

TELEHEALTH 2014: EVOLVING CHRONIC DISEASE MANAGEMENT



David Chmielewski, MBA

Cleveland VA Medical Center Telehealth Lead

VISN 10 Rural Health Consultant

What is Telehealth / Telemedicine?

- **Telehealth** – primarily patient health education with remote monitoring and coordination of care
 - ▣ In general, no direct interaction between provider and patient
 - ▣ E.g. home glucose monitoring with medication titration

- **Telemedicine** – direct provision of medical care
 - ▣ Two-way video, image review
 - ▣ E.g. acute care visit, Tele-Dermatology

Often terms are used interchangeably



1. Home Telehealth
2. Clinical Video Telehealth
3. Store-and-Forward Telehealth

Regulation of Telemedicine

OTS (Office of Telehealth Services) – Oversees the programs, ensures that certain requirements are met; Similar to JCAHO; Biannual site visits.

Competencies – Care Coordinators must maintain yearly competencies related to Telehealth.

Conditions of Participation – Clinical, business and technical components of the program are intact.



Department of Veterans Affairs Intranet

VHA Office of Telehealth Services



Home Telehealth

Home Telehealth

- Facility to Patient's Home
- Telemessaging / Telemonitoring
- Patients are monitored at home using home Telehealth technologies
- Goal: Reduce ER visits, hospital admissions, bed days of care
- Patients learn self-management skills that allow them to take control of their diagnosis and monitor their condition from home.



Telemessaging

- Diagnoses
 - Diabetes
 - CAD
 - CHF
 - COPD
 - Hypertension
 - Spine Cord Injury
 - Depression
 - Schizophrenia
 - PTSD
 - Bipolar
 - Dementia
 - Low ADL
 - MOVE!
 - Smoking Cessation
 - Substance Abuse
- Daily monitoring
- Easy to use and transport
- Interactive Voice Response



Comparing Technologies:

Wired Devices

- Landline or high speed internet (wired, wireless, cellular) required
- Cabled peripherals provide accurate data
- Real time data transmission not available with all vendors
- Dialogs often more inclusive
- Cost: approx \$300

Interactive Voice Response

- No Landline or Internet Required
- Cell phone
- Same Day Data Transmission
- Inbound/outbound calls
- Lack of cabled peripherals
- Phone plan required
- No reading required
- Cost: no fee service

Daily Alerts

- Color coded alerts are generated based on how patient answers questions about symptoms and inputs biometric data.
- General, Behavior, Symptoms, Knowledge:

Red = High alert



Yellow = Medium alert



Green = No alert



Nurse's Role in Reviewing Daily Alerts: Identify priority alerts

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

Responses on Wednesday, July 23, 2003

Patient	Response Time	Symptoms	Behavior	Knowledge	General
	02:58 PM PDT	High	High	High	None
	09:38 AM PDT	High	High	Medium	None
	03:07 PM PDT	High	Medium	Medium	None
	01:09 PM PDT	High	Medium	High	None
	10:43 AM PDT	High	Medium	Medium	None
	05:14 AM PDT	High	Medium	Medium	None
	02:17 AM PDT	Low	High	Medium	None
	11:46 PM PDT	Medium	Medium	Low	None
	06:19 PM PDT	Medium	Low	Medium	None



Risk	Question	Response	Category	Aspect	Report Code
low	Welcome back, DONALD! Your questions are ready for you! You may start at any time.	Okay	General	None	
low	Have you checked your blood sugar in the last 24 hours?	Yes	Behavior	Glucose Metabolism	
low	Did you check your blood sugar this morning?	Yes	Behavior	Glucose Metabolism	
low	Did you check your morning blood sugar reading BEFORE the morning meal?	Yes	Behavior	Glucose Metabolism	
high	What was your morning blood sugar reading?	319	Symptoms	Glucose Metabolism	
	This is too high. Please call your Care Coordinator now, or if it is after business hours, call the VA TeleNurse at 1-888-838-6446.	continue	Behavior	Glucose Metabolism	
medium	Did you check your morning blood sugar reading roughly 2 hours AFTER eating the morning meal?	No	Behavior	Glucose Metabolism	
	The best time to check your sugar is before a meal, 2 hours after a meal, or at bedtime.	continue	Behavior	Glucose Metabolism	
medium	Did you check your midday blood sugar reading today?	No	Behavior	Glucose Metabolism	
medium	Did you check your evening blood sugar today?	No	Behavior	Glucose Metabolism	



Telemonitoring

- Use of two way audio/video technology
- Provides remote care delivery
 - Assessment
 - Education
 - Data Collection
 - Multiple Peripherals
 - Digital Photography
- Mimics in-person visit
- Earlier identification of exacerbation by using stethoscope, multiple peripherals, and live assessment
- Regularly used for patients with HF and/or COPD diagnosis
- Cost: \$3,800 w/ peripherals



Why Home Telehealth?

- ❑ Allows the clinic to target high risk, high resource Non-Institutional Care (NIC) patients
- ❑ Proactive management of health issues
- ❑ Encourage patient education
- ❑ Improve patient self-management behaviors
- ❑ Involve the caregivers as appropriate
- ❑ Increase patient satisfaction
- ❑ Increase provider satisfaction
- ❑ PACT / Medical Home Benefits



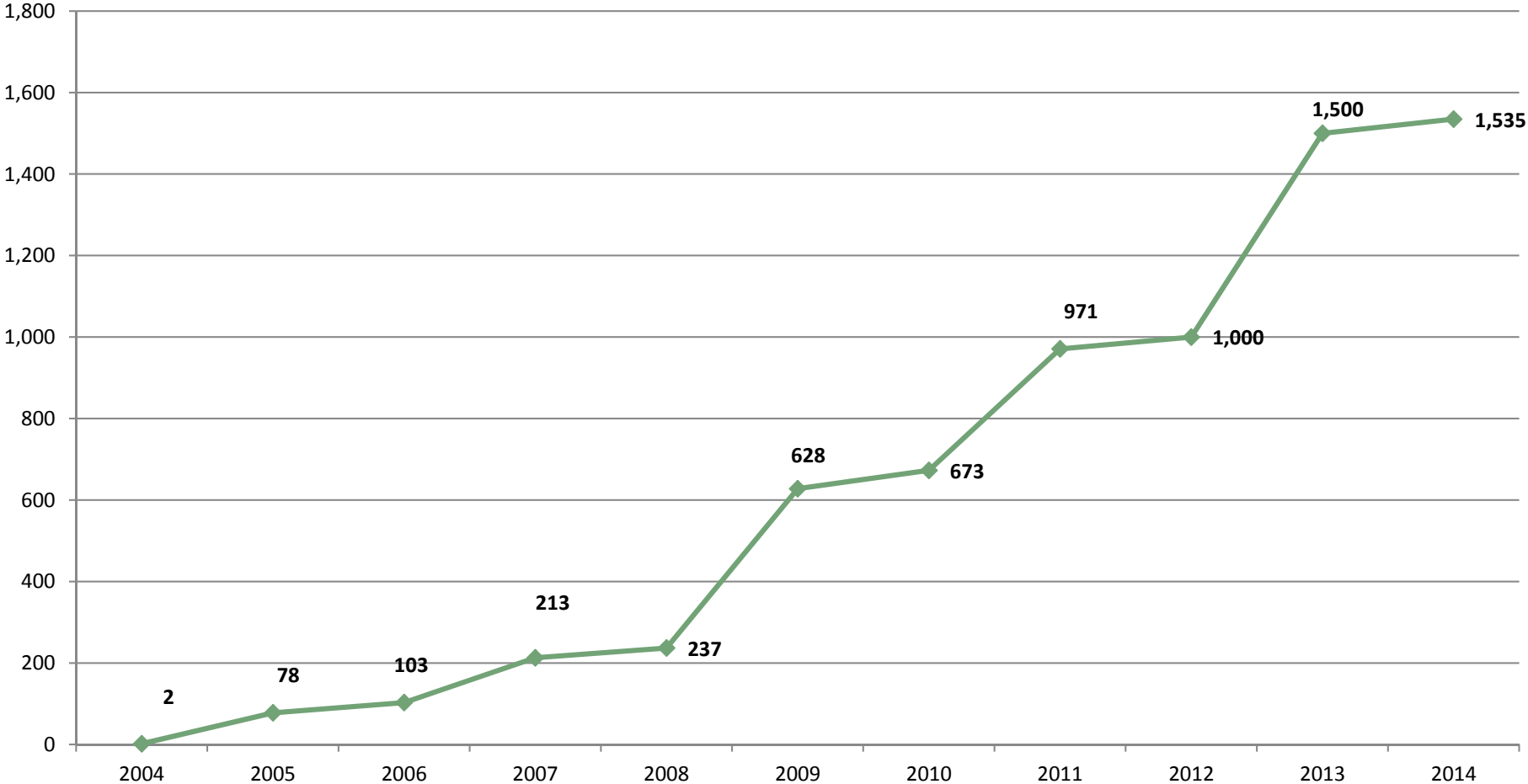
Department of Veterans Affairs Intranet

VHA Office of Telehealth Services



Cleveland VAMC Highlights

Cleveland HT Census Growth



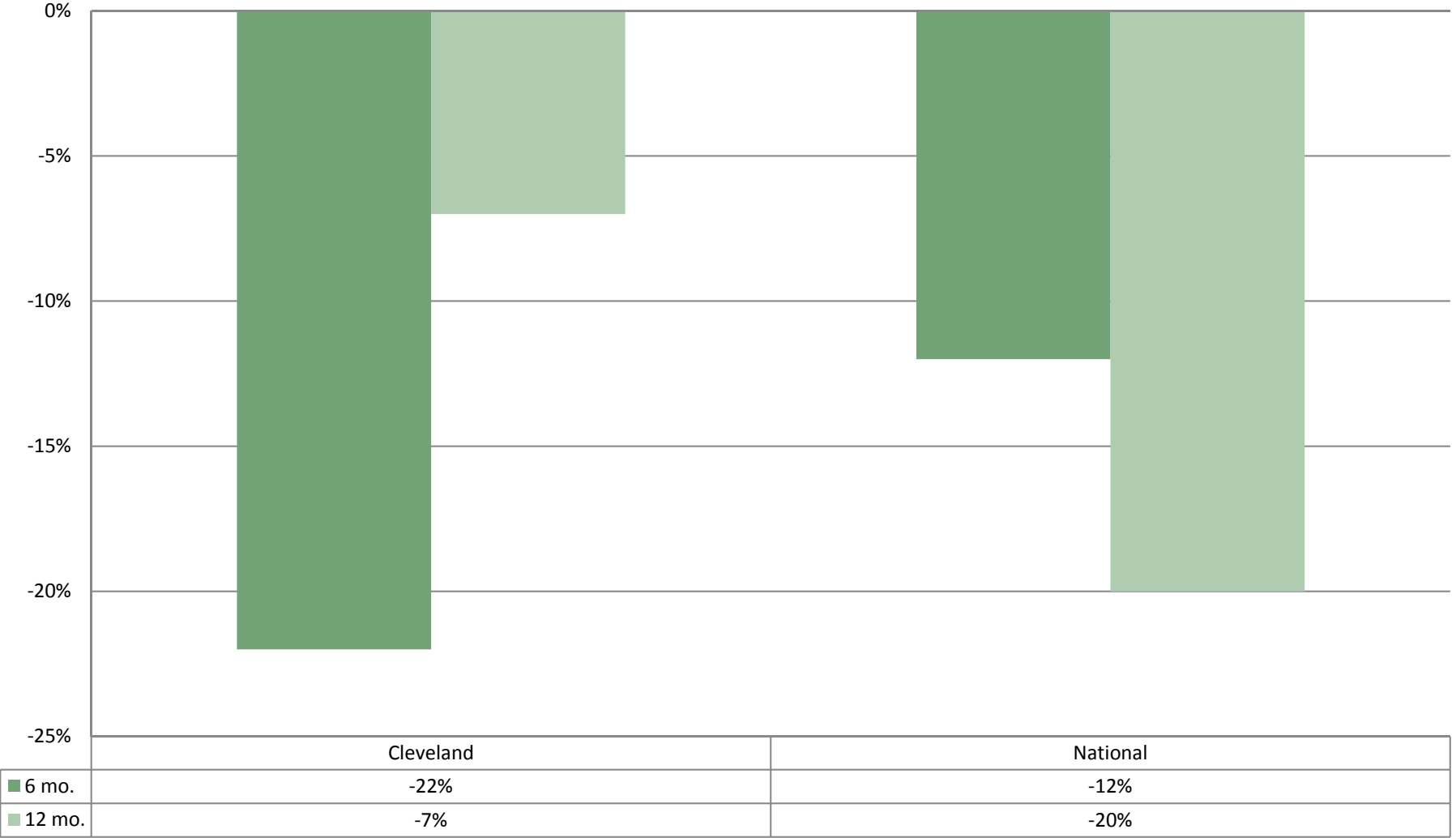
Technology in Use



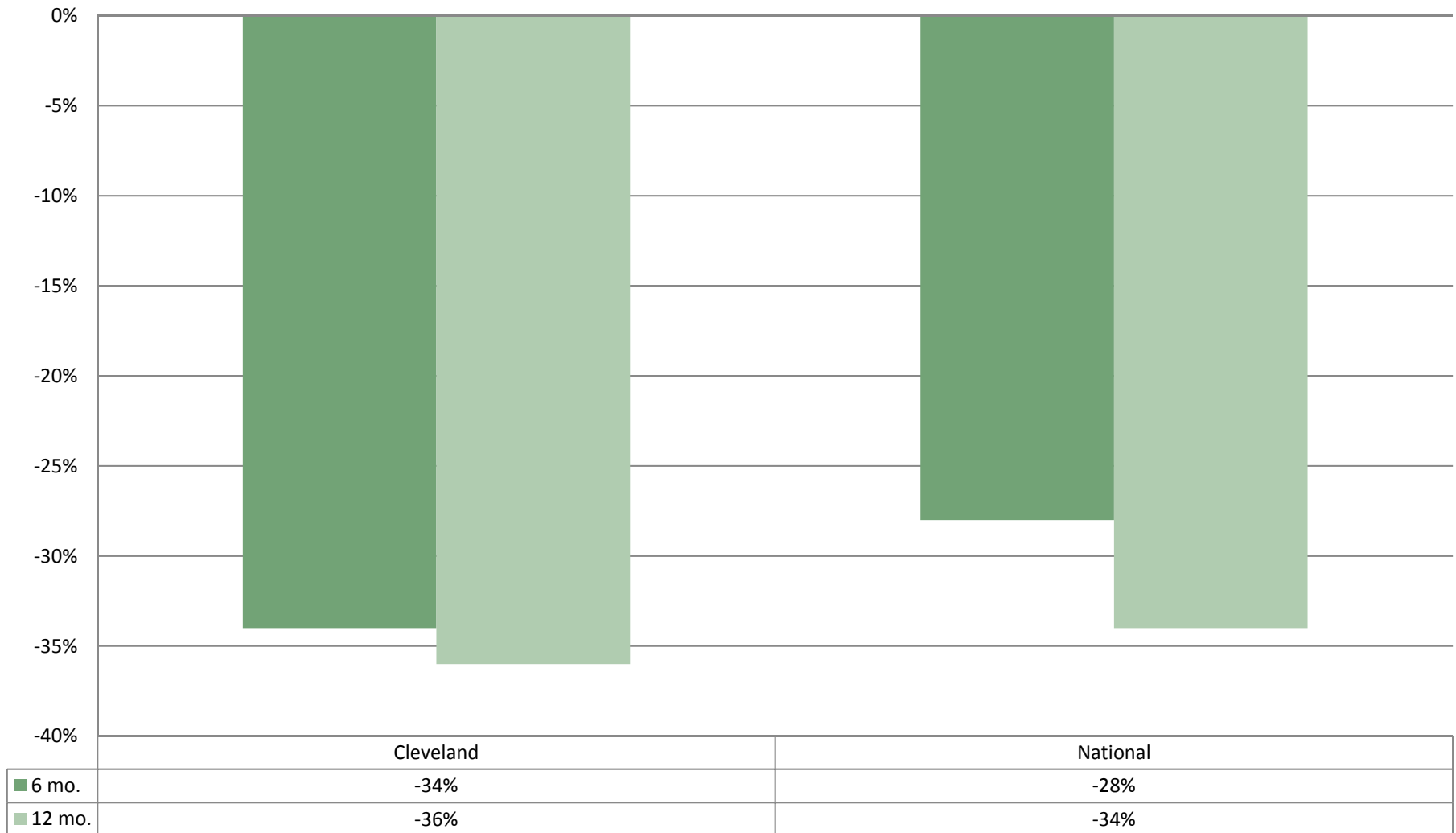
- Health Buddy: 364
 - IVR: 409
 - Commander Flex: 729
 - miLife: 33
-
- Total: 1,535

VA's 2nd Largest Program!!!

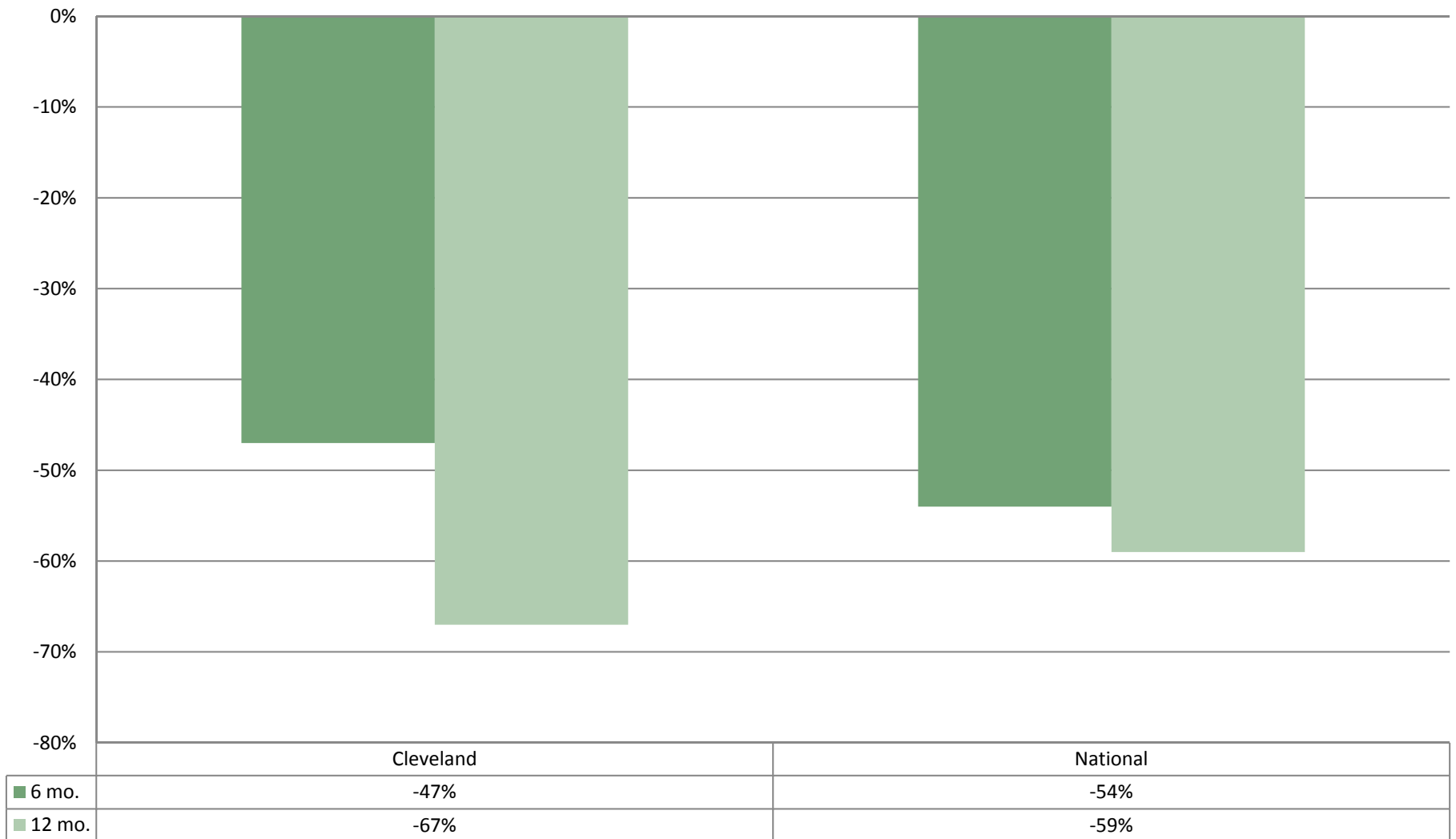
ED Visit Reduction



Hospital Admissions Reduction



Bed Days of Care Reduction





Department of Veterans Affairs Intranet

VHA Office of Telehealth Services



Clinical Video Telehealth

Clinical Video Telehealth

- Facility to Facility
- Facility to Home
- Uses advanced Telehealth technologies to make diagnoses, manage/provide care, and perform check-ups
- Real-time videoconferencing technologies with supportive peripheral devices and consultation between clinics and hospitals, or hospitals and other hospitals



Clinic Based Video Telehealth

- Facility to Facility / Facility to Outpatient Clinic
 - Within VA: Clinical Enterprise Videoconferencing Network (CEVN)

- Facility to Non-VA Location
 - Outside VA: “Video Expressway” allows for secure connection to non-VA facilities (e.g. University of Akron, Ohio correctional facilities)

Cleveland Video Program Offerings

- Tele-Mental Health
- Tele-Cardiology
- Tele-Pain Medicine
- Tele-Diabetes
- Tele-Spinal Cord Injury
- Tele-Surgery
- Tele-Blind Rehab / VIST Services
- Tele-Genomic Medicine
- Tele-Physical Therapy
- Tele-Nephrology
- Tele-Clinical Pharmacy
- Tele-Amputation
- Tele-Pulmonary
- Tele-MOVE! Exercise
- Tele-Traumatic Brain Injury
- Tele-Audiology
- Tele-Speech Pathology
- Tele-Geriatrics
- Tele-Gastroenterology
- Tele-Chaplain Services
- Tele-Neurology
- Tele-Nutrition

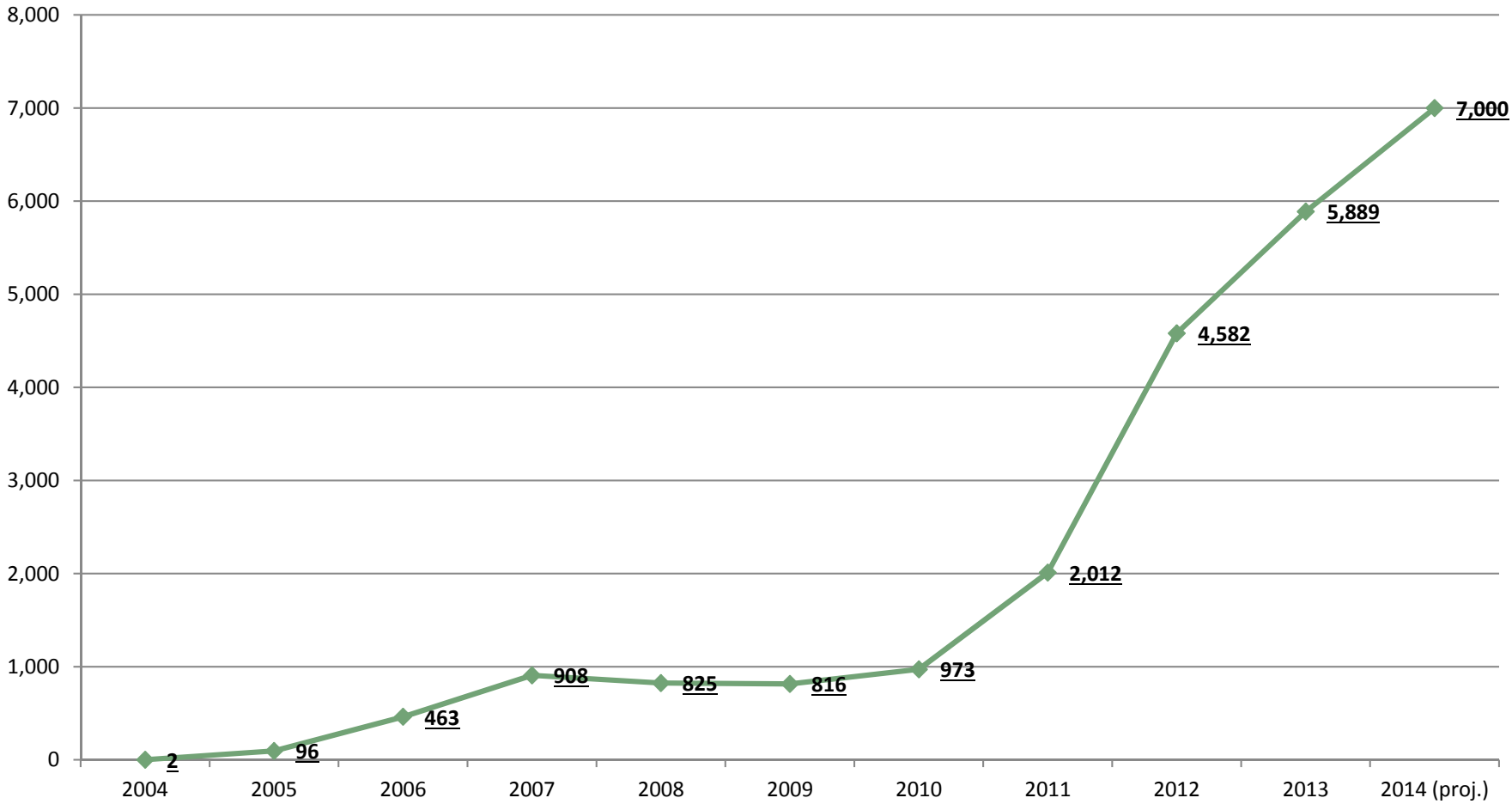
Telemedicine Mobile Carts

- Numerous peripheral options available
 - Stethoscope, POX, BP, Ultrasound, EKG, Audiology, Skin Exam Camera, ENT Tools, Imaging Software, Vital Sign Monitors
- Immediate Primary or Specialty Care Access
- Right Care, Right Place, Right Time
- Practice preventative medicine and more conveniently monitor chronic conditions
- Allows medical centers to create provider networks
- Reduced cost to both patients and providers

IP Video to the Home

- Veterans use their own devices
- Approximately 2,700 patients nationally
- Modalities
 - Home Telehealth Telemonitoring
 - Jabber
- Technology and processes have been created to ensure secure, encrypted connections
- Issues
 - Co-Payments?
 - Security Process?

Cleveland CVT Encounter Growth





Department of Veterans Affairs Intranet

VHA Office of Telehealth Services



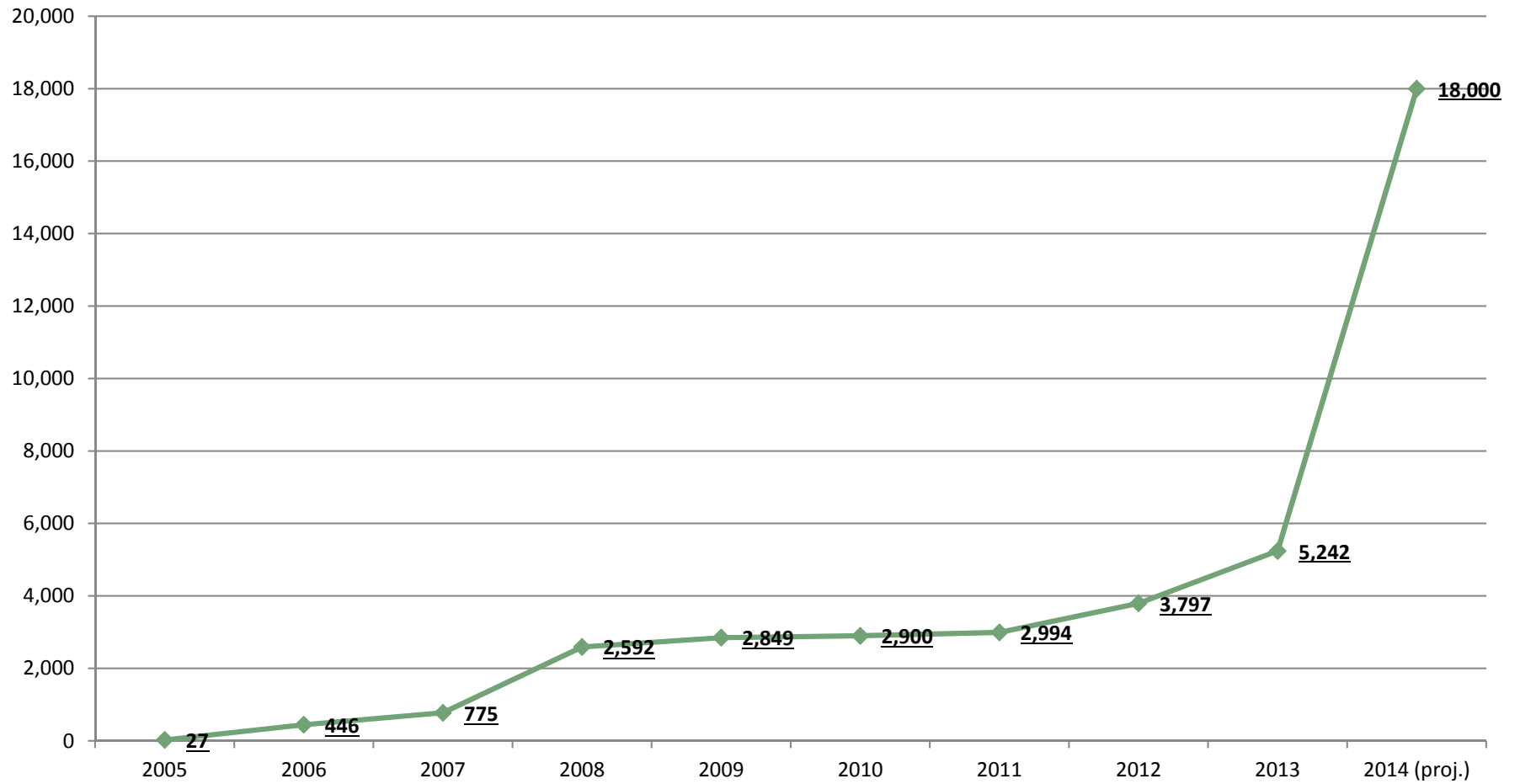
Store & Forward Telehealth

Store & Forward Telehealth

- Facility to Facility
- Uses advanced Telehealth technologies to make diagnoses, manage/provide care, and determine the necessity of follow-ups
- Imagers acquire and store clinical information (e.g. data, image, sound, video) that is then forwarded to (or retrieved by) another site for clinical evaluation.
- Programs:
 - Tele-Retinal Imaging
 - Tele-Dermatology
 - Tele-Wound Care
 - Tele-ECG



Cleveland SFT Image Growth



Benefits of CVT & SFT

- Travel Reduction
 - Cost Savings
 - Time Savings
 - Compliance
- Increased Patient Satisfaction
- Improved No-Show Rate
- Increased Access & Awareness
- Integrates PACT Teams into Specialty Care Process



Department of Veterans Affairs Intranet

VHA Office of Telehealth Services



VA & Non-VA Reimbursement

VA Reimbursement

□ Home Telehealth

- Each patient with at least 3 months of HT monitoring, local VA is reimbursed approx \$10,000 - \$16,000 annually through the VERA Model

□ Clinical Video Telehealth

- Providers get workload credit as though they saw patients as a face-to-face visit
- Can be used to vest patients into the VERA Model

□ Store & Forward Telehealth

- No Reimbursement
- Increases access, providers get workload credit as though they saw patients as a face-to-face visit

Affordable Care Act

- Projected shortage of at least 39,000 family practitioners by 2020 even before announcement of ACA
 - 30 million more expected healthcare users
- Change from fee for service to outcome based model
- Penalties will be assessed for frequent hospitalizations
- Prevention will be the new focus (HT)
 - Physician must be engaged for true prevention

Thank You!



Questions?

Contact Information

David Chmielewski, MBA
Cleveland VA Medical Center Telehealth Lead
VISN 10 Rural Health Consultant
216-739-7000 x2103
David.Chmielewski@va.gov