

Clinical Research and the MCHP Data Repository

Presentation for MCHP 20th
Anniversary
March 8, 2010



Health care

- The sum of thousands of individual interactions between health care seekers and clinicians.
- The way that these are organized constitutes the health care system
- The value of these interactions and the ways that patients, providers, managers and government interact determine the quality of health care



Definitions

Clinical Process

the process by which clinicians interact with individual care seekers to diagnose, determine the cause, provide prognostication and treat or prevent dis-ease or secondary complications.



Clinical Process

- The clinical process is more than the application of empirical knowledge. It involves establishing trust, building a relationship, providing comfort and compassion, explaining and demystifying and the relief of pain and suffering. Empirical Knowledge is applied within this framework and within the context of the patient's culture and environment.



Definitions

- Clinical Research
 - Research that attempts to derive empirical knowledge from the experience of groups of patients that can then be applied to individual patients in the context of the clinical process



Definitions

- Clinical Research provides knowledge in one of four fundamental areas that are required in the clinical process:
 - **Diagnosis**
 - **Cause or Origin**
 - **Prognosis**
 - **Treatment or Prevention**



Types of Research Design appropriate for Clinical Research

- Cause - Cohort
- Prognosis – Inception Cohort
- Diagnosis – RCT best. Cross-sectional acceptable
- Treatment - RCT. Cohort can provide knowledge but inferior to RCT



So, How much Clinical Research is done with MCHP Repository?

- Methods
 - Reviewed list of publications 1989-2009
 - Tagged research that was directed at one of the 4 important areas of clinical knowledge
 - Applied to individuals
 - Not exclusively about the effect of poverty or SES
 - Information about health care system, costs, efficiencies and resources excluded



MCHP Data Repository

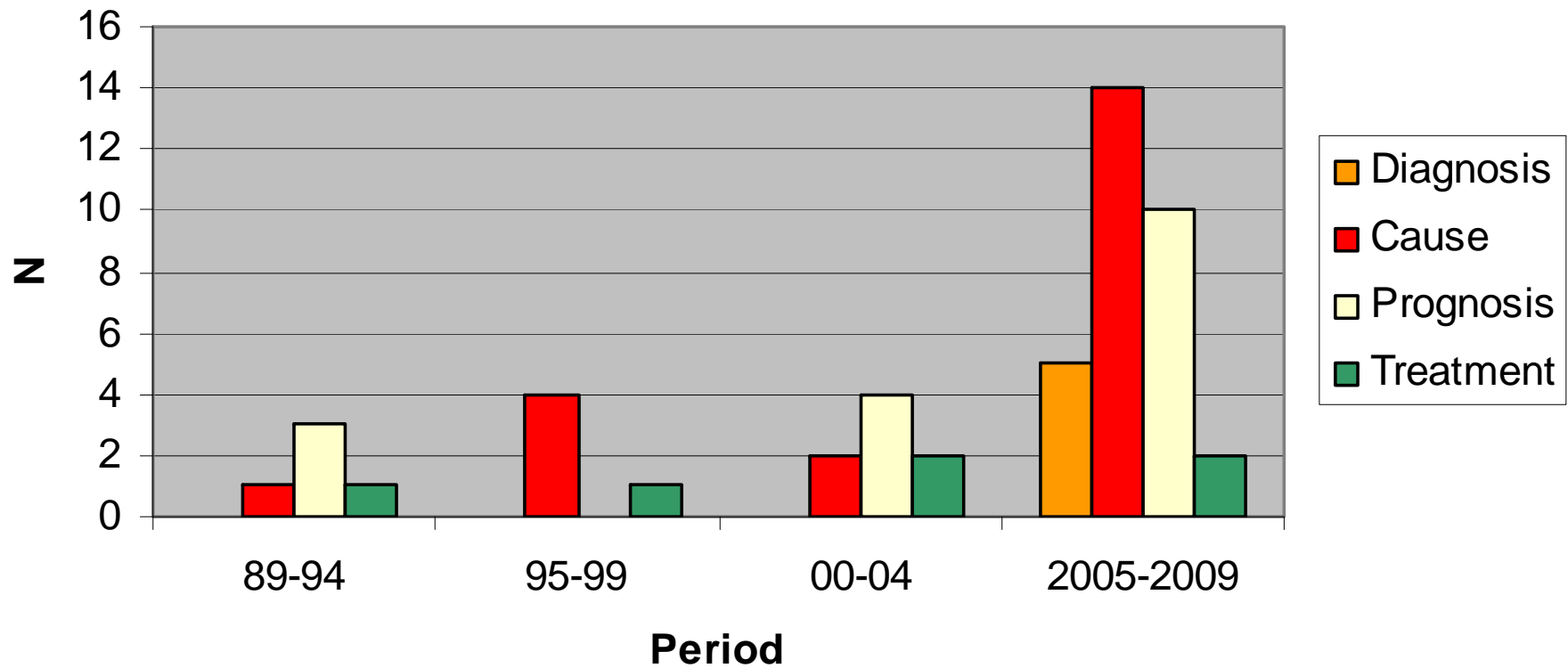
- Primarily a large population-based cohort
- Some of the databases housed are cross-sectional but they are linked to the longitudinal part
- Cohort data can be used cross-sectionally
- Since RCT is a specialized form of cohort, repository should be ideal for clinical research



So, How Much Clinical Research Happens with the MCHP Repository?



Clinical Research at MCHP



Conclusion

- Clinical Research using the MCHP Repository is accelerating exponentially
- Surprisingly, Causation research dominates with Prognostic second



The Downside

- Very limited range of clinical fields:
 - Bone health
 - Gastroenterology
 - Clinical Pharmacology
 - Oral Health
 - Respiratory
 - Childhood Asthma
 - Anesthesia (not recently)
 - Mental Health



What is Needed to do good clinical research?

- Almost always requires additional data
 - Often from clinical databases
 - Could be primary data collected specifically for the purpose of linking to repository
- Clinician Scientist with skills and interest
- Money
- Data analysis capability (SAS)



How Could we facilitate more clinical research?

- Better training for Clinician–researchers
- Academic support for time to do clinical research
- Availability of research funds
 - E.g. special competition for clinical research using the repository
- Making data more easily accessible
- Partnering between clinicians and researchers at MCHP



Summary

- The MCHP Data Repository represents a terrific resource for clinical research
- Clinical research is increasing rapidly
- So far it involves limited specialized clinical areas
- Has to be a clinician-scientist with a driving interest
- Several steps could stimulate further Clinical Research

