MEASURING THE CONTINUITY OF CARE OF HIV SNP PROVIDERS

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What is continuity of care?

- The extent to which:
  - A patient receives clinical care from the same provider during a given time period
  - Services are part of a coordinated and uninterrupted succession of events consistent with the patient's clinical requirements
- Optimal continuity occurs when the same provider is seen by the patient at each visit
- The provider functions as the manager and coordinator of clinical services
- Both the provider and patient expect an enduring relationship

What is continuity of care?

- The provider's responsibility is not limited by the nature of the patient's illness or duration of time spent with the patient
- Continuity of care may be assessed for primary care providers (PCPs), as well as for other care providers (e.g., specialists, mental health provider, case manager, etc.)
- Continuity is associated with positive clinical and financial benefits and is considered an important aspect of an accessible, quality health care delivery system

METHODS FOR MEASURING CONTINUITY OF CARE

- **Usual Provider Continuity (UPC): proportion of visits to the patient's usual provider**
- **Index of Continuity of Care (COC): extent to which a given patient's total visits for a time period are with a single or multiple providers**
- **Likelihood of Continuity (LICON): probability that the number of providers seen by a group of patients is less than random, given the patients' level of utilization and the number of available and accessible providers**
- **GINI: distribution of patients being seen by different patients**

METHODS FOR MEASURING CONTINUITY OF CARE

- **Sequential Nature of Provider Continuity (SECON): fraction of a patient's sequential visit pairs in which the same provider is seen**
  - **LISECON: Likelihood that the SECON score is greater than what would have occurred randomly**
- **Standardized index of concentration (CON): extent of deviation from an even distribution of the number of providers divided by the number of patients studied**
- **Fraction-of-Care Continuity (FCC): current provider's share of the patient's previous experience of care during a continuity-determining period**

MEASURING CONTINUITY OF CARE RECEIVED BY HIV SNP MEMBERS

- A briefing paper was prepared for the AIDS Institute
- The AIDS Institute Quality Assurance Advisory Committee (QACC) reviewed the paper and received a briefing
- The various measures were discussed by the QACC
- They recommended using the Index of Continuity of Care (COC) measure
- An HIV QARR measure is being developed

INDEX OF CONTINUITY OF CARE (COC)

- COC measures the extent to which a patient's total number of visits for a given time period are to a single or multiple providers
- The COC is influenced by the:
  - Total number of visits made by a patient
  - Distribution of patients across providers
- The COC score:
  - Ranges from 0 (no continuity of care) to 1 (full continuity of care); the greater the continuity the higher the score
  - Increases as the number of visits increase but is not influenced by the number of available providers or the sequence of visits to the same providers
  - Decreases as the distribution of visits shifts from a concentration of one provider to a more even distribution of providers

HIV SNP Continuity Of Care Index (COC) Score For Each Patient

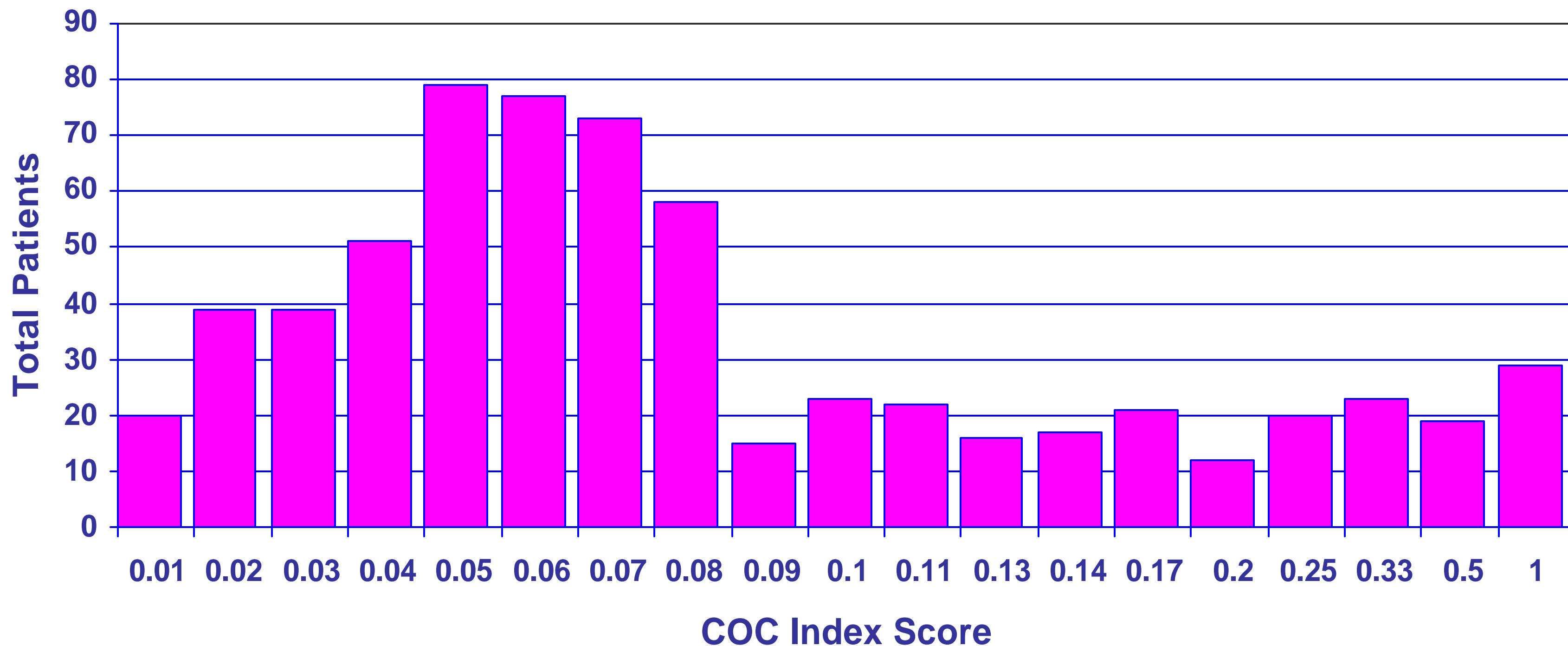
HIV SNP COC =

$$\frac{\text{Sum of the number of visits}^2 \text{ to each different provider} - \text{the total number of visits to all providers}}{\text{Total number of visits} * (\text{total number of visits} - 1)}$$

APPLICATION OF THE COC TO A NY CLINIC'S BILLING RECORDS

- **Ambulatory care services were studied among 653 patients treated at a NY community-based HIV clinic**
- **A 24 month service period was studied**
- **Billing data were used to select primary care visits:**
  - **Visits of primary care clinical staff (MDs, NPs, PAs)**
  - **Selecting primary care procedures: evaluation and management, consultations, preventive medicine services, medicine, etc.**
- **Procedure groups *excluded* from the analysis include pathology and laboratory, nutrition, studies, or other or unknown procedures**
- **36 patients with only 1 visit in the observation period were excluded from the study since only 1 clinician provided care**

DISTRIBUTION OF CONTINUITY OF CARE (COC) SCORES IN A NY CLINIC
(n = 653)



Mean COC Score = .14 **Only 7% of patients had a score > .50**

INTERPRETATION OF THE COC SCORES OF A NY CLINIC

- Differences in COC were not associated with gender or age
- The low COC scores appear to be associated with substantial staff turnover during the observation period
- The clinic's capacity may also be insufficient to meet demand for primary care, such as during seasonal peaks
- A high level of unscheduled "walk-in appointments" may also contribute to the low COC scores since a patient's PCP may not always be available

FACTORS IMPACTING CONTINUITY OF CARE IN HIV SNPs

- Continuity measures are a proxy for the nature of the provider-patient relationship, the quality of their communication, and other qualitative aspects of care
- Continuity measures are sensitive to the number of appointments kept and the duration of the observation period
- Continuity measures reflect actual utilization rates and not the intention to treat a patient that misses appointments
- Changes by patients in their managed care plan enrollment or in Medicaid enrollment will impact continuity measures

FACTORS IMPACTING CONTINUITY OF CARE IN HIV SNPs

- Member choice regarding changing PCPs or plan selection during the enrollment period
- The number of providers in a plan's network will influence continuity
- Practice size and the amount of time spent with each patient
- The care models used (e.g., use of care teams)
- Turn-over of personnel in ambulatory clinic settings
- Case-mix

OPERATIONALIZING AN HIV SNP QARR REGARDING CONTINUITY OF CARE

- Definitional issues:
  - How should primary care visits be defined?
  - Which provider types and procedures should be included for review?
- Statistical adjustment methods might be employed to account for differences in the size and organization of primary care in HIV SNPs' networks
- Ability of MA MIS to accommodate the physician coding required to account for team and other care models
- Accuracy of the coding of provider data
- Interpreting the results
- Working with the HIV SNPs and PCPs to identify ways to assure continuity of care