

# Presenter Disclosure Slide

Linda L. Pierce, PhD, RN, CNS, CRRN, FAHA  
**Taking Care of the Caregivers: Evidence for  
Telephone and Web-based Support**

## ■ FINANCIAL DISCLOSURE:

➤ No relevant financial relationship exists.

## ■ UNLABELED/UNAPPROVED USES DISCLOSURE:

➤ None.



# Taking Care of *the* Caregivers: Evidence for Telephone and Web-based Support

Linda L. Pierce, PhD, RN, CNS, CRRN, FAHA



THE UNIVERSITY OF  
**TOLEDO**  
1872

Professor of Nursing

President



Association  
of Rehabilitation  
Nurses

# Taking Care of *the* Caregivers:

Evidence for Telephone and Web-based Support

## Learning Objectives

- Review of stroke and caring: care recipients & caregivers. 
- Discuss recent research evidence related to **virtual** support and education for caregivers of persons with stroke:
  - **telephone**
  - **web-based**.
- Examine the value of these interventions.

# Objective #1

- Review of stroke and caring:
  - care recipients & caregivers.





# Review of Stroke and Caring

- Chronic conditions, such as stroke, are leading causes of disability in the world:
  - 20 million stroke events occur globally each year
    - 50 million people live with stroke worldwide (6th World Stroke Congress, Vienna, Austria, 24<sup>th</sup> -27<sup>th</sup> September, 2008).
    - annually in the U.S. 795,000 people experience new or recurrent stroke (Heart Disease and Stroke Statistics – 2010 Update, American Stroke Association).
  - the incidence of stroke is expected to increase by 30% over the next decade (6th World Stroke Congress, Vienna, Austria, 24<sup>th</sup> -27<sup>th</sup> September, 2008).

# Review of Stroke and Caring continued

- Many persons after initial treatment for stroke:
  - return home and are:
    - at increased risk for depression
    - injury due to falls
    - decreased physical functioning.



- Carota, A., Berney, A., Aybek, S., et al. (2005). A prospective study of predictors of poststroke depression. *Neurology*, 64(3), 428-433.
- Lutz, B., Chumler, N., & Roland, K. (2007). Care coordination/home-telehealth for veterans with stroke and their caregivers: Addressing unmet need. *Topics in Stroke Rehabilitation*, 14(2), 32-42.
- Yates, J., Lai, S., Duncan, P., & Studenski, S. (2002). Falls in community-dwelling stroke survivors: An accumulated impairments model. *Journal of Rehabilitation Research Development*, 39(3), 385-394.

# Review of Stroke and Caring continued

- Family members care for these survivors of stroke in the home.
- These family caregivers:
  - are ill-prepared for this role and
  - receive little or no support.
- Family caregivers become the unseen or hidden patients.

Pierce, L. (2009). Family caregivers are unseen patients. *Rehabilitation Nursing*, 34(4), 134,173.



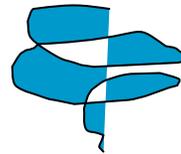


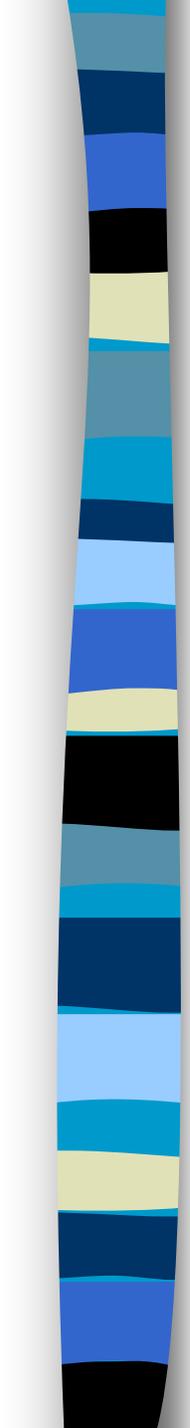
# Review of Stroke and Caring continued

- Let's re-examine what we know ~
  - Stroke is:
    - a sudden, traumatic event
    - leaves the person with stroke and their family caregivers unprepared for dealing with its aftermath.
  - Stroke results in:
    - a complex life changing event for both these care recipients and their caregivers.

# Review of Stroke and Caring continued

- The profound physical, behavioral, & emotional changes that accompany stroke:
  - create **problems** for the person affected and their caregivers:





# Problems continued

1. high psychosocial costs for the person with stroke and their caregivers:
  - considerable impact on the persons' well-being (e.g., decreased life satisfaction / quality of life, stress, depression, etc. (emotional problems ranked 1st)-
    - related to patient's mental and physical status (e.g., caregivers of patients with more severe impairments were more likely to be depressed)
    - associated caregiving tasks completed by caregivers (e.g., carers with a higher mastery of caregiver skills exhibited fewer depressive symptoms).

Berg, A., Palomaki, H., Lonnqvist, J., Lehtihalmes, M., & Kaste, M. (2005). Depression among caregivers of stroke survivor. *Stroke*, 36(3), 639-643.

Murphy, J., et al. (2003).

Schreiner, A., & Morimoto, T. (2003). The relationship between mastery and depression among Japanese family caregivers. *International Journal of Aging and Human Development*, 56(4), 307-321.



# Problems continued

2. poorer health & higher mortality rates for caregivers than non-carers:
  - less time to care for self = few health promotion or prevention activities
  - an analysis of 31 studies found that health was significantly influenced by the caregivers' physical well-being and pre-stroke psychological status & quality of the relationship between them and the care recipient
    - » As carers' health declines, care recipients' health and recovery are also likely to suffer
  - more severe person's level of disability = higher levels of burden, depression, and poorer health outcomes for the caregivers and for whom they care.

Family Caregiver Alliance National Center on Caregiving. (2006). *Fact sheet: Caregiver health*. Retrieved from <http://www.caregiver.org/>

Low, J., Payne, S., & Roderick, P. (1999). The impact of stroke on informal carers: A literature review. *Social Science and Medicine*, 49(6), 711-725.



# Problems continued

3. high monetary expenses for families:
  - medical/rehabilitation costs, loss of employment, etc.
  - for example, \$6.1 billion annually in the U.S. for informal care costs.
  - review of 27 studies (n=6,000 patients; n=3,000 caregivers) **service issues** ranked as 3rd most prevalent problem.

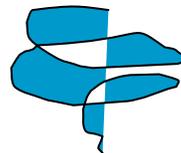
*Facts and figures about stroke.* (2010). The Stroke Association. Retrieved from <http://www.stroke.org.uk/>

Hickenbottom, S., Fendrick, A., Kutcher, J, Kabeto, M., Katz, S., & Langa, K. (2002). A national study of the quantity and cost of informal caregiving for the elderly with stroke. *Neurology*, *58*, 1754-1759.

Murray, J., Young, J., Forster, A., & Aahworth, R. (2003). Developing a primary care-based stroke model: The prevalence of longer-term problems experienced by patients and carers. *British Journal of General Practice*, *53*, 803-807.

# Review of Stroke and Caring continued

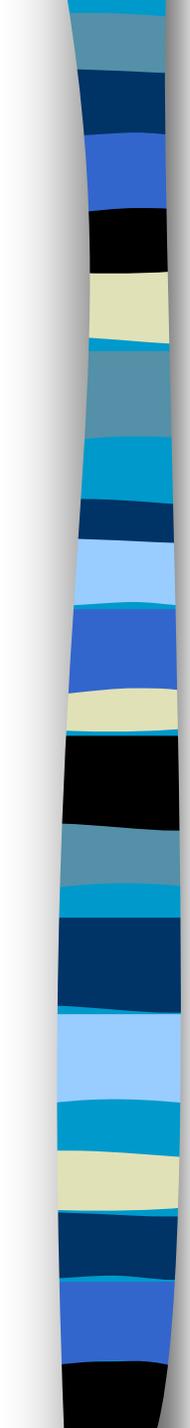
- If caregivers' well-being declines:
  - their ability to provide effective caring for a person with the stroke also decreases.
- A loss in the caregivers' ability to provide effective caring:
  - increases problems for the person with the stroke.
  - increases the need for health care services.



## Objective #2

- Discuss recent research evidence related to **virtual** support / education for caregivers of persons with stroke:
  - telephone
  - web-based.





# Research Evidence

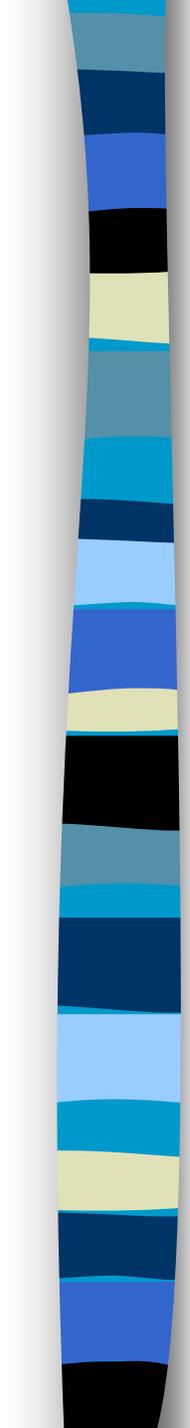
- Virtual interventions:

- telephone and

- web-based interventions

- that provide in-home support & education have the *potential* to impact people's well-being, as they are cared for [care recipient] and provide care [caregiver] in home settings.

- Some evidence about the effectiveness of current approaches (stroke > chronic diseases...so...).



# Research Evidence continued

- In general management of chronic diseases using
  - telephones [2-way picture phones] or
  - Internet [web camera monitoring]
- showed improved outcomes for care recipients and
- improved quality of life for caregivers.

Davis Kirsch, S., & Lewis, F. (2004). Using the World Wide in health-related intervention research. *Computers, Informatics, Nursing*, 22(1), 8-18.

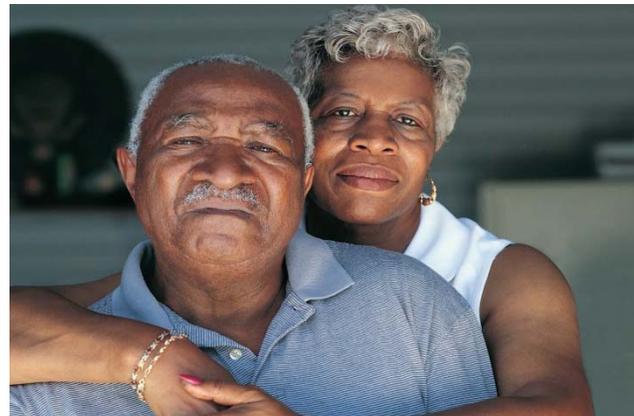
Hersch, W., et al.(2006). Diagnosis, access and outcomes. *J Telemedicine and Telecare*, 12 (suppl. 2), S3-S31.

Marziali, E., & Donahue, P. (2006). Caring for others: Internet video-conferencing group intervention for family caregivers of older adults with neurodegenerative disease. *The Gerontologist*, 46(3), 398-403.

Rotondi, A., Sinkule, J., & Spring, M. (2005). An interactive web-based intervention for persons with TBI and their families. *J Head Trauma Rehabil*, 20(2), 173-185.

# Research Evidence continued

- The American Stroke Association makes outreach to persons with stroke and caregivers a priority.
- The National Institutes of Health (NIH) point to a need for research using innovative technology to support family caregivers.



# Research Evidence continued

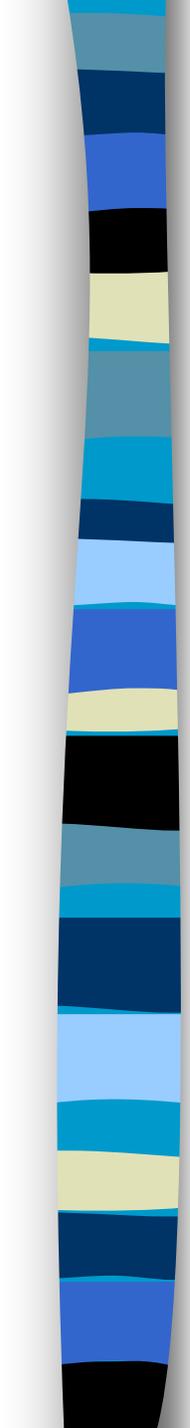
- Caregivers of persons with stroke often express the need for information about stroke and assistance with stroke-related care in the early discharge period.



# Research Evidence continued

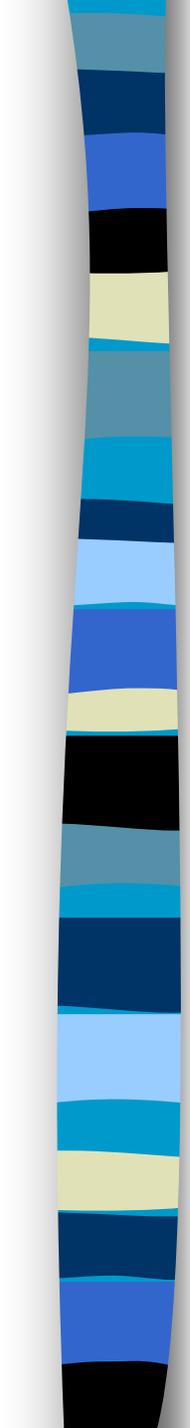
- Innovative **virtual** interventions, **telephone** and **web-based**, to strengthen caregivers' efforts in home settings have only recently been investigated.
- The evidence is rather scarce!





# Telephone Interventions (Hartke & King, 1997)

- Study explored effectiveness of a telephone intervention focused on the stress of caregivers of stroke survivors (n=30).
  - an 8-week educational/support group professionally led by telephone conference calls.
- This intervention was effective / identified problems:
  - social isolation,
  - worry and over protectiveness
  - finances
  - frustration with various caring tasks
  - health, conflicts with others
  - loss of companionship with their spouse.



# Telephone Interventions (Grant, et al., 2002)

- Study quantified the impact of social problem-solving telephone partnerships on caregiver outcomes after stroke survivors are discharged home (n=74):
  - initial 3-hour home visit between a trained nurse & caregiver:
    - within 1 week after discharge to begin problem-solving skill training.
  - followed by weekly (the first month) and biweekly (the second and third month) telephone contacts.
- Family caregivers had better: problem-solving skills, greater caregiver preparedness, less depression
  - significant improvement in vitality, social functioning, mental health, and role limitations related to emotional problems.
- Telephone partnerships may effectively assisted caregivers to cope.



# Telephone Interventions (Grant, et al. (2004))

- Study identified major problems and associated feelings experienced by family caregivers of stroke survivors (n=22) during the first month after returning home.
  - Results indicated 3 common problems for caregivers in 1<sup>st</sup> month of caring:
    - Safety,
    - Difficulty in managing activities of daily living,
    - Cognitive, behavioral and emotional changes of stroke survivors (e.g., mood swings, lack of motivation, forgetfulness and memory loss, depression)
    - 1<sup>st</sup> first month of caregiving = dynamic and distressful for caregivers.
- Telephone contacts appeared to be beneficial in assisting caregivers to cope with the caregiving process.

Grant, J., Glandon, G., Elliott, T., Giger, J., & Weaver, M. (2004). Caregiving problems and feelings experienced by family caregivers of stroke survivors the first month after discharge. *International Journal of Rehabilitation Research*, 27(2), 105-11.



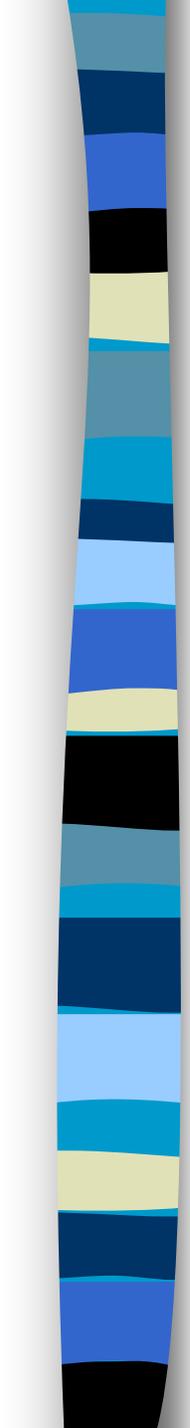
# Telephone Interventions (Bakas, et al., 2009)

- The Telephone Assessment and Skill-Building Kit (TASK) is an 8-week program that addresses caregiver needs (n=40).
  - caregivers randomized to the TASK (n=21) or an attention control group (n=19).
  - Six outcomes (optimism, task difficulty, threat appraisal, depressive symptoms, life changes, general health perceptions) were measured.
- Caregivers receiving the TASK intervention improved in optimism, task difficulty, and threat appraisal.
- Caregivers' outcomes were positively impacted.

# Web-based Interventions

- The Internet has an estimated 1,668,870,408 users worldwide.
  - nurses and members of professional health care teams that include physicians, therapists, social workers, dietitians, pharmacists, etc. are using the Internet to help caregivers' deal with stroke.





# Web-based Interventions

- N= 1480 - The Internet is also a popular resource, named top of mind as a potential resource by 25% of caregivers.
- However, half of all caregivers say they have used the Internet in the past year to find caregiving information (53%).
- Most looked for information about care recipient's condition or treatment.



# Web-based Interventions (Rochette, et al., 2008)

- **StrokEngine** <http://www.strokengine.ca/>
  - Site for information on stroke rehabilitation intended for stroke survivors and their families (McGill University and Canadian Stroke Network).
- **Usability assessed with stroke survivors and family members (n=7):**
  - Easy to use
  - Valuable content.

Rochette, A., Korner-Bitensky, N., Tremblay, V., & Kloda, L. (2008). Stroke rehabilitation information for clients and families: Assessing the quality of the StrokEngine-Family website. *Disability and Rehabil*, 30(19), 1506-1512.

[Français](#)

# Str kEngine



Canadian Stroke Network

Réseau canadien contre  
les accidents cérébrovasculaires

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## TOPICS

**Acupuncture**

Last updated: 12/12/2009

**Aerobic Exercise-  
subacute**

Last updated: 13/12/2009

**Aerobic Exercise- chronic**

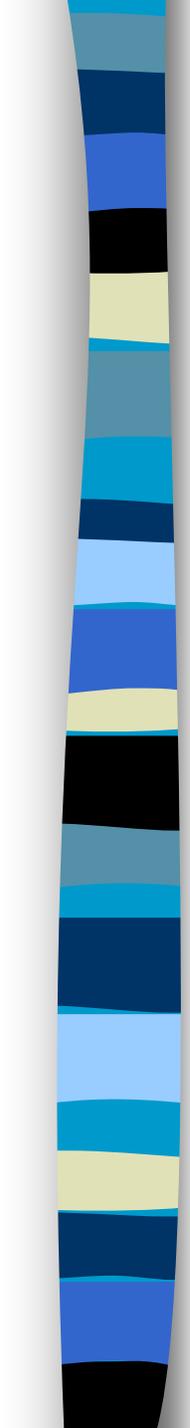
Last updated: 13/12/2009

A site about...  
stroke rehabilitation



## Welcome to StrokEngine

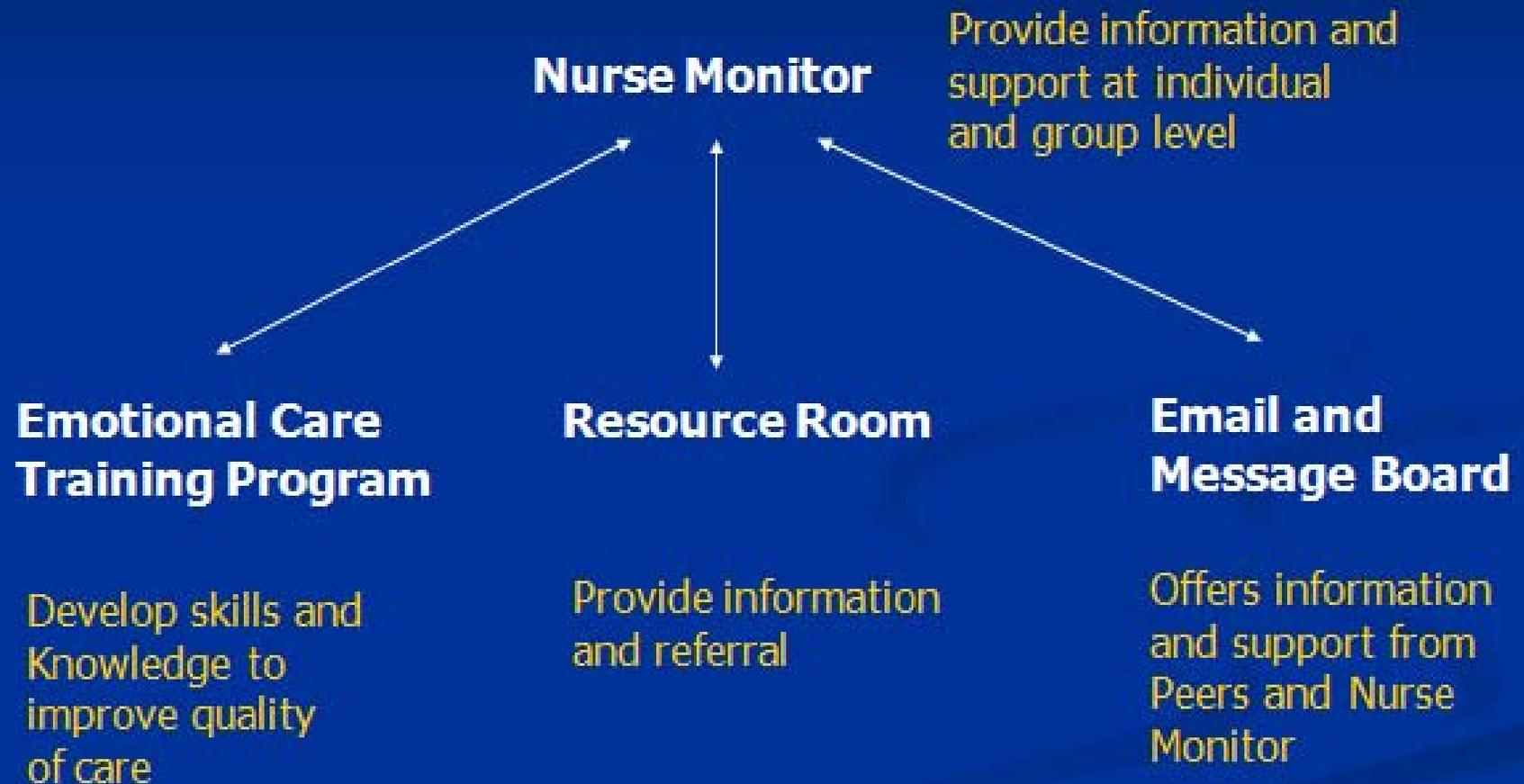
This site focuses on stroke rehabilitation topics and interventions. Information is derived from quality articles, websites and systematic reviews. All have been



# Web-based Interventions (Smith, et al., 2010)

- Online Caregivers' Access to Resources and Education (CARE) Program to Improve Stroke Care From Spouses (Kent State University)
  - Providing a unique blend of peer and professional support which maximizes older adults' increasing desire to communicate and glean information via the Internet.
  - Dyads (n=32):
    - 16 dyads receive intervention
    - 16 dyads in comparison / control group

# MAIN INTERVENTION COMPONENTS



# MAIN OUTCOMES

## Caregivers

Perceived Social Support  
Caregiver Competence  
Personal Mastery  
Self-Esteem



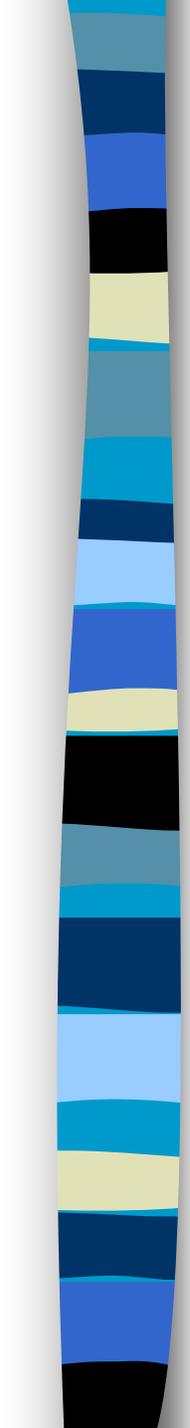
## Care Receivers

Perceived Social Support  
Perceived Overprotection  
Personal Mastery  
Self-Esteem

Depression

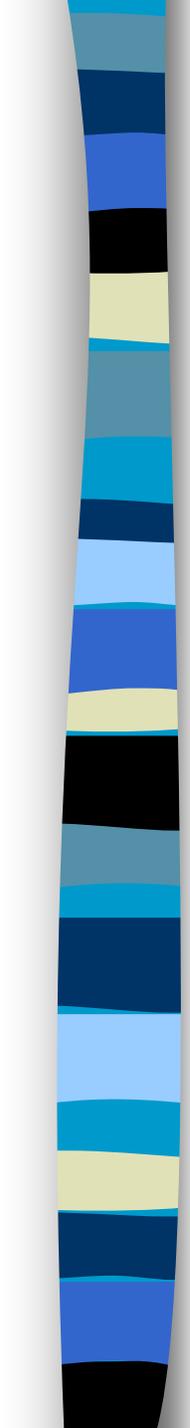


Depression



# Web-based Interventions continued

- Online Caregivers' Access to Resources and Education (CARE) (Smith, et al., 2010)
  - Greg Smith: Primary Investigator
    - Mary Dellmann-Jenkins: Co-Investigator
    - Nichole Egbert: Co Investigator
    - Kevin Nanna: Project Director
- Study is in progress / data analysis is underway: [Funded by NIH: R21NR010189-01A1]
  - preliminary finding that CARE enhances well-being for caregivers and care recipients.



# Web-based Interventions (Pierce & Steiner, 2000-2010)

- Caring~Web<sup>©</sup> : Web-based Support for Stroke Caregivers (University of Toledo)
- Caring~Web <http://caringweb.utoledo.edu/>
  - open site on the World Wide Web for a support and education for caregivers of persons with stroke.

Steiner, V., & Pierce, L. (2002). Building a Web of support for caregivers of persons with stroke. *Topics in Stroke Rehabilitation*, 9(3), 102-111.

# Caring~Web<sup>©</sup> Format

- Web pages designed with:
  - pictures
  - bright colors.
  - easy to move around the site:
    - novice users
    - older adults.



Caring~Web<sup>©</sup>

Education and Support for Caregivers of  
Stroke Survivors





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**PLEASE TAKE  
OUR SURVEY**

This site is designed for caregivers and survivors of stroke to provide general educational information and support.

Over 5 million Americans live with after-effects of stroke. Most persons with stroke return home after initial rehabilitation treatment and are cared for by family members.



- ➔ **Care Tips** are customized information on special topics such as nutrition or exercise.
- ➔ **Educational Links** give you access to other web sites to read about information related to stroke, caring, and caregivers.
- ➔ **Activities** that include jokes, greeting cards, and games to name a few.
- ➔ **News** through national newspapers, as well as a public library is available. Weather information is also accessible.



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## Care Tips

### ➔ Understanding the Stroke Disease Process

### ➔ 10 Tips for Persons with Stroke

- Bowel Habits: Managing Changes in Bowel Habits after Stroke
- Chronic Illnesses: Managing Chronic Illnesses after a Stroke
- Coping Issues:
  - Coping with Right Brain Issues after Stroke
  - Managing Behavior and Personality Changes
  - Positive Coping with Life after a Stroke
- Daily Living Activities: Managing Activities of Daily Living
- Driving: Driving after a Stroke
- Sexuality: Thinking about Sexuality and Stroke
- Sleep Problems: Managing Problems with Sleep
- Urinary Incontinence: Managing Urinary Incontinence after Stroke

### ➔ Tips for Caregivers

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

## A

- ▶ Assistive Device: X-10 Technology
- ▶ Availability and Use of Assistive and Adaptive Devices

## B

- ▶ Blood Thinning Meds
- ▶ Bedsores



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## Understanding the Stroke Process

### Disease Process

A stroke, also called a brain attack, is an injury to the brain. Most strokes happen when blood cannot get to a part of the brain. The blood is unable to reach the brain due to a blood vessel that is blocked by a clot or is too narrow for blood to flow through it. These are called **ischemic** (is-KEE-mic) strokes and are the most common type of stroke. Another type is called **hemorrhagic** (hem-or-AJ-ic) stroke and occurs when a blood vessel in the brain bursts, causing brain injury.

Injury from the stroke can take many forms, depending on the area of the brain that is damaged. The stroke's effect may be slight and temporary or it may be serious, and can sometimes cause death. Every stroke is different and no two stroke survivors have the same problems.

**Individuals with stroke are at a higher risk of having another stroke. As a caregiver of an individual with stroke there are some things you can encourage to decrease the risk of another stroke:**



#### **Control of blood pressure:**

Take blood pressure medication as prescribed. Ask your health care provider about the purchase of an in-home blood pressure monitoring device or free blood pressure clinics. Also ask how often the blood pressure should be checked and at what level of a high reading should they be notified. Keep a record or log of all blood pressures and take it to all visits to your health care provider for review. **The Guide for the Management of Blood Pressure** contains information for you about what can be done.

#### **Stop smoking:**

Cigarette smoking is linked to an increased risk for stroke. Ask your health care provider about a program designed to help quit smoking. **A Guide to Stop Smoking** can assist your efforts in not smoking.

#### **Exercise regularly:**

Researchers think exercise may make the heart stronger and improve circulation. It also helps control weight. Being overweight increases the chance of high blood pressure. Ask your health care provider about an exercise program that is safe for the individual with stroke. **A Guide to Exercise** can help.



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## Dealing with Emotional Changes After a Stroke

Emotional changes often occur after a stroke. A survivor may respond one way today and weeks later, respond entirely different. Emotional changes usually occur because of the brain injury caused by the stroke or because of the individual trying to cope with any physical and mental limitations that occurred due to the stroke.

### Emotional changes that may occur due to brain injury may be any of the following:



- Rapid mood swings, which may consist of crying for no apparent reason and then quickly stopping or beginning to laugh.
- Crying or laughing that does not match their mood.
- Crying or laughing that lasts longer than what seems appropriate.
- Feelings of extreme sadness or depression.
- Hopelessness or helplessness.
- Irritability
- Changes in eating, sleeping, and thinking.

### Symptoms of emotional changes may look like any of the following:

- Frustration
- Anxiety
- Anger
- Apathy (Does not display any emotions.)
- Lack of motivation
- Depression or sadness

**Dealing with these changes in emotion can be difficult for the individual with stroke and for you as the caregiver.**

The following are some helpful suggestions for you, the caregiver, to help deal with emotional changes:

...Offer frequent encouragement to the individual with stroke and avoid nagging.



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## Educational Links

Issues related to patient and family/caregiver education can be explored using links to information on the Internet.

- ▶ **Take the FREE Stroke Pledge and calculate your risk of stroke**
- ▶ **Glossary of Heart Terms**
- ▶ **Glossary of Stroke Terms**
- ▶ **Caregiving Tips**

## What is a stroke?

[back to top](#)

- ▶ **What is a Stroke/Brain Attack?**
- ▶ **Types of Stroke**

### Effects of Stroke

- ▶ Information from the National Stroke Association (NSA)
- ▶ Information from the American Heart Association (AHA)

### Stroke

- ▶ Understanding Stroke
- ▶ Diagnosis and Treatment Options
- ▶ **Stroke Statistics from the AHA**

## What are the risk factors for stroke and how can they be reduced?

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- [For Patients](#)
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- [American Stroke Association](#)
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## Stroke Rehabilitation

Stroke is the No. 3 killer in the United States. It's also a leading cause of serious, long-term disability. Many stroke survivors are left with mental and physical disabilities.

### Does a person need rehabilitation to recover from a stroke?

Most gains in a person's ability to function in the first 30 days after a stroke are due to spontaneous recovery. Still, rehabilitation is important. For the most part, successful rehabilitation depends on

- how early rehabilitation begins
- the extent of the brain injury
- the survivor's attitude
- the rehabilitation team's skill
- the cooperation of family and friends

People with the least impairment are likely to benefit the most. But even with slight improvement, rehabilitation can mean the difference between returning home or staying in an institution.

### What is the goal of rehabilitation?

For a stroke survivor, the rehabilitation goal is to be as independent and productive as possible. That may mean improving physical abilities. Often old skills have been lost and new ones are needed. It's also important to maintain and improve a person's physical condition when possible.

Rehabilitation begins early as nurses and other hospital personnel work to prevent such secondary problems as stiff joints, falls, bedsores and pneumonia. These can result from being in bed for a long time.

### How can a stroke survivor's family help?

A person's family has a key role in rehabilitation. A caring and able spouse or partner can be one of the most important positive factors in rehabilitation. Family members' knowledge also helps a lot. Family members need to understand what the stroke survivor has been through and how disabilities can affect the person. It will be easier for them to handle the situation if they know what to expect and how to handle problems that arise after the person leaves the hospital.

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#### RELATED ITEMS

Links on This Site  
[Stroke Connection Magazine](#)



Have you or someone you love had a stroke? There is a life after stroke, and we're here to help. Find support and resources to help you make the most of your recovery. [learn more...](#)

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## Activities

- ▶ Barnes & Noble bookstore
- ▶ Amazon Books
- ▶ Online Drug Store
  
- ▶ News & Health Topics / Activities & Games
- ▶ Yahoo! Games
- ▶ PlayBridge
- ▶ Joke a Day
  
- ▶ E-Cards Greeting Cards
- ▶ Hallmark Greeting Cards
- ▶ American Greetings Cards
  
- ▶ National Gardening Association
- ▶ Gardening for People with Disabilities
- ▶ See Also: Gardening for People with Disabilities
- ▶ Counted Cross Stitch, Needlework, and Stitchery
- ▶ Sports
  
- ▶ History Channel
- ▶ Library of Congress - American History
- ▶ Discover Your Family Tree
  
- ▶ Internet for Kids: Site for kids who want to learn about the Internet.



DISCLAIMER: The medical information presented on this web site is meant for general educational purposes only.

Please contact your healthcare provider for specific medical concerns or treatment. Further, the inclusion of links to external web sites is not intended to reflect their importance, nor is it intended to endorse any views expressed or products or services offered by the author or the organization operating the site.

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## News

- ▶ Stroke news
- ▶ CNN
- ▶ NY Times
- ▶ USA Today
- ▶ Fox News
- ▶ Weather
- ▶ Internet Public Library



Some Internet information resources listed above may have disappeared or moved to other sites and other excellent resources may not be listed at all.

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Education and Support for Caregivers of  
Stroke Survivors



#### WELCOME

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## This section is for UTMC families and patients treated for stroke.



➔ **Ask the Nurse** provides you the opportunity to email a nurse on the rehabilitation team ([AskTheNurse@utoledo.edu](mailto:AskTheNurse@utoledo.edu)) any personal questions or discuss issues related to caring.

➔ **Caretalk** (Discussion Group) gives you the ability to "talk" online with other caregivers and the nurse by email. Send a message to [Carenurse@utoledo.edu](mailto:Carenurse@utoledo.edu) to join Caretalk. After you join, you can simply use your own email system to send messages automatically to everyone in the discussion group.

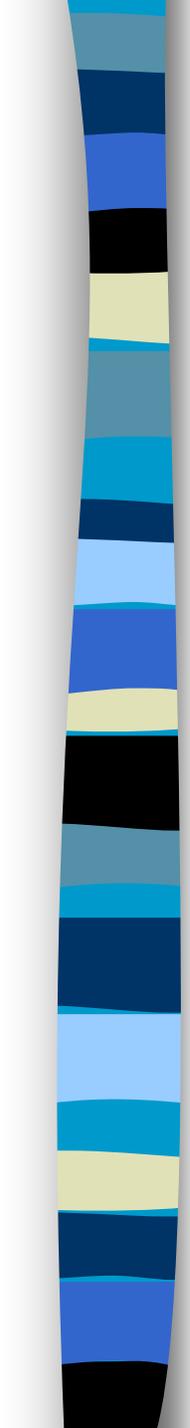
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# Web-based Interventions continued

- **Caring~Web: Web-based Support for Stroke Caregivers** (Pierce, et al., 2002-2006)
  - Linda Pierce – Primary Investigator
    - Victoria Steiner – Co-PI
    - Sadik Khuder – Statistician
    - Amy Govoni – Nurse Specialist
    - Teresa Thompson- Qualitative Consultant
    - Marie Friedemann – Theorist
- **Study completed.** [Funded by: NIH RO1NR007650]



# Web-based Interventions continued

## ■ What we did:

- A randomized, two-group, repeated measures design was used.
  - Subjects were recruited from four rehabilitation centers from which first-time stroke survivors were discharged to home in two Midwestern states.
  - 144 caregivers screened; 103 who were novice Internet users were assigned to a Web user group (n=51) or non-Web user group (n=52).
  - Seventy-three subjects completed the one-year study: (36 Web users and 37 non-Web users).



# Web-based Interventions continued

- We collected data on:
  - all caregivers well-being (perceived depression, life satisfaction) and
  - survivors healthcare service use (self-reported provider and emergency department visits, hospital re-admissions, nursing home placement).



# Web-based Interventions continued

## ■ We found:

- No statistical differences between the groups in caregivers well-being or in the number of provider visits for survivors.
- There were significant differences in emergency department visits ( $p=0.001$ ) and hospital re-admissions ( $p=0.0005$ ) related to the health of survivors.
  - Web user group: the stroke survivor had fewer emergency department visits and hospitalizations > Why? Impact of Caring~Web and costs.



# Web-based Interventions continued

- We found the web-users:
  - were satisfied with Caring~Web
  - on average, used the intervention 1-2 hours / week
  - had a total 7121 “Hits” on the web pages
  - 102 messages to the nurse specialist
  - posted 2148 messages amongst the caregivers in the discussion group.

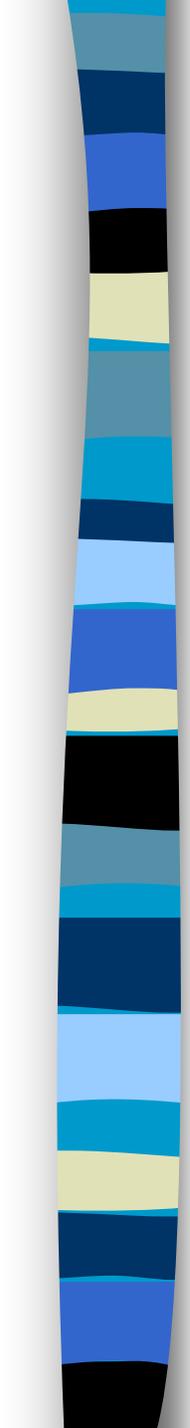
Pierce, L., Steiner, V., Govoni, A., Thompson, T., & Friedemann, M. (2007). Two sides to the caregiving story. *Topics in Stroke Rehabilitation*, 14(2), 13-20.

Pierce, L., Steiner, V., Khuder, S., Govoni, A., & Horn, L. (2009). The effect of a web-based stroke intervention on carers' well-being and survivors' use of healthcare services. *Disability and Rehabilitation*, 31(20), 1676-1684.

# Objective #3

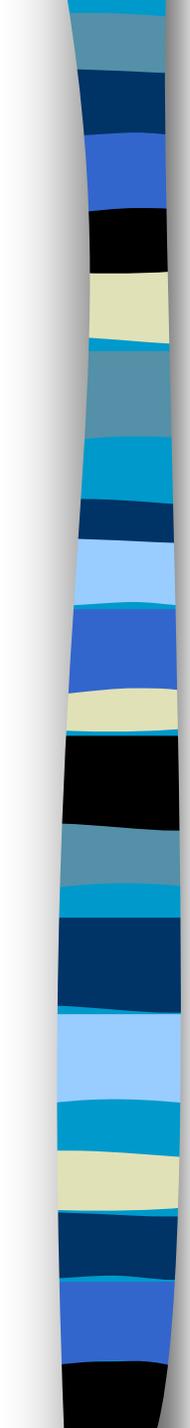
- Examine the value of these interventions.





# Value of these Interventions

- These studies *begin* to provide some evidence that is needed to determine the value of these **virtual** education / support interventions for care recipients and caregivers.



# Value of these Interventions continued

- Some cautions with any research study:
  - methodological flaws
  - small sample sizes
  - lack of statistical rigor
  - limited outcome measurements
  - few longitudinal studies or randomized trials.
- Some studies do have:
  - psychometrically tested instruments
  - sound quantitative & qualitative research methods
  - adequately powered samples.



# Value of these Interventions continued

- **Virtual** interventions appear to be:
  - relatively quick and easy ways for professionals to connect with caregivers and direct them to current information to assist them in caring ~ being there for the caregivers.
  - cost-effective means of reaching a large number of caregivers and improving their ability to provide daily care through improved decision making and problem solving.

# Taking Care of *the* Caregivers:

## Evidence for Telephone and Web-based Support

- 
- Reviewed caring: care recipients & caregivers.
  - Discussed recent research evidence related to **virtual** support and education for caregivers of persons with stroke:
    - **telephone**
    - **web-based.**
  - Examined the value of these interventions.

# Questions?

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## Taking Care of *the* Caregivers: Evidence for Telephone and Web-based Support



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