

# VIRTUAL INTEGRATED PRACTICE

Interdisciplinary Team Care  
& Communications Technology  
To Improve Chronic Disease Management

# **At the dawn of the 21st Century Chronic Illness is the Norm**

*Adults > 80 years old...*

25% in chronic care facilities

40% need assistance with ADLs

*Adults > 65 years old...*

50% report limitations of activity

# CHALLENGES IN PRIMARY CARE

- Multiple chronic problems
- Polypharmacy
- Physical disability
- Functional Impairment
- Economic Stressors

# Outcomes

- Missed opportunities for primary prevention
- Undiagnosed depression, deconditioning, co-morbidities
- Avoidable disability
- Too many problems...Too little time

# Physician's Viewpoint



# Patient's Viewpoint



?

?

How do we design a health care delivery system to effectively address

• AGING POPULATION

?

?

• CHRONIC ILLNESS

?

?

• DISABILITY

?

?

**COMPLEXITY -->**

# **INTERDISCIPLINARY TEAMS**



*Are they the answer ???*

# Benefits of Interdisciplinary Team Care

- Address complex issues in multiple domains
  - Disease
  - Function
  - Psychological
- Enhanced compliance with patient care guidelines

# THE IDEAL:

## Coordinated Services... Fewer Redundancies

Providing patients with

- The right provider *giving*
- The right service *at*
- The right time *doing it*
- The right way

# “The Traditional Team”



# TEAM INTERACTIONS

	<b>SAME TIME</b>	<b>DIFFERENT TIME</b>
<b>SAME PLACE</b>	<b>Synchronous Face-to-Face</b>	Asynchronous Co-Located
<b>DIFFERENT PLACE</b>	Synchronous Distributed	Asynchronous Distributed

From R. Johansen, Groupware

# Synchronous, Face-to-Face Interaction

- Works well in institutional setting:
  - Nursing Home
  - Hospital
- Basis for **G.I.T.T.**  
The Hartford Foundation's  
Geriatric Interdisciplinary Team  
Training Project (1995-2000)



# **GITT Experience Taught Us:**

- Primary care offices do not often work as teams
- Lack of direct communication with other disciplines involved in patient care is the norm
- Even if team existed, impractical to meet in same time and place

# TEAM INTERACTIONS:

**SAME TIME**

**DIFFERENT  
TIME**

**SAME  
PLACE**

Synchronous  
Face-to-Face

**Asynchronous  
Co-Located**

**DIFFERENT  
PLACE**

Synchronous  
Distributed

Asynchronous  
Distributed

# Asynchronous Co-Located Teams



Hospitals,  
Nursing homes

Team members  
interact primarily  
in medical record



# TEAM INTERACTIONS:

**SAME TIME**

**DIFFERENT TIME**

**SAME PLACE**

Synchronous  
Face-to-Face

Asynchronous  
Co-Located

**DIFFERENT  
PLACE**

**Synchronous  
Distributed**

Asynchronous  
Distributed

# Synchronous Distributed...

# TELEMEDICINE

- Patient, Providers in separate locations
- Interactions at same time
- **A MEANS TO LINK PATIENTS TO PROFESSIONAL OR TECHNICAL RESOURCES**



# Limits of Telemedicine

- **Single task focussed**
- **DATA-Centered vs.**  
***PEOPLE-Centered***
- **Can be expensive**
- **Synchronicity difficult for multiple providers on a regular basis**

# TEAM INTERACTIONS:

**SAME TIME**

**DIFFERENT  
TIME**

**SAME  
PLACE**

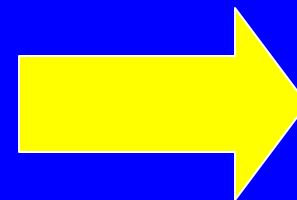
Synchronous  
Face-to-Face

Asynchronous  
Co-Located

**DIFFERENT  
PLACE**

Synchronous  
Distributed

**ASYNCHRONOUS  
DISTRIBUTED**



**VIRTUAL  
INTEGRATED  
PRACTICE**

# VIRTUAL INTEGRATED PRACTICE

- Target: Vulnerable Elderly with Chronic Diseases
- Problem: Sub-optimal Care in Conventional Primary Care Setting
- Goal: **USE NEW COMMUNICATIONS TECHNOLOGIES TO BUILD EFFECTIVE INTERDISCIPLINARY TEAMS**

# **V.I.P.** Professionals in different settings, interacting with patient at different times



**NURSE**



**SOCIAL WORKER**



**PHYSICAL THERAPIST**



**PHYSICIAN**

# VIRTUAL INTEGRATED PRACTICE

- Four Year Efficacy Study
- 4 Intervention practices (vs. controls)
- 1.0 - 4.0 FTE physicians
- Target conditions:
  - Diabetes Mellitus
  - Urinary Incontinence

# V.I.P. INTERVENTION

- Engage each practice in self-assessment process
- Identify team members from community of practice
- Introductory meetings to engage team, determine how they will work together
- Train group in use of four V.I.P. Tools
- On-going support for intervention (*Nurse Coaches*)

# FOUR CORE V.I.P. TOOLS FOR TEAM BUILDING

- PATIENT AT THE CENTER
- PROCESS STANDARDIZATION
- GROUP ACTIVITIES
- PLANNED COMMUNICATIONS

# PATIENT AT THE CENTER

- Common emphasis on *self management* training at all patient encounters
- Explicit negotiation of goals with patient and monitoring progress towards goals
- e.g. DIABETES SELF MANAGEMENT CARDS

# PROCESS STANDARDIZATION

- All team members agree on common evidence-based approach to patient care
- Use of flow sheets in medical record trigger referrals to team members (nutritionist, pharmacist, ophthalmologist, etc.)
- Periodic audits monitor adherence to process standards.

# GROUP ACTIVITIES

Team members replace one-to-one interactions with group activity

- Drop In Group Medical Appointment (DIGMA)
- Group pharmacy tours
- Nutrition classes

# PLANNED COMMUNICATIONS

*The essential technologic piece of VIP*

VIP designed with the EMR in mind

Given our assumption (in 1999) that electronic records would be the norm within five years, how could these be used as a tool of team building?

# PLANNED COMMUNICATIONS

*The reality five years later*

EMRs used in less than 10% of primary care practices

Teams must select optimal strategies that enhance communications and build trust

# Communications Issues

- Real time vs. Asynchronous
- Emergency vs. Urgent vs. Routine
- Straight data vs. Emotional content
- Recognizing and addressing conflict
- Ensuring continuous improvement

# OBSERVATIONS OF VIP PROCESS

## **#1: PEOPLE still matter**

- Face-to-Face meetings had to precede Virtual collaboration
- Individuals better than Agencies

# OBSERVATIONS OF VIP PROCESS

## #2: FAX is preferred communication technology

- Familiar, Easy to use, Ubiquitous
- Asynchronous... but faster than snail mail, phone tag
- Written documentation at point of service
- Reinforces process standardization

# OBSERVATIONS OF VIP PROCESS

- **E-MAIL**

- Relatively low use
- Trust / HIPAA concerns?
- Fear of the Crushing In-Box

- **CELL PHONE**

- Minimal use -- Little need for same time communication
- Reluctance to “take advantage” of physician access

# OBSERVATIONS OF VIP PROCESS

- **VOICE MAIL**

- Trusted technology
- Reliable... personal communication, without real time stressors
- Able to communicate more than data, text

- **TEXT MESSAGING**

- Generation gap? Not yet being used on teams

# OBSERVATIONS OF VIP PROCESS

- PDAs / PALM-TOPS
- SMART CARDS

*Not yet... We are now asking:*

- What do they add over paper and pencil communications?
- What benefits would justify added costs, duplicate data entry?
- How do we ensure that older patients will use these systems?

# OBSERVATIONS OF VIP PROCESS

## **#3: REINFORCEMENT is critical to success**

- Decay in use of systems over time
- Need for an in-office “Champion”
- Nurse Coach model for reinforcement

# OBSERVATIONS OF VIP PROCESS

## #4: CHANGE IS DIFFICULT

Even selecting “early adopters”,  
physicians were reluctant to  
adopt changes to existing  
practices

*“That’s an interesting idea, but  
our patients won’t accept it.”*

# OBSERVATIONS OF VIP PROCESS

## **#5: Patients EXPECT us to communicate with each other!**

- Why don't you all talk to each other?
- My doctor always asks what the other doctor told me.

# VIRTUAL INTEGRATED PRACTICE

- Primary care of the aging and disabled requires an interdisciplinary team approach
- “Virtual teams” can be successfully developed and implemented in primary care practices
- Community participants (e.g. pharmacists, dieticians) are eager to work more closely with physicians
- Teams depend on human factors more than technological ones

# VIRTUAL INTEGRATED PRACTICE

- VIP approach may result in better adherence to evidence-based guidelines, increased chronic disease self-management, better clinical outcomes
- Challenges:
  - Maintenance of VIP intervention over time
  - Dissemination and replication
  - Enhancing use of “right” communication technologies
  - Maintaining the patient as a member of the virtual team

# Investigative Team

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FOR MORE INFORMATION ABOUT  
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