Implementation Science Centers for Cancer Control (IS-C^3)

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Cancer Moonshot Implementation Teams:

- *Prevention and Early Detection: Implementation of Evidence-Based Approaches for Prevention and Screening*
- *Prevention and Early Detection: High-Risk Cancers*
- *Symptom Management*

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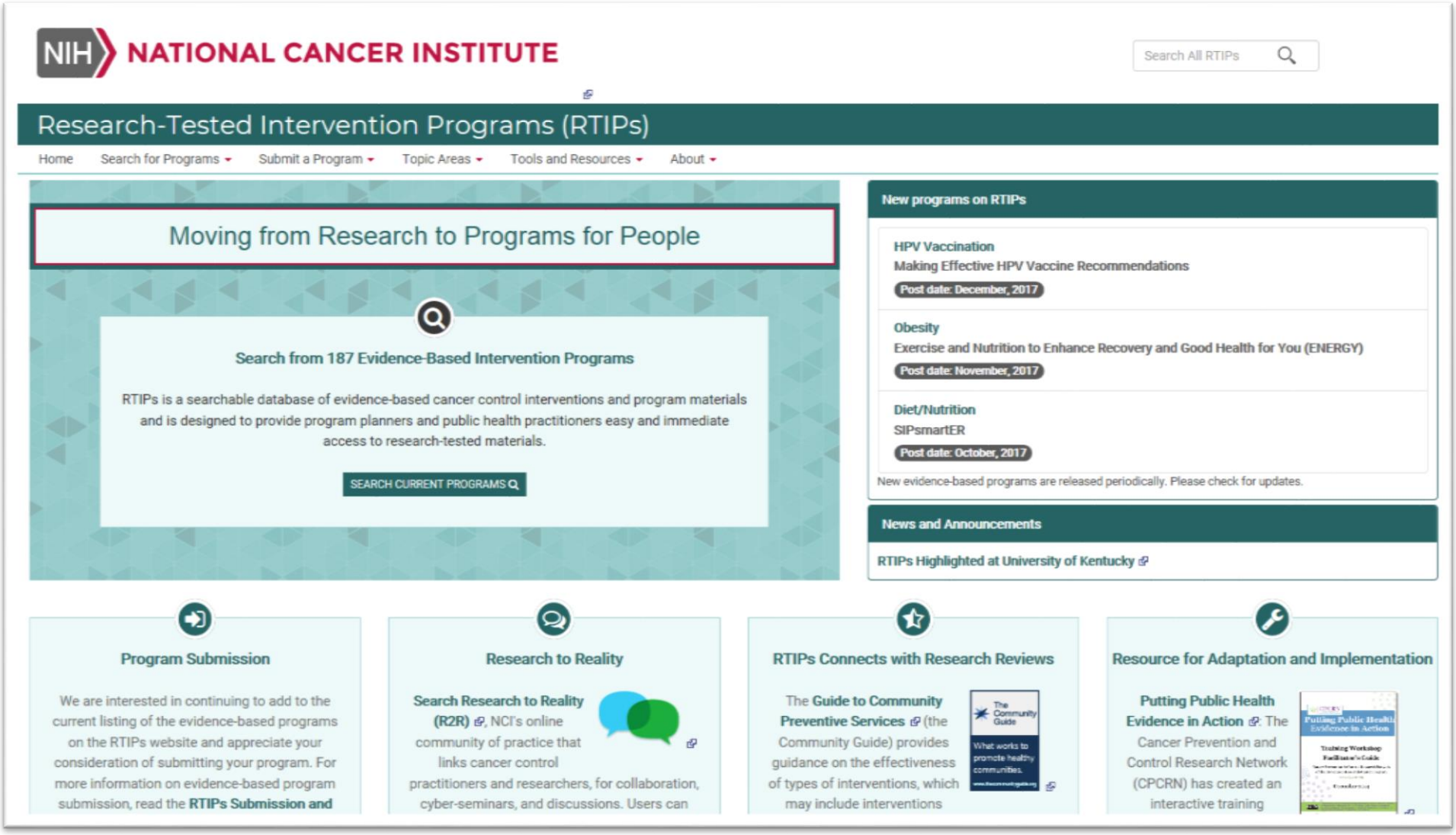
Implementation Science Working Group Report: Implementation of Evidence-based Prevention and Screening Approaches

- **Issue**: Suboptimal uptake of evidence-based cancer prevention and screening programs, particularly among underserved populations.
- Can we better implement what has already been developed and tested?
- Effective scale-up of CRC screening and follow-up, HPV vaccination, and tobacco cessation interventions could result in:
  - 389,900 fewer new cancer cases annually
  - 318,500 fewer cancer deaths annually

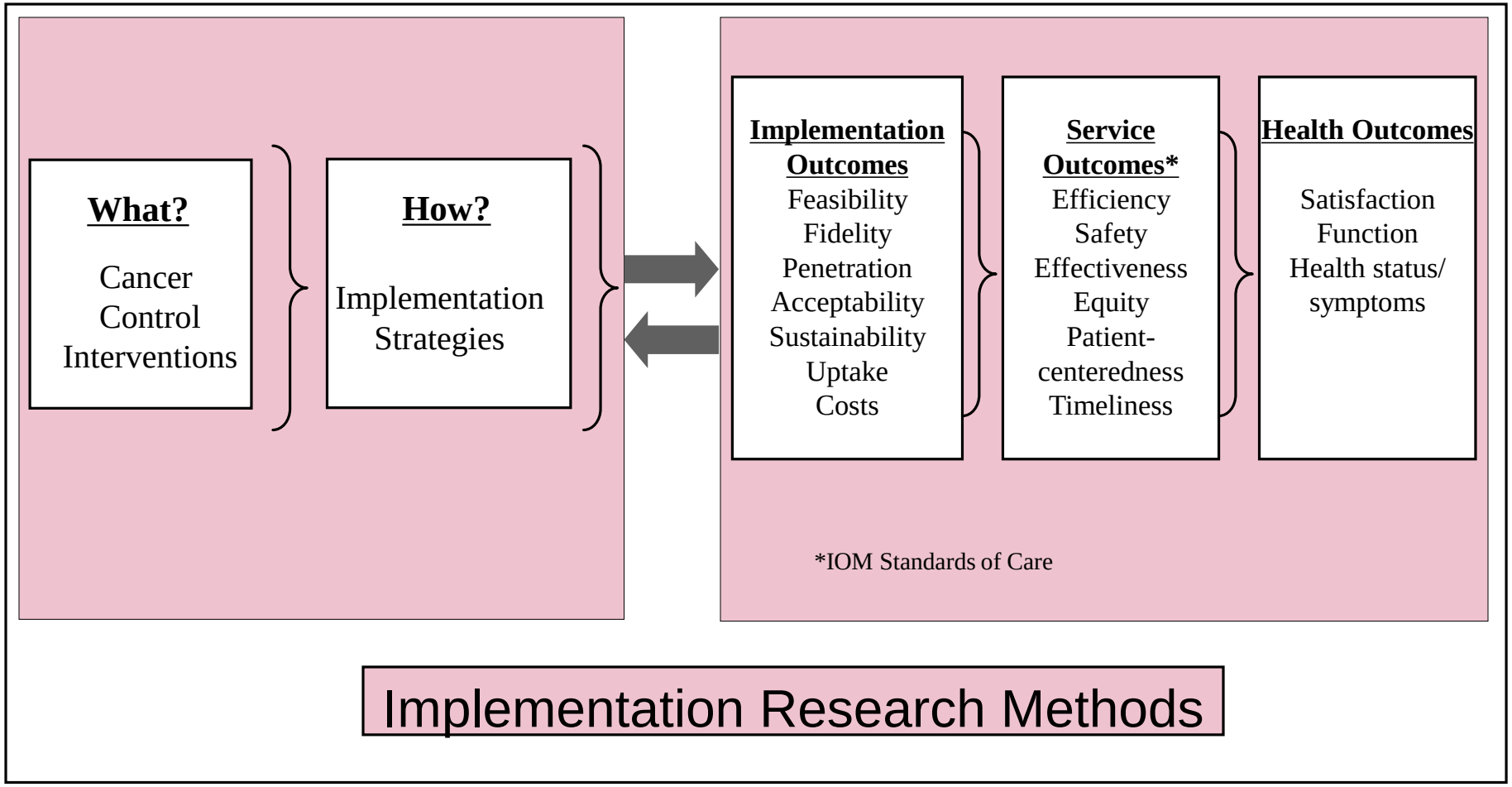
A robust knowledge base around implementation strategies would make significant progress toward this goal.

We have hundreds of evidence-based programs to implement



https://rtips.cancer.gov/rtips/index.do

But Need Implementation Science to Drive Population Benefit…



Proctor et al 2009 *Admin. & Pol. in Mental Health & Mental Health Services Research*

Building from the Blue Ribbon Panel Report: Implementation of Evidence-based Prevention and Screening Approaches

What are we doing in response?

- ACCSIS—Implementation Strategies to improve CRC Screening, Follow-up, Referral to Care
- IMPACT—Programs to improve symptom management across Cancer Tx
- Hereditary Cancers RFA—Programs to Improve Cascade Screening and Referral to Tx

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- *Tobacco Cessation Supplements to Cancer Centers*
- *HPV Cancer Center Supplements to understand local factors affecting Vax Uptake*

Current Needs for Scaling Up Implementation Science

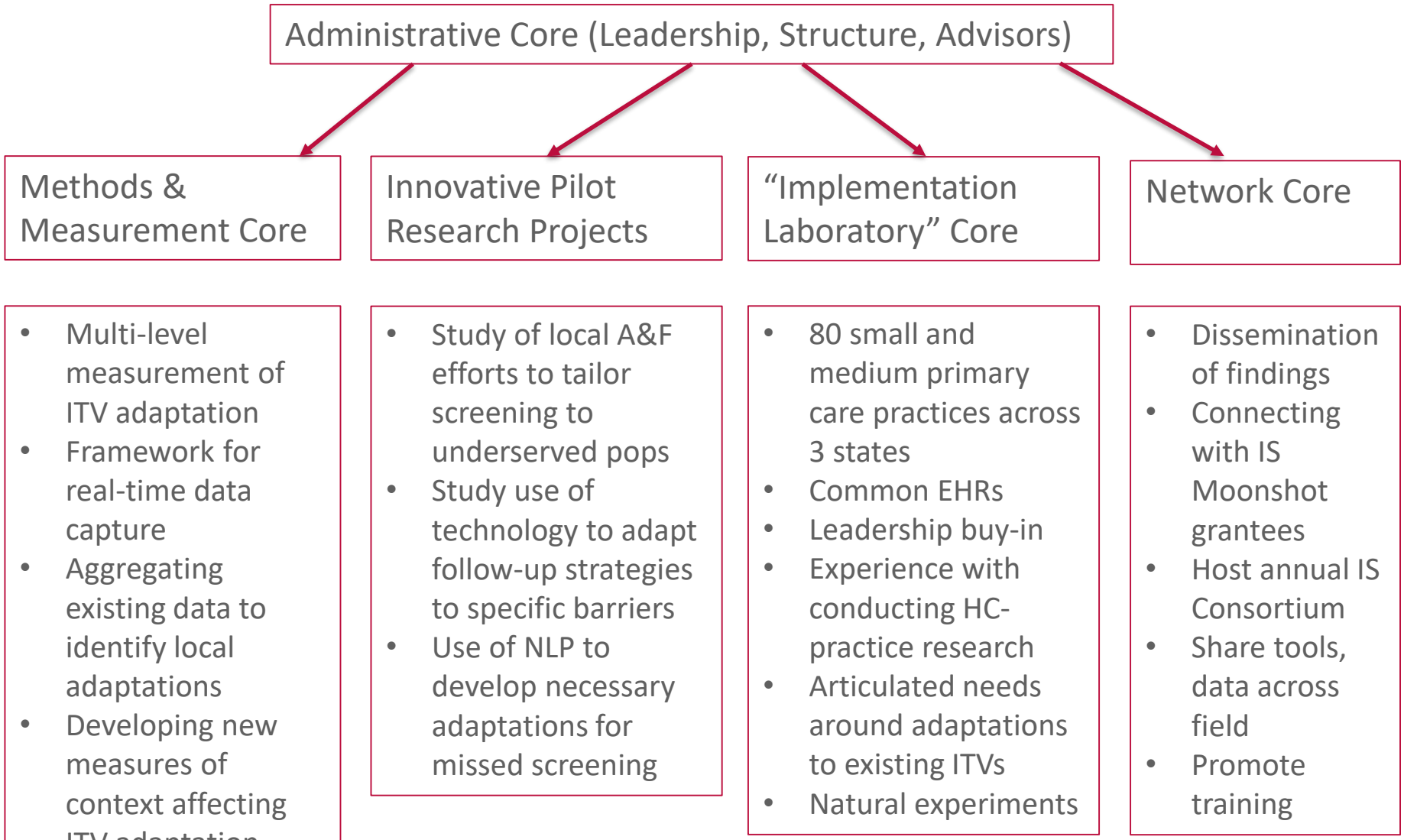
- Leveraging existing clinical and community sites where cancer control interventions are delivered to form an **"implementation laboratory"**
- Development and execution of **natural experiments** and **rapid-cycle testing** of innovative approaches to implementing evidence-based interventions
- Development and testing of **valid, reliable and pragmatic measures** of **implementation constructs** not currently available
- Generation of **pilot studies** in **emergent areas** of implementation science under-represented in the current NCI portfolio
  - E.g. implementation of precision medicine, de-implementation, local adaptation of interventions, mechanistic studies of implementation strategies
- **Nationwide support** for implementation scientists in cancer control,
  - annual meetings, training and mentoring support, technical assistance on proposals, collaborative workspace for innovative study concepts

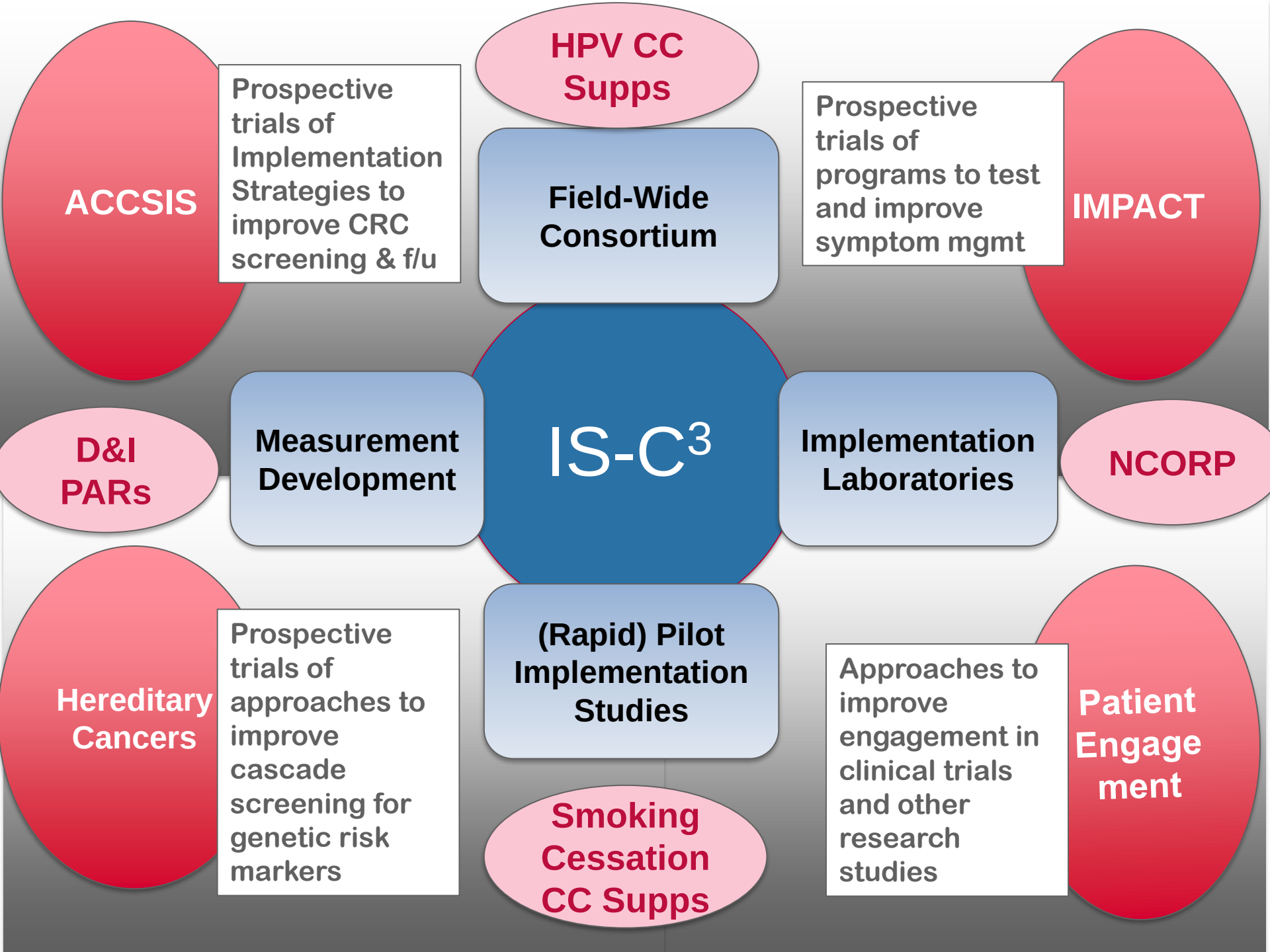
Implementation Science Centers for Cancer Control (IS-C^3)

Goal: Scaling Up IS Efforts Across Moonshot (and then some)

1. Administrative Core
2. IS Laboratories: Established Collaborations with Health and Community Systems (e.g. Oncology, Primary Care, Community Settings)
3. Measurement and Methods Core
4. Set of Innovative Research Pilots
5. Network Core
    - Shared capacity to run program-wide IS Consortium (host annual meetings/dissemination of findings/training)

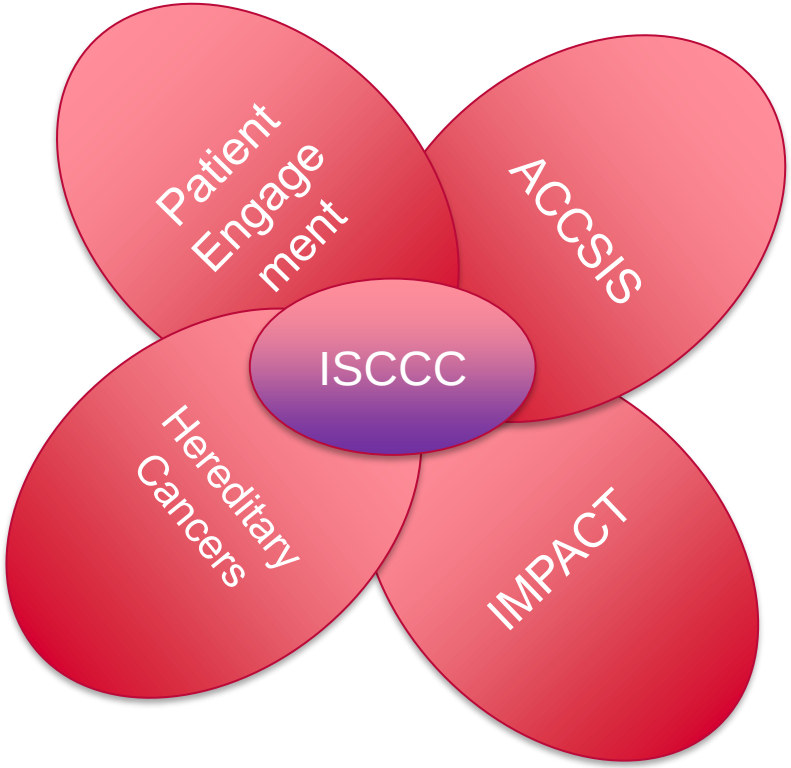
An Example of an IS-C^3 on Intervention Adaptation




HPV CC Supps
ACCSIS
Prospective trials of Implementation Strategies to improve CRC screening & f/u
Field-Wide Consortium
Prospective trials of programs to test and improve symptom mgmt
IMPACT
D&I PARs
Measurement Development
IS-C3
Implementation Laboratories
NCORP
Hereditary Cancers
Prospective trials of approaches to improve cascade screening for genetic risk markers
(Rapid) Pilot Implementation Studies
Approaches to improve engagement in clinical trials and other research studies
Patient Engagement
Smoking Cessation CC Supps

Implementation Science Centers for Cancer Control RFA Concept (via 3 Moonshot Teams)

- 4-5 Research Centers
  - Implementation “Laboratories”
  - Methods Development, Network Cores
  - Pilot Implementation Studies
  - Common Data Repositories
  - Building a Field-wide Consortium



- 3 Advanced Centers ($2M per yr); 2 Developing ($1M per yr) [P50/P20]
  - Advanced Ctrs in established areas (Cancer Prevention, Screening, Symptom Management)
  - Developing Ctrs in newer areas (precision medicine, de-implementation)
- **FY19 Budget: $8M TC ($40M TC over 5 years)**

BSA Sub-Committee Feedback and Responses (Thanks!)

- **Explicit expectations of administrative/leadership functions**
  - Description of administrative core responsibilities
- **Central importance of "data ecosystem"**
  - Common Data Elements required, new measures developed for broader field, recognizing diverse needs
- **Individual center activities vs. "consortium" activities**
  - E.g. opportunities for aspiring IS investigators within centers vs. participation in consortium to build field capacity
- **Clarification of number and types of pilots**
  - R03/R21 scale; 4-8 for advanced centers, 2-4 for developing centers
- **Distinction b/w developing vs. advanced centers**
  - Number of pilots; scale of the implementation lab; network size; scientific focus
- **NCI role of coordination across centers**
  - NCI's IS team can foster trans-center coordination (data sharing, dissemination, meeting support)

CMIT co-chairs Paul Pinsky, Kathy Helzlsouer, Asad Umar, Paul Jacobsen, Ann O'Mara and team members

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