Home Based Primary Care for Frail Elderly People

- Description of a Model of Primary Care
- Frailty and Aging Cohort Study

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Office

Advantages of
Home –Based Primary Care

- **Access** - people who can't get to an office- e.g. Dementia
- **Assessment** - How a person functions in their environment
- **Reduce Caregiver Stress** and Work loss taking parents to appt.
- **Continuity of Care**
  - Build Relationship with Patients and Caregivers
  - Quicker Recognition of a Change in Health Status
  - Build Trust Re: important decisions about health care, intensity of treatment and EOL Care

Model

- **Comprehensive Geriatric Assessment and Management**
  - Assessment of Physical, Mental and Social determinants of decline
  - Standardized Health Status measures
- **Interdisciplinary Team**
  - PT -0.6
  - RN – 1.8
  - MD- 1.4
  - Will likely be adding OT and Kinesiology
- **Web –Based EMR** with Virtual Team Meetings
- **Sustained follow up** – primary care vs consultant care

Eligibility

- **Eligibility**
  - \>75
  - Frailty syndrome- e.g. memory, c.pain, immobility
  - Multiple Comorbidities that are difficult to manage
  - Difficulty getting to a doctor's office
- **Referrals**
  - Home Care nurses and Case managers
  - Physicians- hospitalists and primary care
  - Assisted living/retirement homes
  - Word of Mouth

Funding

- **Private Public Mix**
  - Insured Services – MSP
    - Doctor visits, Lab, specialists and hospitals
  - Non Insured – Annual Practice fee/FFS
    - Team: RN, PT etc
    - Telephone, email, family meetings
    - Paperwork, etc.

Practice Profile

- **N= 300**
  - Live in Homes = 270
  - Nursing Homes = 30
- **Functional Status and Risk factors**
  - Age   - 88
  - Dementia   - 20%
  - Depression - 44%
  - Chronic Pain on Narcotic – 27%
  - Osteoporotic Fracture – 47%
  - Ave # RX drugs – 6.8
  - Charlson Comormidity Index (3-37) – 8
  - CSHA –Clinical Frailty Scale – 6
  - Gait Speed -0.68 m/s (<0.8 – increases mortality, # etc.)
  - Housing
    - 54% in homes or Apartments
    - 26% in Retirement homes
    - 20% in Assisted Living

Study
Evaluating our Practice
JAGS 2012

- Compared health care utilization in the the year prior to entering the practice to the fiscal year 2011. ALOS in practice was 4 years:

  – 40% Reduction in hospital admissions and days-ss

  – 20% reduction in ER visits - ns

  – 47% of people were able to die at home

Frailty and Aging Cohort Study (FACTS)

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Objectives

- Benchmark Practice
  - Use Enhanced Comprehensive Geriatric Assessment with Standardized valid, reliable health status measures on all patients in our practice
- Follow people longitudinally to study:
  - Risk Factors for:
    - Death
    - Acute Care utilization
    - Nursing home placement
    - Deterioration in QOL and Function
    - Infections and Falls/injuries
  - Evaluate our Interventions

Facts Pilot
Test the Tests

- UBC Ethics Approval
- Eligibility
  – Living in Retirement Home
  – MMSE>20 and able to Consent
- N= 57/91 (63%) Consented and participated

Methods

- June-July 2015
- Nurse and Research Assistant
- Collected Demographic Information
- Did Standard Assessment
  - Mental Status: sMMSE , MOCA and GDS
  - Pittsburgh Sleep Quality Index
  - ADL: Barthel, Lawton Brody. CSHA CFS
  - Other: MNA, Grip Strength, BMI, BP, HGB, GFR, lymphocyte Count
  - Medical: CCI, certain DX and Medication Use
- Added
  - Gait Speed- 3 meter vs 4 meter
  - QOL: Euroqol 5D 5L , and tested new ISOQOL and DOW-6
  - CRAFT – New Falls Risk Assessment
  - 3 OZ Water Swallow Test- for Dysphagia and risk of pneumonia

Results
Gait Speed

- 65% had living space large enough to use standard 4 m gait speed
- Tested
  - Average Gait Speed:
    - Mean- 0.68 m/s
    - 13% - normal gait speed $\geq$1m/s
  - 3 Meter vs. 4 meter – Mean Difference   0.04m/s NS (0.68 for 4m vs. 0.72 for 3m)
  - Test Retest Reliability – Mean Difference 0.01m/s   NS
  - Inter-rater Reliability - "   " r=0.98
- Validation- 3 m Gait speed showed significant corrleation with:
  - CFS, Grip Strength, EuroQol, Barthel/LB and Mood

Results QOL

- **ISOQOL -20**
  - 20 symptoms eg pain, fatigue memory, nausea
  - Each Symptom Scored out 5- Present, impact on: IADL/ADL, Hobbies/Leisure, Relations, Life Satisfaction
  - Domain Score out 20
  - Total Score: 100 . Higher score, worse QOL
  - Results
    - Mean score 17 – indicates relatively good QOL (Euroqol – percentile 76%, VAS – 71)
    - Correlated with Euroqol VAS, GDS, sleep-PSQI, Dependency ADL/IADL, Gait Speed
    - Test-retest- r=0.83

- **Domains of Wellness (DOW-6)**   5 point Likert Scales and VAS (0-100) for intensity
  - Happiness, Life Satisfaction, Control over Life Loneliness, Optimism and General Health Satisfaction
  - Results
    - VAS –difficult for people and didn't add any information
    - Mean Likert – 17.2 (10-24)
    - Mean VAS- 76.3
  - Validation – correlated with
    - GDS, Euroqol, ISOQOL PSQI, Gait speed CFS, MMSE/MOCA CCI and # drugs

Results
CRAFT -Falls

- **Test- 20 points**
  - Hx- Fall, Fracture
  - Equipment: walking aid, Medical Alert
  - Symptoms: dizzy, Light headed etc.
  - Drugs : Psych., CV, >3
  - Exam
    - Hr<60
    - BP – orthostatic drop>20 mm
    - Stand from a chair without arms
    - Get up off the floor
- **Results**
  - Average score 8.5
  - R= Barthel, CFS, Gait Speed, Depression, QOL

Results
Caregiver- Pending

- Caregiver Burden
  - S Zarit Burden index-12 point
  - GDS
  - CareQOL
  - DOW-6
  - Demographics
  - Time Spent Caregiving

Results
Acceptability

- The eCGA
  - 89% felt Relevant
  - 98% -willing to repeat it
  - 7% -found it stressful
  - Ave. Assessment time – 94 minutes.
    - ISOQOL – 9 minutes

Next Steps

- Introduce this into "Usual Care" on all patients in the practice by practice nurses
- Repeat at 3 months for new people to evaluate our interventions
- Repeat Annually on all people
- Track Outcomes
  - Hospitalization
  - Transfer to Nursing Homes
  - Deaths - mortality, site of death and type of death
  - Pneumonia and other recurrent infections
  - Falls and Injuries
  - QOL
  - Caregiver Burden