



Forging Collaborations to Enhance Productivity: The HMO Cancer Research Network

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Overview

■ **The HMO Cancer Research Network (CRN)** is a consortium of the research programs, enrolled populations and data systems of 13 integrated health care delivery systems across the nation.

■ **Funded by the National Cancer Institute (NCI)** since 1999, the CRN is comprised of an Infrastructure, core projects, and a growing number of affiliated, supplemental, and pilot studies. In 2003, AHRQ joined NCI as a co-sponsor of the CRN.

■ **The overall CRN goal is to increase effectiveness** of preventive, curative & supportive interventions for major cancers.

■ **Our research portfolio** addresses the spectrum of cancer control, with studies on prevention, early detection, treatment, survivorship, surveillance, and end-of-life care.

■ **Key features of the CRN's population laboratory:**

- Over 10 million enrollees across 13 sites
- 800,000 African American enrollees
- 4,000 colorectal cancer cases/year; ~7,200 breast cancers/year
- Large # of rare cancers: ~300 esophageal/year; ~600 ovarian/year
- Retention of cancer patients 1-yr post dx: 96%; 5 yrs post-dx: 84%

CRN Specific Aims

■ **Develop resources and pursue projects** to improve the effectiveness of cancer prevention and treatment through research that identifies system, provider, treatment, and patient factors affecting outcomes

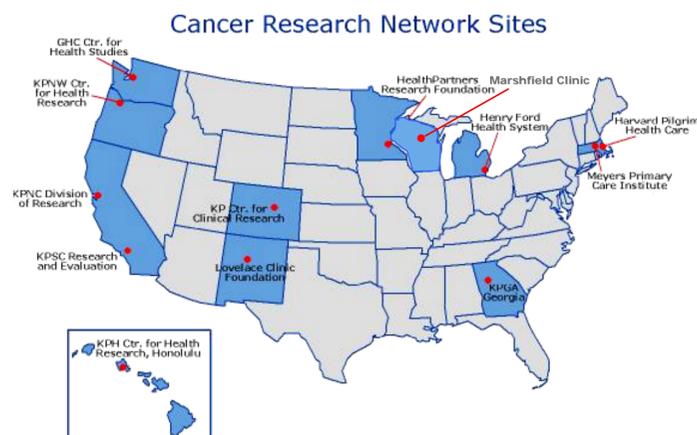
■ **Develop and leverage standardized approaches** to data collection, data management, and analysis found to be useful in CRN research

■ **Increase collaboration** between CRN sites, and with investigators at the NCI, academic centers & cancer centers

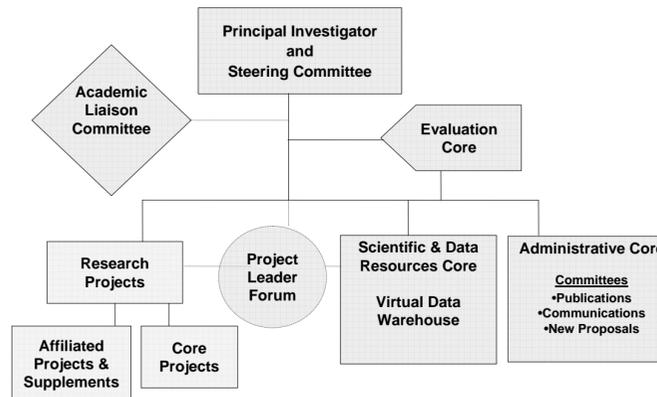
■ **Enhance the ability of the CRN** to respond to NCI priority questions related to rare cancers, the diffusion of innovations in cancer care into practice, and the role of health services

■ **Evaluate and improve** the CRN's performance

Site Locations



Organizational Structure

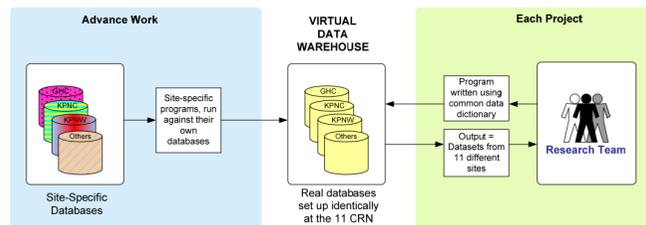


Virtual Data Warehouse

■ **The CRN Virtual Data Warehouse** is a series of dataset standards and automated processes at each of the CRN sites that allow a SAS program written at one site to be run against all the other sites' databases

- **rapid (typically within a few hours to a few days)**
- **minimal site-specific customization**

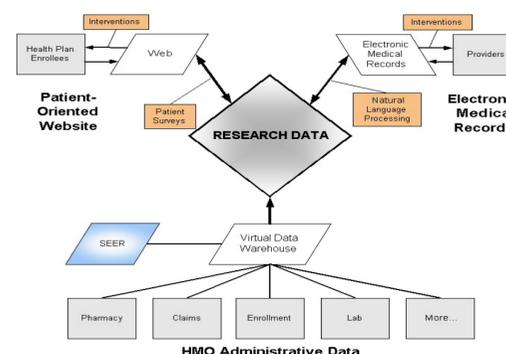
■ Synonymous with the term "Distributed Data Warehouse"



CRN Interconnected Data Resources

■ **Able to intervene at patient, provider and/or system level**

- Automated data systems are comprehensive and mature
- Electronic medical records implemented or on-deck at all sites
- Patient-focused web portals at all sites



Achievements & Innovations

■ **Growing Portfolio**

- 6 core projects
 - 8 affiliated R01 or P50 grants
 - 13 supplements
 - 6 pilot projects
 - 3 contracts (CDC and NCI)
- } 36 funded projects

■ **Publications**

- JNCI Monograph "Healthcare Systems as Research Platforms"
- Diverse array of high-impact journals including *Journal of Clinical Oncology*

■ **Capacity Building**

- Number of sites has increased from 10 to 13
- New/Junior Investigators Workshop (2005) involving 15 trainees
- 6 pilot projects funded over two years, resulting in grants &/or manuscripts

■ **Culture of Collaboration**

- Committee structures & policies aim to facilitate research, guide collaboration
- Formal affiliation with Dana-Farber Cancer Institute, other cancer center affiliations under discussion/negotiation

■ **Research Projects**

- High participation rates in primary data collection studies:
 - ❖ 2,500 participants in web-based diet intervention enrolled in 4 months across 5 sites
 - ❖ 45,000 enrollees (5,700 smokers) surveyed about physician assessment of tobacco use
 - ❖ 90% response rate from oncologists surveyed re: barriers to cancer clinical trial accrual

■ **Evaluation**

- Annual survey of all CRN members about effectiveness of CRN projects, infrastructure, and impact of CRN on research and practice
- Opportunity to constructively approach areas needing improvement and propagate best practices

New Research Directions

■ **Timely studies of the diffusion of new advances in cancer treatment and clinical guidelines into community-based health systems**

■ **Identification of optimal models for high-quality, patient-centered cancer care**

■ **Examination of biological markers and variables in populations**

■ **Inclusion of cost measures in studies of the effectiveness of an intervention**

■ **Continue to integrate research resources and informatics innovations with related projects, e.g., the cancer Biomedical Informatics Grid (caBIG™)**

■ **Expansion into other condition areas based on interest from other NIH institutes (NHLBI, NHGRI)**

Summary

The HMO Cancer Research Network is gaining recognition as a national resource for cancer control. The overall experience of the CRN confirms the rich opportunities provided by a coordinated research program involving large health systems.