

Technology and Long Term Care
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1. DEFINITION OF TELEHEALTH

To remove the barriers to access of primary and specialty services in remote based populations through the use of technology supported networks.

Extends high quality, advanced health care electronically to situations in which the physical presence of a provider or consumer is either not feasible or unnecessary

2. TELEHEALTH INCLUDES:

patient assessment and evaluation, patient intervention (clinical care), patient counseling, professional to professional consultation, practice support

3. HEALTH INFORMATION COMMUNICATIONS

Synchronous = Interactive

Store-and-Forward = Fax, Email, Electronic , Patient Records, Patient Vital Sign Monitors, Medical Images, Patient Generated Internet, Medical Provider Generated Internet

Interactive = Telephone, Compressed Video

4. THE SCOPE OF THE ISSUE

35 Million people over the age of 65

12% increase since 1990

25% of the population in the year 2025

50,954 Octogenarians

Age Population Distribution:

Of the People over the Age of 65:

65-74 53%

75-84 32%

85-94 9.1%

>94 .8%

Women outnumber men increasingly as the age bracket increases.

Improvements in health has increased life expectancy by:

those persons currently 65: +18 years

those persons currently 85: +7 years

4.5% of people >65 live in nursing homes.

91% of all residents in nursing homes are >65 years old.

\$1,654 out-of-pocket expenses in the lowest fifth of income distribution in older adults.

Memory impairment is the major risk factor for entering a nursing home.

Health Issues:

Chronic Health Conditions: (varies by age and race)

Arthritis	Diabetes	Stroke
Cancer	Hypertension	Heart Disease

Mortality Rates:

↓ Deaths from Heart Disease and Stroke

↑ Deaths from Cancer, Pneumonia, Influenza

↑ Deaths due to complications of Diabetes

5. CO-CONFOUNDING ISSUES

- Baby Boomers coming of age!
- Increasing costs
- Concerns about quality of care
- Rates of disability in the coming years
- Problem is the challenge of providing assistance with activities of daily living
- Decreased mobility/transportation

6. WHERE WILL THESE PEOPLE GO?

- Stay at home
- Relatives move in with them
- Go and live with relatives
- Go and live in friends/group
- Assisted living
- Intermediate care
- Nursing care
- Skilled nursing care
- Hospice

7. LONG TERM CARE

Remote care delivery, monitoring, and patient education between a health provider and a patient located outside of a clinical health facility, in their place of residence.

The provision of services to persons with health care needs in the place where they live.

The provision of support for the activities of daily living along a continuum that spans simple decreased mobility to full dependence on another.

This support is given by a wide range of caregivers, from the skilled medical and nursing professionals to the care and love of a family member or friend.

This care is provided in a range of settings from the patient's own home to a skilled nursing facility including hospice.

- 8. SERVICES TYPICALLY NEEDED:** Meals and home assistance, Assistance with medications, Assistance with ADLs, Social Services, Skilled Nursing Care, Physical Therapy, Speech Pathology/Therapy, Occupational Therapy, Beauticians, Psychiatry, Primary, IM, or Geriatric Care
- 9. IMPACT OF TECHNOLOGY ADVANCEMENTS**
- Maximize independence and enhance individual and family interactions
 - Robotics, voice activated devices, highly specialized prosthesis, medical devices, remote monitoring, interactive video
 - Decrease and substitute for human interaction
- 10. TELEHOME CARE INCLUDES:**
- Home TeleHealth
 - Interactive Home TeleHealth
 - Telemonitoring
 - Self- monitoring
 - Patient encounters
 - Social Contact with others
 - Interactive Visits
- 11. REMOTE MONITORING**
Physiological monitoring, Event monitoring, Alarms for omission of events, Electronic monitoring of persons at a distance through monitoring devices that measure, display, and document physiological information Through sensors attached to the patient, through data entry by the patient, or by remote access of data.
- Remote Monitoring Technology:
Self Contained Home Units
Assessment Parameters and Patient Reminders
Patient Surveys
Patient Peripherals – VS, SpO2, Scale, Peak Flow, Stethoscopy, ECG, Spirometry, Blood Glucose, etc.
Medication Reminder
POTS enabled
Server based applications
Nursing Care Software
Usually FDA approved and HL7 compliant
- 12. BENEFITS OF TELEHOME CARE**
- Reducing the Number of ED visits
 - Reducing unnecessary MD office visits
 - Avoiding unnecessary costly visits to allied health providers.
 - Education to the patient on early symptom management.

- Monitoring VS and other parameters 24x7.

12. WEB BASED WOUND MANAGEMENT

- Digital images sent as Store-and-Forward
- Reviewed at the convenience of the provider
- Low-cost
- No transfer of the patient
- Increased timeliness, consistency, and quality of care
- Cost Savings in a Wound Care Program

Average cost of a chronic wound care in-person visit = \$246.28
(Required transport)

Average cost of chronic wound care visit via TeleHealth = \$136.16

13. TELEPSYCHIATRY AND LTC

Ability to respond promptly to patients' clinical needs.

The flexibility to contact more frequently if clinically indicated.

More efficient use of the consultant's time (elimination of travel time).

Johnston D, Jones BN. 2001. J Geriatr Psychiatry Neurol Summer;14(2):72-5.

14. KOREA'S EXPERIENCE

Wide-spread use of TeleHealth in LTC.

Telepsychiatry support for dementia patients.

Acceptance good.

Accuracy of diagnosis 76-89%.

46% of patients showed relative clinical improvements.

Lee JH et al. 2000 Alzheimer Dis Assoc Disord Apr-Jun;14(2):94-101

15. COPPER RIDGE EXPERIENCE

Dementia Long Term Care population

Connected to inpatient psychiatric care at Johns Hopkins Hospital via POTS system

Services: TeleCounseling and Training
 Telemonitoring and Assessment
 TeleTherapy

Outcome: Reduced inpatient psychiatric admissions

Lyketsos CG et al. 2001 J Geriatr Psychiatry Neurol Summer;14(2):76-9.

16. ISSUES

- Lack of Skilled Nursing Facility as an originating site.
- Lack of Medicaid Reimbursement
- Lack of CPT inclusion of 33000 codes for skilled nursing home care
- Lack of the home as an originating site
- Lack of 'scientific studies'
- Attitude

17. WHAT DOES LTC NEED FROM TECHNOLOGY?

- Communication access
- Monitoring
- Socialization
- Increase independence
- Assist with access to services
- Safety and security
- A sense of well being

18. POLICY AND PROGRAM ISSUES IN LONG TERM CARE

Changing role of the rural nursing home.

Residential care alternatives in rural areas.

Health personnel and rural long term care.

Quality of long term care.

Innovations in LTC financing and service delivery.

Use of technology in rural long term care.

Effect of Medical Assistance and Medicare changes in policy on the rural long term care health system.