Mobilizing Computable Biomedical Knowledge
A Growing Community to Transform Health
Matthew Fiorillo¹, Charles Friedman¹, Rachel Richesson², Peter Boisvert¹, Lisa Ferguson¹, Allen Flynn¹, Jodyn Platt¹, Josh Rubin¹
¹University of Michigan Medical School, Department of Learning Health Sciences; ²Duke University School of Nursing

**Computable**
- Machine-executable and systematically applicable using calculation or logical operation

**Biomedical**
- Related to human health

**Knowledge**
- Result of an analytic or deliberative process undertaken by a community

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**Why Mobilize CBK?** To effectively organize knowledge so that CBK is properly encoded, versioned and curated, shared rapidly and widely, and used repeatedly, by stakeholders including researchers, informaticians, librarians, health IT vendors, clinicians, patients, and health system administrators.

**Excerpt: A Manifesto for Mobilizing CBK**
In order to improve health care, population health, and individual health, every decision affecting health should be informed by the best available knowledge in computable forms.

We will:
- Sustain the CBK ecosystem
- Establish participatory governance
- Enable the ecosystem with open standards
- Make the ecosystem diverse and inclusive
- Build and uphold trust in CBK
- Ensure the safe and effective use of CBK
- Explore the sciences of CBK collaboratively
- Generate value for CBK creators, users, and the general public
- Be agile to reflect rapid changes in knowledge
- Engender equity in health and in knowledge accessibility
- Ensure methods to support transparency for CBK
- Implement the highest standards of privacy and security
- Enable staged transitions of knowledge from human-readable to fully computable forms

**Community Building**
- MCBK conference: Oct 18 & 19, 2017, Ann Arbor, MI
- MCBK meeting: July 10 & 11, 2018, National Library of Medicine, Bethesda, MD
- Upcoming webinars
- Future MCBK meeting: July 2019
- Ongoing activity of 4 workgroups

**Technical Infrastructure Workgroup**
Identify framework components necessary to move knowledge from generation into practice by facilitating dissemination, testing, versioning, use, evaluation, scalability, and interoperability of CBK

**Next steps:** Learn from other industries; Define metadata; Describe use cases to solidify CBK requirements; Establish governance structure; Identify candidate platforms and CBK representations

**Sustainability for Mobilization and Inclusion Workgroup**
Identify and engage diverse stakeholders of CBK to accelerate and sustain adoption; Leverage existing networks, communities, and resources; Identify communication needs; Mitigate bias and discrimination

**Next steps:** Identify and engage champions in stakeholder groups such as professional societies, patient advocacy groups, clinical guideline orgs, libraries, and industry vendors

**Standards Workgroup**
Establish requirements for data, knowledge representation, exchange, function, and metadata, for CBK developers and consumers

**Next steps:** Develop set of CBK artifact metadata exemplars, with rationale for each element; Identify metadata models to use

**Policy and Coordination to Ensure Quality and Trust Workgroup**
Determine process to ensure high quality and trustworthy knowledge in a CBK ecosystem

**Next steps:** Explore current practices; Compare metadata schema to identify gaps; Evaluate transparency in CBK systems; Map regulatory space; Extend FAIR principles (Findability, Accessibility, Interoperability, Reusability) with TLC (Traceability, Licensure, Connectedness)

**Select organizations developing platforms to mobilize CBK:**
- Knowledge Grid (kgrid.org)
- Apervita (apervita.com)
- IBM Watson Health (truenhealth.com)
- CDS Connect (cds.ahrq.gov)
- Semedy (semedy.com)
- MAGIC – GRADE (magicproject.org)

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For more information visit: dlhs-umi.ch/mcbk

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