6 (5.8) 0 (0)	8 (8.6) 1 (1.2)	7 (6.0) 2 (1.8)	8 (8.0) 0 (0)
Joint Injection	19 (18.5)	22 (23.7)	27 (22.9)	17 (16.7)
Topical NSAID or Capsaicin	7 (5.7)	8 (7.1)	10 (7.6)	8 (6.6)
New Pain Medication	32 (28.8)	27 (27.8)	41 (33.1)	40 (38.8)

Patient and PRovider Interventions for Managing Osteoarthritis in Primary Care (PRIMO) Studies

- Evaluate Outcomes: Duke Study

Treatment Recommendations and Self-Reported OA Treatment Use in Provider Intervention Groups				
	Provider Intervention (N=140)		Patient + Provider Intervention (N=140)	
	N (%) With Treatment Recommendation	N (%) With Recommendation Receiving Treatment	N (%) With Treatment Recommendation	N (%) With Recommendation Receiving Treatment
Physical Therapy	85 (60.7)	10 (11.8)	76 (54.3)	8 (10.5)
Any Knee Brace	102 (72.9)	7 (6.9)	99 (70.7)	7 (7.1)
Joint Injection	26 (18.6)	6 (23.1)	31 (22.1)	8 (25.8)
Topical NSAID or Capsaicin	104 (74.3)	9 (8.7)	92 (65.7)	7 (7.6)
Discuss New/ Alternative Pain Medication	107 (76.4)	33 (30.8)	101 (72.1)	34 (33.7)

Patient and PRovider Interventions for Managing Osteoarthritis in Primary Care (PRIMO) Studies

- Evaluate Outcomes: VA Study

Provider Referrals and Treatment Receipt During Study Period				
	Usual Care (n=149)		Patient + Provider OA Intervention (n=151)	
Treatment / Visit	Received Referral from Provider N (%)	Received Treatment N (%)	Received Referral from Provider N (%)	Received Treatment N (%)
Physical Therapy	10 (6.7)	2 (20.0)	18 (11.9)	1 (5.6)
Knee OA		1 (10.0)		0 (0.0)
Hip OA		1 (10.0)		1 (5.6)
Knee Brace	17 (11.4)	3 (17.6)	29 (19.2)	5 (17.2)
MOVE! Program (Weight Loss)	5 (3.4)	2 (40.0)	30 (19.9)	8 (26.7)
Orthopedic Visit	9 (6.0)	6 (66.7)	8 (5.3)	4 (50.0)
Knee OA		5 (55.6)		3 (37.5)
Hip OA		1 (11.1)		1 (12.5)
Joint Injection	16 (10.7)	7 (4.7)	14 (9.3)	8 (5.3)

Patient and PRovider Interventions for Managing Osteoarthritis in Primary Care (PRIMO) Studies

- Evaluate Outcomes: VA Study

Treatment Recommendations, Provider Referrals and Treatment Receipt in OA Intervention Group			
Treatment / Visit	PCP Received Treatment Recommendation from Study Team N (%)	Received Treatment Recommendation and Referral from PCP N (%)	Received Treatment Recommendation, Referral and Treatment N (%)
Physical Therapy Knee OA Hip OA	74 (49.0)	15 (20.3)	1 (6.7) 0 (0.0) 1 (6.7)
Knee Brace	62 (41.1)	22 (35.5)	2 (9.1)
MOVE! Program (Weight Management)	131 (86.8)	30 (22.9)	8 (26.7)
Orthopedic Visit Knee OA Hip OA	18 (11.9)	2 (11.1)	0 (0.0) 0 (0.0) 0 (0.0)
Joint Injection	33 (21.9)	N/A	9(27.3)
Topical NSAID or Capsaicin	75 (49.7)	N/A	11 (14.7)
Discuss New/ Alternative Pain Medication	125 (82.8)	N/A	46 (36.8)

Patient and P**R**ovider **I**nterventions for **M**anaging **O**steoarthritis in Primary Care (PRIMO) Studies

- Evaluate Outcomes: Why Lack of Uptake?
  - VA study suggests barriers with patient follow-up on provider referrals
    - Travel distance to VA?
    - Lack of shared decision-making conversations to encourage treatment use
  - Qualitative data from Duke PCPs suggest:
    - Provider perception that patients don't want to make lifestyle changes
    - Difficulties with co-payments for physical therapy
- Need to take step back in selecting / tailoring interventions

Practical Lessons from Other OA KT / Implementation Efforts Internationally

- Support from all key stakeholders (e.g., orthopaedic surgeons, general practitioners, physiotherapists) or selected clinical champions is critical
  - Stakeholder groups can differ in interests / priorities
  - Patient involvement is key
- "Bottom up" approach can facilitate professional pride & engagement, but also need to have top-level buy-in
- Need well-defined team and roles to deliver programs

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"Osteoarthritis: Models for Appropriate Care across the Disease Continuum" In Press, *Best Practice & Research, Clinical Rheumatology.* Allen, Choong, Davis, Dowsey, Dziedzic, Emery, Hunter, Losina, Page, Roos, Skou, Thorstensson, van der Esch, Whittaker

Practical Lessons from Other OA KT / Implementation Efforts Internationally

- Need to balance consistency in Action steps with adaptations to the local context
- Methods of delivery are important for extending reach
- Consistent, regular evaluation is required
- Thorough monitoring / evaluation can identify better options for delivery setting, stage of disease, etc
- Funding for KT / implementation efforts sometimes requires creativity

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Acknolwedgements

- Thurston Arthritis Research Center
- NIH / NIAMS Multidisciplinary Clinical Research Center (P60AR30701)
- Center for Health Services Research in Primary Care, VA Medical Center, Durham, NC

- Ambulatory Care Service, VA Medical Center, Durham NC
- Duke Primary Care Network

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