

# Home Telehealth Making a Difference

**Bringing Home & Health Together Through  
Technology**

**at Charles George VAMC**



**Care Coordination/Home Telehealth**



# Professional Definition



HT is the wider application of care and case management principles to the delivery of healthcare services using health informatics, disease management and telehealth to facilitate access to care and to improve the health of designated individuals and populations with the specific intent of providing **the right care in the right place at the right time.**



Care Coordination/Home Telehealth

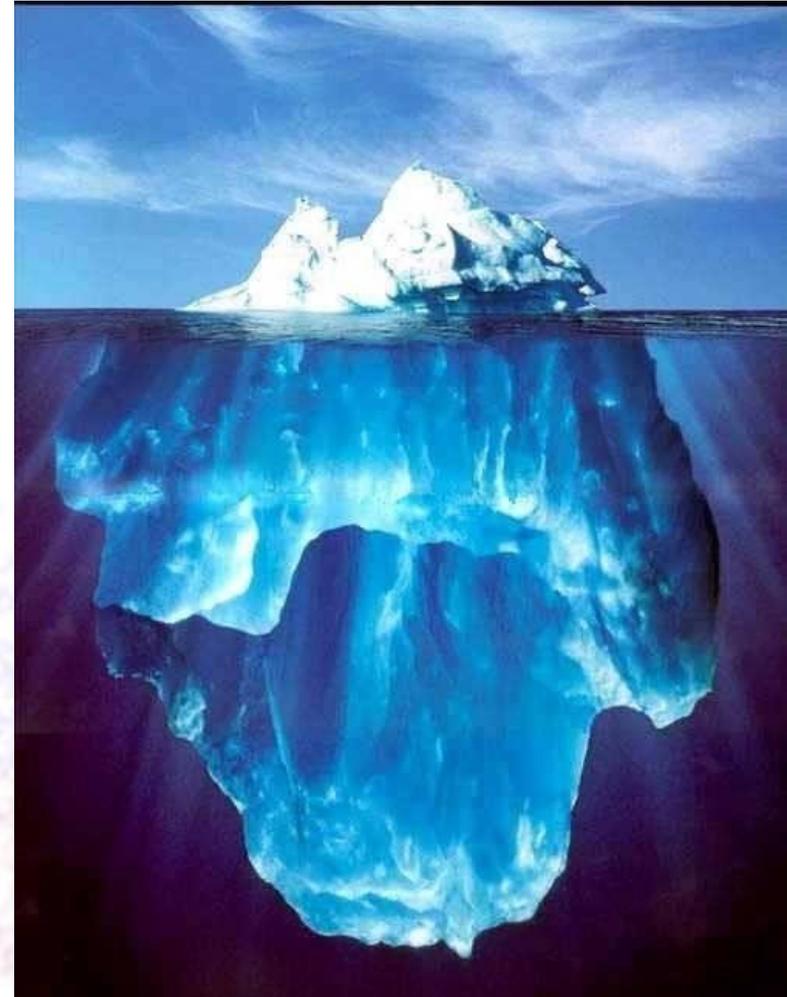
# Patient Definition

HT is the use of new information technologies that connect people in health care services that help ensure the **right care happens in the right place at the right time.**



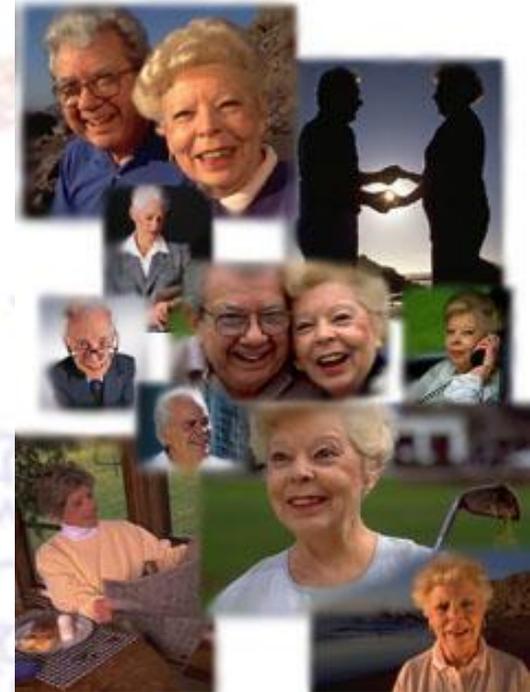
# Care Coordinator Goals

- ★ Establish continuous healing relationships
- ★ Integration of healthcare environment to best meet the patient's and caregiver's needs
- ★ Proactive delivery of evidence-based care & follow-up



# Why Do HT?

- ★ Increased access to services
- ★ Improved communication
- ★ Improved quality of life
- ★ Fewer healthcare crises
- ★ Reduced healthcare usage
- ★ Improved self-care behaviors
- ★ Improved satisfaction



# Criteria for enrollment in HT?

- ★ Diagnosis of: HTN, CHF, DM, COPD, PTSD, Depression, SA, Weight Management and newly added Hepatitis C.
- ★ **OTHER NEW Diagnoses: Pain management, CAD, pre-diabetes, Dementia, Cancer maintenance, and Smoking Cessation.**
- ★ Cell phone or Ethernet ideal but not always needed.
- ★ **Pre-Diabetics** must have HgB A1C 6.1-6.4, and documented lab CBG of 100-125 range, **Diabetics** must have HgB A1C level >9.0, **SA** patients must be enrolled in SA program, and **WM** patient's BMI must be >24.9 Overweight or >30 Obesity categories.
- ★ Must have recent hospitalization in past year or 14 clinic visits in past year for all but WM category.
- ★ Must be psychiatrically stable and willing to participate.
- ★ Call ext. 4464 if you have questions.



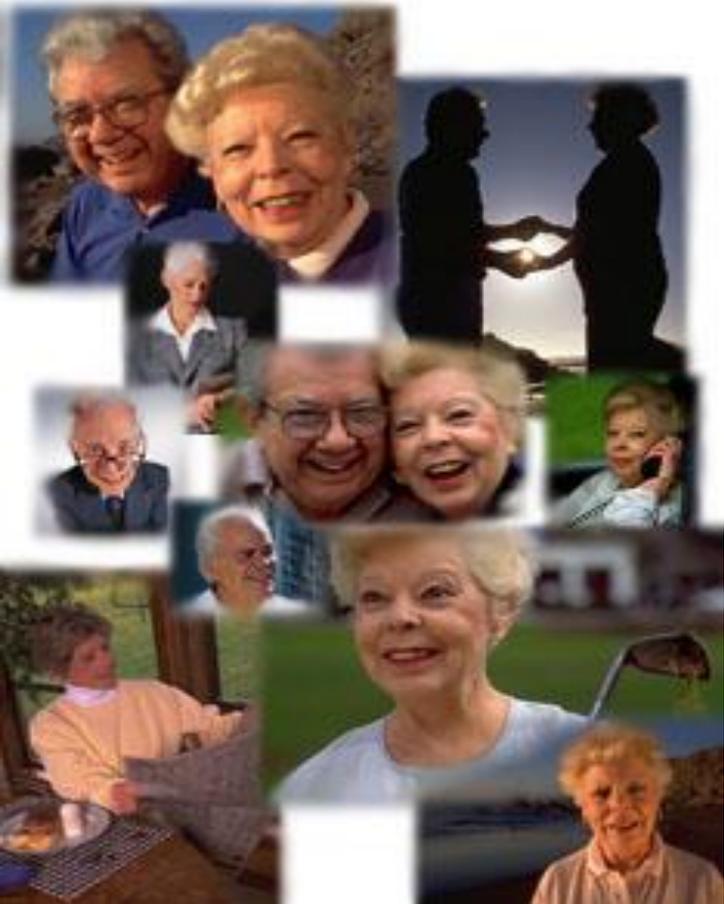
# Care Coordination and the Veteran



- ★ Enhances the relationship between Veterans and the VA health care system by Coordinating their care, and in doing so improves the health of the Veteran population.
- ★ Has made us recognized by the Institute of Medicine as a leader in health care innovation.
- ★ Our information technologies help support care delivery in the home and help Veteran patients to enjoy better health and remain living independently.



# Care Coordination Components



## ★ Disease management

- symptom
- knowledge
- behavior

## ★ Care/case management

- Across the continuum

## ★ Self-management

- Tools for self care
- Technology is key



# ViTelNet's Turtle 400

ip://191.149.219.100/rnclinical/patients.asp

**ViTelCare™ Web**

Results Trends Profile Update

Worklist Today is: Friday, April 21, 2006  
Patient Name: Bell, Terry Lee  
Program: CHF

Care Manager: VISN: VISN7  
Facility: Charleston

Patient

Reports

ID	Date/Time	BP	SpO2	Pulse	Temp	Wght	Gluc	PEF
57	12/18/2005 10:48:16 AM	162/110	0	77	0	298	0	0
56	12/17/2005 09:42:29 AM	170/110	0	77	0	298	0	0
55	12/16/2005 08:48:48 AM	167/115	0	73	0	298	0	0
54	12/14/2005 01:29:15 PM	174/109	0	77	0	296	0	0
53	12/12/2005 08:56:03 AM	146/88	0	88	0	297	0	0
			0	72	0	298	0	0
			0	72	0	296	0	0
			0	82	0	295	0	0
			0	70	0	296	0	0
			0	62	0	296	0	0
			0	77	0	296	0	0
			0	68	0	195	0	0
			0	50	0	200	0	0
			0	100	0	290	0	0

date: 11/01/2005  ALL dates:

KNOWLEDGE for 11/01/2005 08:19 AM

Response	Type



- ★ Touch Screen
- ★ Multiple daily readings
- ★ Monitors BP, pulse, weight, temperature, glucose, SpO2
- ★ Reads questions (low literacy)



Care Coordination/Home Telehealth

# Health Buddy System



- ❖ **Diagnosis Specific**
- ❖ **Low Cost**
- ❖ **6<sup>th</sup> Grade**
- ❖ **Multiple Mental Health Protocols**
- ❖ **Ethernet capable**



**Care Coordination/Home Telehealth**

# Cardiocom Flex

- Multiple disease management protocols.
- Built-in cellular modem capabilities
- Connected peripheral devices available such as scales, SPO2, and BP monitors.



# Decision Support Tools: iCare Desktop™

You are viewing sessions for Jul 23, 2003 in the "All Programs" program. Date:   
**26 responses** have been received and there are **3 non-responding patients**.

**Responses on Wednesday, July 23, 2003**

Patient	Response Time	Symptoms	Behavior	Knowledge	General
Patel, Krishna	02:58 PM PDT	High	High	High	None
Chamura, Mark	09:38 AM PDT	High	High	Medium	None
Lake, John F.	03:07 PM PDT	High	Medium	Medium	None
McAllister, Troy	01:09 PM PDT	High	Medium	High	None
Romeo, Julie R.	10:43 AM PDT	High	Medium	Medium	None
Zimman, Mary M.	05:14 AM PDT	High	Medium	Medium	None
Schmidt, Anna	02:17 AM PDT	Low	High	Medium	None
Fish, John F.	11:46 PM PDT	Medium	Medium	Low	None
Flock, Kimberly	06:19 PM PDT	Medium	Low	Medium	None
Garden, Herb E.	03:20 AM PDT	Medium	Low	Medium	None
Kawahara, Aolani	12:55 AM PDT	Medium	Low	Medium	None
Smith, Anna N.	07:22 PM PDT	Medium	Low	Medium	None
Soprano, Michael J.	05:29 PM PDT	Medium	Low	Medium	None
Rubenstein, David	01:02 AM PDT	Medium	Low	Medium	None
Kawahara, Aolani	08:31 AM PDT	Medium	Low	Low	None
Chen, Ying	06:36 PM PDT	Medium	Medium	Medium	None
Linton, Lloyd L.	03:00 PM PDT	Medium	Medium	Medium	None
Nguyen, Thanh	02:57 PM PDT	Medium	Medium	Medium	None
Parish, Jason M.	03:00 PM PDT	Medium	Medium	Low	None
Chen, Angela	09:38 AM PDT	Medium	Low	Medium	None
Garcia, Jose	03:07 PM PDT	Low	Medium	Medium	None
Jones, Barbara	01:09 PM PDT	Low	Medium	Medium	None
LeSur, Vincent A.	10:43 AM PDT	Low	Medium	Medium	None
Rodriguez, Francisco L.	05:14 AM PDT	Low	Medium	Medium	None
Smith, Elle	02:17 AM PDT	Low	Medium	Medium	None
Spencer, Sharleen A.	11:46 PM PDT	Low	Medium	Medium	None

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Health Hero Network - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Results Date: 06/01/2001  Results:

**Results of Day 2 of Month 10 from Health Hero 12 mth CHF Program**  
 Taken on Friday, Jun 01, 2001 12:16 AM America/Chicago

Risk	Question	Response	Category	Aspect
	Hi Me! Thank you for coming back! Your Health Buddy is here for your health. Begin when you are ready.	continue	General	None
low	Did you weigh yourself today?	Yes	Behavior	Weight
	What is your weight today? (Use the arrows to indicate your weight)	122	Symptoms	Weight
medium	This is somewhat higher than your usual weight. This could be a sign of fluid retention. Be sure you remember to limit your salt intake and take your medications as prescribed by your doctor.	Okay	Symptoms	Weight
low	Yes or no: I have recently fallen while checking my weight.	No	Symptoms	Weight
	Excellent! Be sure to let your doctor know if you ever have a fall for any reason, especially if you are injured.	continue	Behavior	Weight
high	Do you have any more shortness of breath than usual today?	Yes	Symptoms	Dyspnea
	Increased shortness of breath can	OK	Symptoms	Dyspnea

Done Internet



## Care Coordination/Home Telehealth

# CARDIOCOM Interactive Voice response (IVR)

Cell phone only – no device needed!

**Also available:** Messaging device with soon to be released built-in cellular modem.

**CARDIOCOM**  
Experts In Telehealth

HEARTFAILURE, JUDITH {456-899-8098} - HF - "Call after 9am"

14-Day Device Logs

Today's Transmissions : 1

Alert	Score	Time	Verified	Referred
	13%	15:43	<input type="checkbox"/>	<input type="checkbox"/>

**Device Data**

	9/21/2010 15:43	9/20/2010 08:46	Change	Trigger
Acute	N	N		
Sx Score	13%	20%	-7%	25%
Sx Variance	11%	18%		10 / 2 Days
Compliance	1 (3)	1 (2)	0	3 / 3 Days
Weight (lbs)	155.2	153.1	+2.1 lbs	5 lbs / 7 Days

**Exception Verification Call Attempt**

Result: **Contacted - HIPAA Approved Contact** [Post My Call](#)

**Add Note**

[Add Health Check](#) | [Add My Signature](#) | [Spell Check](#) | [Post My Note](#)

14:50 - Alerts generated: weight gain of 5.0 lbs over 7 day(s), symptom variance of 10% in 2 day(s) and symptom compliance of 3 in 3 day(s). Biometric data: weight is 155.2, +2.1 lbs from previous weight on 9/20/2010. Reported symptoms: Ankles Or Feet More Swollen, Stomach Feels More Bloated, More Tired Than Usual, Missed Med. Transmit time was 15:43.

14:51 - Alerts generated: weight gain of 5.0 lbs over 7 day(s), symptom variance of 10% in 2 day(s) and symptom compliance of 3 in 3 day(s). Biometric data: weight is 155.2, +2.1 lbs from previous weight on

**Question Detail - Score: 13%** [View Health Check](#)

Exception	Question
<input checked="" type="checkbox"/>	Ankles Or Feet More Swollen
<input checked="" type="checkbox"/>	Stomach Feels More Bloated
<input checked="" type="checkbox"/>	More Tired Than Usual
<input checked="" type="checkbox"/>	Missed Med

**Medications : 8**

Name	Dose	Unit	Route	Freq
Aspirin	81	mg	PO	daily
Coreg	25	mg	PO	bid
Digoxin	0.125	mg	PO	daily
Lasix	40	mg	PO	daily
Lipitor	40	mg	PO	daily

**Tasks**

[Open Interventions: 1](#)

[Follow Ups Due: 1](#)

[Perform A Manual Health Check](#)

[Active Status: N](#)



# Coronary Artery Disease (CAD) Disease Management Protocol (DMP)

- The focus of the CAD program is to monitor and educate patients on self-management behaviors.
- It includes medication reminders, educational curriculum about medications (effects/side effects), dietary instruction, and tips for managing symptoms of CAD.
- Patients are taught signs and symptoms to report, the disease process, risk factors and other pivotal aspects of care in managing CAD. Each daily session ends with an affirmation or fun trivia question.



# Coronary Artery Disease (CAD) Questions Outline

Coronary Artery Disease Cardiac Risk Factors  
CAD Prevention/Control CAD management  
Diet/Nutrition/Lipids Angina  
Medications Activity/Exercise  
Stress Management Smoking  
Obesity/Weight Mgt When to call 911  
AICD/Pacemaker Dyspnea/Oxygen Safety  
Heart Physiology Hypertension



# Cancer Maintenance Disease Management Protocol (DMP)

- The focus of the Cancer Maintenance Program is to monitor and educate patients on self-management behaviors.
- It includes medication reminders, educational curriculum about medications (effects/side effects), dietary instruction, pain management education, complications/SE of chemo, and other useful tips for managing Cancer treatment.
- Patients are taught signs and symptoms to report, the disease process, risk factors and other pivotal aspects of care in managing their Cancer condition. Each daily session ends with an affirmation or fun trivia question.



# Cancer Maintenance Questions Outline

Cancer –general/specific Stress/Anxiety

Safety

Energy conservation

Sleep

Chemo/SE

Psychosocial

Risk Factors

Eating disturbances

Depression/fatigue

Pain medications/SE

Nausea/anorexia/diet

Spirituality

Mental attitude



# Chronic Pain Disease Management Protocol (DMP)

- The focus of the Chronic Pain Program is to monitor and educate patients on self-management behaviors to help control pain.
- It includes medication reminders, educational curriculum about pain medications (effects/side effects), alternative pain control methods, dietary instruction, importance of controlling stress, exercising regularly, and other tips for managing Chronic Pain symptoms.
- Patients are taught signs and symptoms to report, education on the chronic pain cycle process, risk factors, and other pivotal aspects of care in managing chronic pain. Each daily session ends with an affirmation or fun trivia question.



# Chronic pain Questions Outline

Chronic pain Definition  
Stress/causes of stress  
Eating disturbances

Exercise

Fever

Life Maintenance

Mental attitude

Pain Assessment

Alternative pain methods

Anxiety

Constipation/diarrhea

Energy conservation

Fatigue

General Nutrition

Pain Medications/SE

Neuropathy

Pain management



# DEMENTIA

## Disease Management Protocol (DMP)

- The focus of the Dementia Program is to monitor and educate patients/caregivers on self-management behaviors. It includes medication reminders, educational materials and resources for caregivers and patients, suggested coping skills, caregiver burden assessments, and other additional information.
- Patients are taught signs and symptoms to report, the disease process, risk factors and other pivotal aspects of care in managing dementia. Each daily session ends with an affirmation or fun trivia question.



# Dementia Questions Outline

**Zarit Burden (caregiver) Inventory**  
**Education Assessment**  
**Communication**  
**Communicating with the Healthcare team**  
**Support systems for the Caregiver**  
**Care**  
**Community resource**  
**Caregiving**  
**Diagnosis along with other co-morbidities**  
**Sharing caregiver burden**  
**Dementia and Safety**  
**Behaviors common to Dementia**  
**Planning for the Future**  
**Stress and Self Care**

**Transportation and Mobility**  
**Medication Management**  
**Stress Assessment**  
**Dementia and Sexuality**  
**Caregiver Physical Self-**  
**Find Enjoyment in**  
**Finance and Legal aspects**  
**Veteran Care and Grooming**  
**Travel and Environments**  
**Education Assessment**  
**Zarit Post test**  
**Grief and Loss**



# Pre-Diabetes Disease Management Protocol (DMP)

- The focus of the Pre-Diabetic Program is to monitor and educate patients on self-management behaviors. This is provided for those whose HgB A1C is 6.1-6.4 plus documented fasting lab CBG of 100-125 range.
- It includes medication reminders, educational curriculum about medications (effects/side effects), dietary instruction, and tips for managing symptoms of Pre-Diabetes.
- Patients are taught signs and symptoms to report, the disease process, risk factors and other pivotal aspects of care in managing Pre-diabetic condition. Each daily session ends with an affirmation or fun trivia question.



# Pre-Diabetic Questions Outline

- Pre-Diabetes general
- Nutrition/Dietary changes
- Behavior change/priorities
- CAD Prevention
- Hypo/Hyperglycemia
- Metabolic syndrome
- Exercise/weight mgt.
- Stress/Anxiety
- Complications
- ER/Medical Care
- Foot Care
- Hyperlipidemia
- Tips on managing pre-diabetes
- Flu shots/preventative care



# Smoking Cessation (DMP)

- The focus of the Smoking Cessation/Tobacco treatment DMP is to monitor and educate patients on self-management behaviors to help them to stop smoking/using tobacco products.
- It includes medication reminders, educational curriculum about medications (effects/side effects), alternative smoking control methods, dietary instruction, importance of controlling stress, exercising regularly, and other tips for managing withdrawal symptoms.
- Patients are taught signs and symptoms to report, education on the nicotine addiction process, risk factors, and other pivotal aspects of care in managing cravings for the use of tobacco related products.



QUESTIONS????





**Teamwork is Vital  
Let's Work Together**

**Care Coordination/Home Telehealth**

