

Lessons Learned from Creating a Clinical Informatics Collaborative (CLIC) : A STARNet Study

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Clinician (Family Physician and Pediatrician) Perspectives

Challenges:

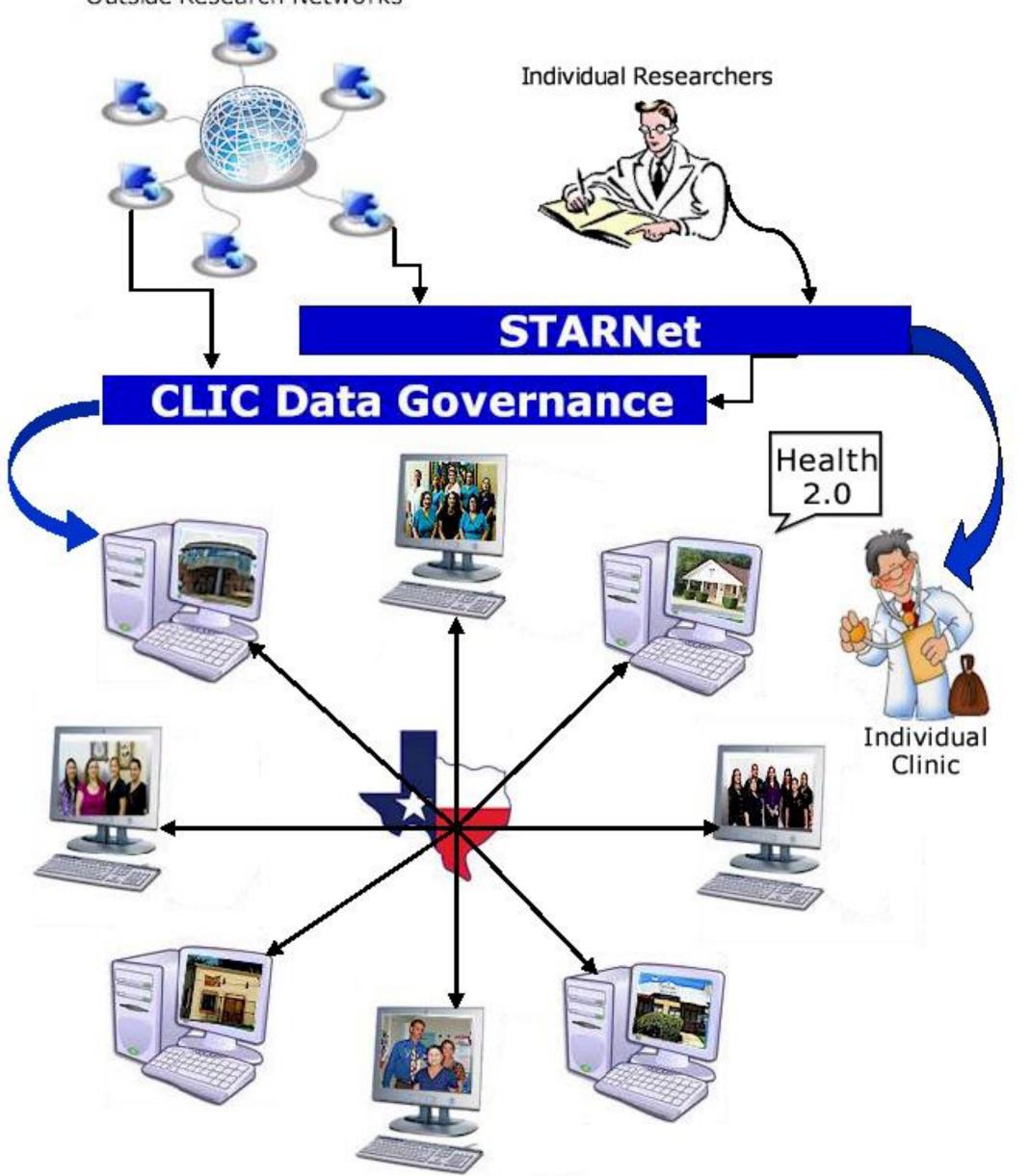
- Lack of experienced clinic IT support needed for installation, multiple and non-standard clinic networking environments, and unresponsive EHR vendors
- Poor understanding of security legalities necessary to sign the CINA license agreement
- Competing clinical demands, EHR and server upgrades, adequate time to "tweak & trust" the Point of Care Reports
- Multi-site clinics with multiple administrative levels needed to connect all providers within a specified timeframe.

Results:

- CLIC Participants revealed a positive overall response to the CINA Point of Care Reports (see figure)
- Claims that the reports initiate both clinicians and staff to move towards an optimization of acute visits for addressing preventative health items and long since overlooked lab items
- Refining the point of care reports resulted in broader use and acceptance of the tool.
- Clinicians concerned the Reports as a valuable tool to give to patients, or family members of their elderly patients, as a broad overall health summary on a single page.
- Reports seemed to prompt patients to become more proactive and accountable with their own health.
- Workflow changes occurred related to the nursing staff in which the doctors seem to be leveraging their nurse or MA's time
- Return on investment is being reported through increased immunizations and labs. Enhanced overall documentation of visit items will hopefully leverage the clinics relationships with the insurance companies in a pay for performance type scenario.
- Participants stated that plan to participate in Bridges to Excellence and other PQRI opportunities. The clinicians have always planned on doing it, but this collaboration makes them feel more comfortable in achieving their goals.

To accelerate the translation of clinical research into practice, STARNet established new partnerships with over 20 non-academic primary care office/clinic sites across South Texas through a CTSA Supplement (UL1 RR 025767-02S1). The three specific aims of this two year project included: 1) Establish connections between electronic health records in 20 STARNet clinics with the Academic Health Center; 2) Use an electronic infrastructure to capture eligibility criteria for 3 clinical trials through a distributed, secure search of electronic health records across all 20 STARNet practices in order to identify eligible participants; and 3) Conduct one mock clinical trial across all 20 STARNet practices.

Outside Research Networks



CLIC Consortium

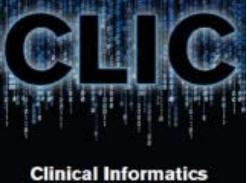
1.) Selecting an IT vendor with excellent customer service and has an understanding of the clinic and investigator needs 2.) Establishing trust, 3.) Creating a data governance structure to protect the clinics and the University and 4.) Providing Point of Care reports to clinicians – tangible benefit

Background: What is CLIC?

Point of Care Report

Patient Recommendation Report DOB:12/14/1927 Age:81 Sex: F Seen By:N/A Report Date 7/20/2 PCP:DOCTOR, CHARLES E M Active Diagnose **Risk Factors** Pneumonia (Age > 64 OR Risk Dx) CHD 10Yr Risk < 10% CHD Risk Factors: 2+ Osteoporosis or Osteoporosis Risk HTN Risk: CoMorbid Dx (DM, Renal Dz o Decr Renal Function) DM Risk: Mod (Metabolic Syndrome Goals Goal not met: CrCl < 60 Goal not met: BP >/= 130/80 Goal not met: Bld Glucose > 125 (Check Fasting Status) Goal met: BMI < 30 Goal met: LDL < 130 Nonsmoker MPTOM, NAUSEA ALONE ERTIGO, BENIGN (386.1 MORE Active Meds Document Advanced Directives sta QD 02/04/09 Zocor 20 MG Document last Bone Mineral Densit PRN Bayer Aspirin 325 MG 09/13/07 Calcium + D 600-200 MG 06/05/06 alcium-Vitamin D 250-1 QD Document / administer Tetanus vac 07/26/05 azepam 10 MG 10/15/08 hs Q 4hr/P 04/21/09 ortab 5 5-500 MG AC TID 04/21/09 glan 10 MG DOC: Consider evaluation for Diabetes of DOC: Consider adding Metabolic Syndro Problem List due to 3/5 criteria met (see MED: Start ACE or ARB for BP goal not PROC: Order or Discuss obtaining Bone Labs for Osteoporosis Dx or Osteoporosis Ris 132 mg/dL 209 mg/dL 126 mg/dL 134 mg/dL 57 mg/dL 7/15/06 Trig Chol LDL LDL Direct 7/15/09 7/15/09 4/05/05 VAC: Consider Zoster vaccination, unles HDL Gluc, Fasting 7/15/06 131 mg/dL Gluc, Random 7/15/09 2/24/09 HbA1c MicroAlb/Cr Measures / Calculations 34/82 7/15/09 54/80 4/21/09 CHD Risk BMI (Wt) 29 (153lb) 102-138 37.26 7/15/09 Est. CrCl 7/15/09 **Diagnostic Testing** Bone Density 6/06/06 Insurance: Routi 7/01/08 Colonoscopy RURAL HEALTH CLINIC I Next Visit: 4/20/05 Mammogram Last Visit: Chlamydia Suggested Next Visit: 2 mos CHO Vaccine BP > 130/8 Tetanus Tdap 5/11/94 HTN **Friglyceride** 1-3 mos - HDL < 40 Men, < 50 Women - Glucose > 100 3-6 mos GLUC 9/25/95 Pneumoccal 1/19/08 BMI > 26 HPV Herpes Zoster -Unless contraindicated

Keys for Sustained Success:



Collaborative

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Investigator/ **Academic Health Center** Perspectives

Challenges:

- Important to give deadlines in large practices when there is a staggered implementation period. Several license agreements went unused for greater than 6 months, which cost valuable grant dollars.
- Creating a generic Data Use Agreement for the clinicians to sign took significantly longer than anticipated when working with the University **Compliance Officer**
- Was not aware that additional agreements are required for each individual query detailing what specific data elements would be pulled (data will not be pulled until complete documentation is in place)
- Difficult to meet investigator needs with tight grant deadlines and be able to sufficiently understand their data needs as well as the IT needs (extraction, aggregation and data scrubbing)
- Detailed meetings (time consuming) had to be held with each clinic to launch the clinical reminder system to recruit patients to a clinical trial
- Difficult to coordinate the priorities and needs of the investigator, clinician and CINA due to a growing number of competing demands

Results:

- CLIC successfully connected the offices of 20 nonacademic primary care community clinicians to not only one another but also to the academic and research resources through informatics.
- We selected a STARNet NIH/NIA-funded randomized double-blind, placebo-controlled trial of aspirin as our first proof-of-concept study. Through our HIPAAcompliant connection via CINA we have implemented a clinical reminder to clinicians identifying eligible patients, informing them that they meet initial screening criteria for this trial.
- In addition, we are currently in the process of querying the Integrated Data Repository for three different studies related to: pediatric obesity, hypertension and the management of warfarin.
- Meetings are being held with other investigators to provide pilot data for grant submissions. Additional queries are being made.