







The Communities For All Ages Idea Book is made possible through support from the Jewish Heritage Foundation of Greater Kansas City and the WJ Brace Charitable Trust, Bank of America, Trustee.

ACKNOWLEDGEMENTS

KC Communities for All Ages and the First Suburbs Coalition would like to thank the following individuals and organizations for their contributions to this book:

First Suburbs Coalition and KC Communities

for All Ages Joint Planning Committee

Marsha G. Alexander, MS, HHS, University of Missouri Extension

Lawrence Andre, Councilmember, Mission, Kan.

John Benson, Director of Development and Public Affairs Department, Raytown, Mo.

Katy Dodd, BSBA, CAPS, LifeWise Renovations

Becky Fast, Roeland Park, Kan.

Beth Gaskill Webb, John Knox Village

Steve Guenther, AIA, Guenther-Mills-Keating Architects, Inc.

Catherine Kirkland, AKBD, Allied ASID, CAPS, Universial and Visitable Interior Designer Specialist

Charlotte Melson, Alderwoman, Raytown, Mo.

Alan D. Napoli, CBO, Building Office, Gladstone, Mo.

Daniel Serda, Ph.D., University of Kansas School of Architecture, Design and Planning

Ron Shaffer, Mayor, Prairie Village, Kan.

Tina Uridge, Executive Director, Clay County Senior Services

Carolyn Vellar, President, Vellar Consulting

Mid-America Regional Council

Cathy Boyer-Shesol, Project Manager, KC Communities for All Ages

Laura Bogue, Public Affairs Specialist

Special thanks to:

Catherine Kirkland, AKBD, Allied ASID, CAPS

Mark Irvin, KC Mass Services

Philip B. Stafford, Ph.D., Indiana University

Vireo

is this book for **YOU**?

Do you hope to stay in your current home as you grow older and/or your needs change and evolve?

Do you want people of all ages and abilities to be able to comfortably visit your home?

When you make changes to your home, it's smart to be proactive and think ahead about the features you, your friends and your loved ones will need in the coming years.

keep reading – this book will help you do just that.

CONTENTS

What are Communities for All Ages?

Home Design to Support Aging in Place

12

Assessing Your Home for Livability and Visitability

20 Home Maintenance

26

Expanding Our View of Housing Options

30

Assistive Technology to Support Aging in Place

40

Paying for Aging in Place

what are **COMMUNITIES** for all ages?

the old and the young

If you haven't heard about the coming "age wave," you will soon. In 2007 the World Health Organization predicted that by 2040 the population of people over age 65 would



top 20 percent and people under age 18 would represent almost 23 percent of the population. Basically, the oldest and the youngest among us will make up nearly half the total population. Making sure we consider factors that appeal to these age groups is good policy and economics.

healthy, vibrant and sustainable communities

In this publication, the First Suburbs Coalition continues its work to make our communities healthy, vibrant and sustainable by providing useful information to help you navigate the coming changes in health care and lifestyles with special emphasis on:

Home design and maintenance to support all ages and abilities.

Housing options to consider as you age.

Assistive technologies (both existing and emerging) that will help you navigate the changes in health care and lifestyles that are on the way.

most desirable characteristics of communities

Older adults, families with young children and young adults share many concerns, needs and interests. Safe, walkable neighborhoods, nearby services, a variety of housing types, opportunities for interaction and choices in transportation represent some of the most commonly cited characteristics that make communities attractive to all ages. Many of the Kansas City metro's first-ring suburban neighborhoods exhibit some or all of these characteristics and stand in a favorable position to capture the expanding market brought about by our changing demographics.

Communities for All Ages are those that support

It is also a national initiative that helps communities

and supports aging in place - the ability to remain in

the place and with the people you know and love.

address critical issues from a multi-generational perspective, promotes the well-being of all age groups

growing up and growing older together.

safe walkable neighborhoods nearby services mixed housing types opportunities for interaction choices in transportation

what is **aging** in place?

Aging in place describes older adults living independently in their existing homes or communities for as long as they possibly can. Communities support aging in place by advocating increased social interaction, providing housing options and striving to connect people, rather than contributing to the isolation so often experienced as we age.

home design to support aging in place

how a home is designed can make all the difference in how well it can accommodate the needs of all residents and visitors.



"Universal design" is an innovative form of problem solving used to make buildings easy to use for all populations. Universal design is smart design — you can use it to create a home that is flexible, adaptable, with efficient space to accommodate everyone's needs and/ or requirements, regardless of age or ability. Your home will be welcoming to visitors of all ages and abilities, as well as accommodate your changing needs.

Whether you build a new home or remodel your current home, incorporating universal design features may allow you to remain in your home as you grow older and your abilities change. Most of us will experience temporary or permanent physical problems that create difficulties with living independently. You may not need universal design features right now, but by incorporating universal design concepts when planning a remodeling project, it will be easier and less costly to plan ahead for future needs, rather than waiting until the last minute, especially if you plan to make changes to your home anyway.



RESOURCES www.kchba.org www.nahb.org www.aarp.org www.concretechange.org

Submitted by Marsha G. Alexander, MS, HHS, Housing and Environmental Design Specialist and Connie Neal, M.S., H.H.S., Housing and Environmental Design Specialist, University of Missouri Extension.

the terms universal design, accessible design and adaptable design are frequently used interchangeably.

Universal design refers to features "that are usable by most people, regardless of their level of ability or disability [and] can be considered universally usable," according to the Center for Universal Design at North Carolina State University (NCSU). Many accessible and adaptable features are universally usable. However, it is important to understand the difference in these three concepts.



ACCESSIBLE DESIGN

Accessible design means a dwelling meets requirements for accessible housing, with features such as wide doors and doorways, sufficient space to maneuver a wheelchair, lever or "D" shaped hardware, grab bars in bathrooms, knee spaces under sinks and counters, seats at bathing fixtures, various types of audible or visual signals, controls or switches in easy-to-reach locations and zero-clearance entries, as well as accessible routes through the house. These features are permanently fixed and visually apparent. Mandatory requirements for accessible housing vary widely and are found in state, local and model building codes and agency regulations, including U.S. Department of Housing and Urban Development programs and the Fair Housing Amendments Act.



ADAPTABLE DESIGN

Adaptable design has accessible features, but allows the builder or owner to omit or conceal certain items until needed. Adaptable features are either adjustable or capable of being easily added or accessed at some time in the future. Homes are often more marketable, given their acceptability to a larger user group. According to the Center for Universal Design at NCSU, many non-disabled people prefer adaptable design over accessible units due to the appearance of clinical-looking grab bars and knee spaces in bathrooms and kitchens that sacrifice base cabinet storage space.



UNIVERSAL DESIGN

Universal design allows for flexible, adaptable, user-efficient space to accommodate everyone's needs or requirements. Zero-step entries with a gentle slope accommodate busy parents with strollers and groceries and allow you to welcome visitors of any ability. By incorporating universal design, living spaces will accommodate and adapt with the residents over a lifetime.

terminology

universal design makes good building sense

Universal design features can be incorporated into new construction projects for an additional construction cost of 1 to 3 percent. Research indicates the cost of retrofitting the home after construction can run as high as 10 to 15 percent.

A home that employs universal design standards meets the needs of almost everyone, regardless of his or her age and physical ability. There are numerous universal design elements and features that provide maximum convenience and livability. No-step entrances, wide doorways and open floor plans that provide 5 feet of turning space in all rooms are typical features of homes with universal design. Additionally, at least one bedroom and an accessible bathroom are located on the ground level, along with accessible kitchen and living areas.

POPULAR AND EASILY ACCOMMODATED FEATURES



OVERALL

Open floor plan.

Wider doorways and hallways.

Raised electrical outlets and rocker-panel light switches.

"Smart Home" wiring, allowing your home to operate on voice command or other processes for those with visual and/or audio challenges.



EXTERIOR



Zero-clearance entry into the house.

36-inch-wide entry door that provides a minimum clearance of 32 inches.

Elevated shelf or bench outside the door to set packages on when locking or unlocking the door.

Durably constructed parking made of lowmaintenance paving material.

Parking that does not include a curb between the driveway and walkway.

Lighted entry and parking.

Covered deck for weather protection.

Durable, easy-care building materials and finishes.

New construction

BATHROOM

Generously sized, **roll-in showers** with 5-foot radii for wheelchair turning and a slight slope in the floor to allow water to flow toward the drain.

Bathtubs designed with a wide seat at the end, easing transfer from wheelchair to tub.

Bathroom sink cabinets constructed with a **removable lower cabinet or removable cabinet doors** to allow wheelchair accessibility.

Grab bars — or **blocking** for grab bars so they can be easily added when needed — in the tub and shower and around the toilet.

Bathtub and shower controls that are located off center toward the room, making them easier to reach and operate from outside the tub or shower.

30-60 inches of space around fixtures.

LAUNDRY ROOM

Elevated, front-loading washer and dryer.

Task lighting increasing illumination directly to the task at hand.

Easy-to-reach appliance controls.





Raised dishwashers or dishwasher drawers.

Non-skid or mattefinish tile on floors.

60 inch wide pathways make a



workspace suitable for two cooks and allow easy maneuverability for someone in a wheelchair.

Contrasting colors on countertops and flooring for the visually impaired.

Rounded corners on countertops and cabinets.

Multi-level cabinet heights for two- and three-cook kitchens or individuals with physical challenges.

Adding a peninsula to a cabinet with a lower counter height so dining accommodates all users.

Roll-out trays and Lazy Susans in cabinets to provide easier access.

Kitchen sinks constructed with a **removable lower cabinet or removable cabinet doors** to allow wheelchair accessibility.

Anti-scald faucet with a single lever.

Pull-out faucet sprayer to fill pots without lifting them into or out of the sink.

Easy-to-read and reach appliance controls.

Counter space next to all appliances.

Task lighting increasing illumination directly to the task at hand. Under shelf lighting is particularly helpful in the kitchen.

lighting is one of the most important, yet often overlooked, elements of design.

We are all different when it comes to how well we see. Some of us are nearsighted, some farsighted and others suffer from a condition called astigmatism. These conditions can worsen as we age and make it harder for older adults to see in low light. Research indicates that an 85-year old person needs two-and-a-half to three times the illumination of a typical 15-year-old.



When designing spaces that reflect universal design, it is important to include higher lighting levels, especially in environments where detailed tasks will be performed (task lighting), such as in the kitchen, bath and hobby areas. It is also very important to provide higher illumination levels around potential hazard areas like staircases.



Energy efficiency is an important factor when designing or remodeling a home. Effective, energy-efficient lighting plans will have ambient, task and accent lighting to obtain the comfortable lighting level desired. Providing layers of light allows the user to have one, all or some of the desired lights on, depending on the need. Rocker light switches are very helpful for individuals with poor hand strength. Switches should be 44 to 48 inches above the floor. Electrical receptacles should be 18 to 24 inches above the floor. Lighted switches provide additional convenience.



1) one-level buyın housing **2** near a or **selling** a home bus stop **3** markets within walking If you are buying or selling a home, eight distance elements to support 4 in a mixed-use neighborhood aging in place are in high demand. sidewalks and 5 nearby parks 6 porches universal 7 design 8 civic center/ entertainment outlets minutes away

those who can't design new homes are likely to remain in their existing homes

As an older adult, you may not be able to move into a new, universally designed home. It is far more likely that you will remain in your existing home, which was probably built before universal design was commonplace. The Assessing Your Home and Home Maintenance Sections of this book contain suggestions for making your existing home more livable.

According to a report by the Center for Universal Design, NCSU, incorporating universal design requires an understanding and consideration of the broad range of human abilities available throughout our lifespans. Creative application of that knowledge results in products, buildings and facilities that most people can use, regardless of their age, agility, physical or sensory abilities.



who to hire

People are often concerned about who they should hire to complete a project that is specific to their changing health and physical needs. The National Association of Home Builders



(NAHB) in conjunction with the American Association of Retired Persons (AARP) developed a certificate program known as CAPS to address this need. The **Certified Aging in Place Specialist (CAPS)** program teaches the strategies and techniques needed to design and build aesthetically pleasing, functional environments. When you hire a CAPS specialist, you are making an investment in someone with the knowledge and skills necessary to help you remain in the home you love through all of life's stages.

To find a **CAPS** professional near you, visit the directory of local professionals online at

www.nahb.org/reference_list. aspx?sectionID = 1391

Contributed by Katy Dodd, BSBA, CAPS Home Modifications Coordinator, LifeWise Renovations

home retrofits

ideas for inexpensively retrofitting your current home



CHANGE CABINET HARDWARE, DRAWER PULLS AND HANDLES

A handle pull will be easier to use than a knob, particularly C- and D-shaped pulls that allow the back side of your hand through, so that gripping and pulling with fingers is not required.



INSTALL ADJUSTABLE RODS AND SHELVES IN CLOSETS OR CABINETS

This makes items more easily accessible and they can also be easily moved to allow wheelchair accessibility.

INSTALL LEVER-TYPE HANDLES ON DOORS AND FAUCETS

A single lever is easiest to use, especially if you have limited hand strength.



ELEVATE FRONT-LOADING WASHERS AND DRYERS

This brings front-load washers and dryers to a height that allows anyone seated or standing to operate the machines with ease. The controls are easier to reach compared to traditional machines and clothing is also easier to gather and transfer.





REPLACE TRADITIONAL SWITCHES WITH ROCKER-PANEL LIGHT SWITCHES

Rocker-panel light switches can be easily flipped with a fist or an elbow (unlike standard toggle switches) if you're carrying something and don't have fingers free.



ADD ROLL-OUT SHELVES TO CABINETS

A roll-out shelf can reduce bending and make lifting easier.

assessing your home for **ivability**&visitability

provide a few features that ensure anyone can use and visit your home



Livability and visitability are concepts that contribute to older adults aging in place, staying connected to their communities over time and avoiding isolation and the health impacts it can have. In addition to thinking about your home, it is important to evaluate your neighborhood.

ask yourself:

- Is there easy access to medical providers, shopping and entertainment?
- Is the area walkable and pedestrian friendly?
- Are there transportation choices, ideally including transit options?

Answering these questions will help you understand the context within which you live and the role that your environment plays in the livability of your location as you age. Assessing your home for livability and visitability and making necessary changes can make it possible for you to function independently and effectively for as long as possible. Livability and visitability differ from full accessibility and universal design because the goal is to provide a few features that ensure anyone can use and visit your home in the shortterm and simplify adapting the home in the long-term.

core visitability features include:

At least one entry without steps.

A bedroom (or room that could serve as a bedroom) and at least a half bath on the first floor.

Doorways with 32-inch clear space and wider hallways

A visitable home may have a second story and/or basement that is not accessible, but the intent is that the first floor of the residence is for anyone and provides basic access to everyone.

RESOURCES

www.homefitguide.org www.homeneedschecklist.org www.caregiverslibrary.org www.stopfalls.org www.seniorfallsprevention.org



conducting a home-safety check is an additional way to evaluate the suitability of your home

Conducting a home-safety check is an additional way to evaluate the suitability of your home for visitors and yourself as you age or experience changes in mobility. Of course, once you find unsafe conditions, it is important to take actions to correct them.

The AARP Home Fit Guide has a Home Safety Checklist that is reprinted here for your use. If you need help performing the assessment, your local health department, fire department or senior center may be able to offer suggestions.





home safety check

entrances and exits

Are exterior pathways, porches and doorways well lit and is the house number clearly visible on the house or mailbox?

- □ Increase lighting along pathways and entryway.
- □ Install floodlights with motion sensors.
- Install photoelectric "eyes" in light fixtures so lighting will turn on automatically at dusk.
- Install easy-to-see, reflective house numbers that can be seen from the street.

Are the walkways in good condition?

- Repair any holes, loose bricks or uneven pavement.
- Make sure the pavement is free of moss or mold, which could make it slippery.

Are there handrails on both sides of the steps?

□ Install handrails on both sides of all steps.

Is the door easy to open and do all exterior doors have deadbolts?

- Install lever door handles, which are easier to use than knobs on all doors and deadbolts on exterior doors.
- For added convenience, place a bench near the door you use most often, to hold packages while you are opening the door.

Are there scatter, throw rugs or mats that could cause tripping or slipping near doorways?

□ Remove all scatter or throw rugs.

Does the main entrance door have a security peephole or view panel?

- Install security peepholes at a height right for you on exterior doors.
- Consider electronic options for seeing who's at the door.

Is the door threshold visible or could it contribute to trips or falls?

Install a beveled, no-step, no-trip threshold. Consider a contrasting color so it will be easily visible.

*adapted from AARP Home Fit Guide

steps and stairways

Are steps and stairways in good repair?

- □ Consider refinishing or replacing worn stair treads.
- Make sure no nail heads are sticking out.
- On exterior steps, make sure there are no loose bricks or pavers and that wooden or concrete steps are in good condition.

Is carpeting on stairs in good condition?

- Replace or remove any worn, torn or loose carpeting.
 Choose tightly-woven, low pile carpet with thin padding and, if patterned, be sure the carpet does not make steps harder to see.
- □ Add non-slip adhesive strips to uncarpeted stair treads.

Are there secure handrails on both sides of stairways?

- Install handrails on both sides of stairs at a height right for you.
- □ Tighten any loose handrails.

Is there a light switch located at both the top and bottom of the stairs for the overhead stairway light fixture?

□ Install light switches at top and bottom of stairs.

Are the stairs well lit?

- Install compact fluorescents or the highest-wattage light bulb approved for overhead or nearby light fixtures. Use bulbs that do not produce excessive glare.
- Install night-lights in nearby outlets.

Is there any clutter on the stairs?

Remove all objects from stairways and keep them clear.

bathroom

Are the sink, bathtub and shower faucets easy to use?

Install easy-to-use lever handles on sink, bathtub and shower faucets.

Is the bathtub and/or shower floor slippery?

□ Use non-skid mats or non-slip strips on bathtub and shower floors.

Do bathmats have a rubber backing and lie flat?

To prevent tripping or slipping on bathroom rugs or mats, use only rubber-backed rugs or mats that stay firmly in place or secure them with doublesided rug tape or rubber carpet mesh.

Is a low toilet seat making it hard to stand up?

□ Install a toilet seat riser or a higher, comfort-height toilet.

Is there blocking in the walls for grab bar installation in the bathtub, shower and toilet areas?

- If the walls have been reinforced with blocking, install grab bars in bathtub and shower and at the toilet at heights specific to your needs.
- When building or remodeling, include blocking in bathroom walls to accommodate possible future installation of grabs bars.

Are there exposed pipes that carry hot water under the sink?

If you sit while using the sink, insulate the pipes underneath the sink so your legs don't touch any pipes that might be carrying hot water.

Is the hot water heater set at 120 degrees or lower?

 Set the water heater to 120 degrees

Is there a handheld or adjustable-height showerhead in the shower or tub?

Install a handheld or adjustable showerhead for easier bathing.

Is the bathroom well lit?

- Install compact fluorescents or the highest-wattage light bulb approved for overhead or nearby light fixtures.
- Install night-lights and/or replace the light switch with an illuminated switch that can be seen in the dark.

Are small electrical appliances including hair dryers, curling or flat irons, shavers, etc., plugged in when not in use?

Unplug all electrical appliances when not in use and never use any electrical appliance near a filled sink or bathtub.

kitchen

Is there good lighting over the sink, stove and countertop work areas?

Increase task lighting at sink, stove and work areas, and use compact fluorescents or highest-wattage bulbs approved for all fixtures.

Are cabinets and drawers easy to open?

□ Install easy-to-grasp D-shaped handles on cabinets and drawers.

Is a fire extinguisher within easy reach of the stove or cooktop?

Mount or place an ABC-rated fire extinguisher in an easy-toreach place.

Do you have a sturdy step stool?

Only use step stools that have non-slip steps and a grip handle and never climb on chairs or countertops. Are stove or cooktop controls easily reached? Does your hand come close to the flame, electric coils or heated areas when turning the burners on or off?

- If there are no young children in the house and you are replacing your stove or cooktop, consider purchasing one with controls at the front.
- Add touch and colorcontrasted controls for those with low vision.

Are objects on shelves or in drawers easily accessible?

- Install adjustable, pull-down shelving to increase safe access to upper cabinets.
- Install pull-out cabinetry or shelves under counters and Lazy Susans in corner cabinets.

Does the sink have an antiscald device?

Install a pressure-balanced, temperature-regulated faucet and keep it at 120 degrees or less.

Is there a countertop work area that can be used while seated?

Create countertop workspace with knee clearance by installing pull-out cabinetry or by removing cabinet doors and shelves so you can work while seated.

Do you use wax on the floor?

Avoid using floor wax and don't walk on just-cleaned floors until they have completely dried.

living room, dining room and bedroom

Are all passageways clear and well lit?

- □ Arrange furniture to allow for clear, wide passageways.
- Make sure the bed is placed for easy access to the bathroom.
- Use natural light to the fullest by opening curtains, blinds and shades during daylight hours.
- Use compact fluorescents or highest-wattage light bulbs allowed for lamps and fixtures.

Are any electrical or telephone cords exposed along pathways?

- Place all cords along a wall where they can't cause tripping.
- Remove cords from under furniture or carpeting to prevent fraying and possible fire.

Are rugs or carpets secured to the floor? Are there any scatter or throw rugs?

□ Use double-sided tape to secure all rugs. Remove all scatter and throw rugs.

Is there ample light in all areas?

- Use compact fluorescents or highest-wattage light bulbs allowed for lamps and fixtures.
- Use natural light to the fullest by opening curtains, blinds and shades during daylight hours.

Are there smoke and carbon monoxide detectors on each floor of the house? Are they near bedrooms?

- Install smoke and carbon monoxide alarms on every floor.
- □ Make sure alarms can be heard in all bedrooms.

Is the telephone easily accessible?

Install a telephone jack or place a cordless phone next to your bed or favorite chair to improve accessibility.

Are closets well lit and easy to use?

Install a closet light and adjustable rods and shelves.

Are light switches easy to use?

- Replace traditional toggle switches with easy-to-use rocker-panel switches.
- Install touch-control lamps or devices that can automatically turn lights on and off.

*adapted from AARP Home Fit Guide

home maintenance

surveys show that most of us want to remain in our homes as we age



If staying in your home is your goal, it is important to maintain your home. Completing potentially expensive maintenance while you're still working may help with financing the improvements. Keeping your home in good condition protects this important asset, especially if you decide to sell and invest in a different housing choice down the line.

seasonal tasks

The AARP Home Fit Guide is helpful in planning maintenance activities. It is organized by season and includes energy conservation tips and projects to save you money. The check list is reprinted on the following pages for your use.

a reputable contractor

One of the biggest challenges is establishing a relationship with a reputable contractor, or finding one on whom you can rely. Family and friends can offer suggestions and you should always check references. Often a contractor with one area of expertise can lead you to others with whom he or she has worked. Getting bids from more than one contractor is ideal, although not always possible. Reliability and experience can be as important as cost.

(For information on hiring a Certified Aging in Place professional, see p. 10.)

RESOURCES www.kchba.org www.remodelingkc.com www.homefitguide.org

Seasona task checklist*

spring

- □ Clean windows.
- □ Replace storm windows with screens.
- □ Change batteries in smoke and carbon monoxide detectors.
- Inspect house for fire hazards, such as overloaded extension cords.
- □ Make sure all exits, hallways and stairs are free of clutter.
- Clean gutters, yard, driveway, patio, porches, decks and walkways.
- Clean out garage, shed or carport.
- □ Clean basement and attic.
- Clean the clothes dryer's vent system. Lint buildup can cause the dryer to run longer to dry your clothes, using energy needlessly. Lint buildup can also lead to a fire.
- Make sure all indoor and outdoor stairs are slip proof, well lit and in good condition.

- Fix broken or uneven pavement on stairs, walkways, patios or driveways.
- □ Call a professional to inspect the roof for leaks, loose shingles or debris.
- Check indoors and outside for signs of pests, such as termites or rodents. Call a professional if you suspect any activity.
- □ Fix broken doors, gates or fences.

summer

- Mow the lawn and trim the bushes, making sure bushes don't obscure windows or doorways.
- Have an arborist remove weak, dead or rotten trees or branches that could fall on the house.

- Install window air conditioners or have the central air system inspected and tuned.
- Check all door locks and door handles to be sure they're in good working order.
- Install deadbolts on exterior doors if you don't already have them.
- Check the home security system or consider installing one.
- Check door and window screens and repair or replace as needed.
- □ Check outside lights and replace bulbs as needed.
- □ Clean outdoor lawn furniture and grill.
- □ Check garden hoses for leaks and replace as necessary.

seasonal task checklist*

fall

- □ Clean and inspect gutters, downspouts and eaves.
- Weatherize house for winter, including attic and basement, with insulation, weather stripping and caulk.
- □ Check and clean furnace and replace air filters.
- Store lawn furniture, hoses, planters, grills and other outdoor items for winter.
- Buy and store salt, sand and snow shovel. Have snow blower tuned.
- Drain outdoor water faucets and irrigation pumps.
- Clean the clothes dryer's vent system. Lint buildup can cause the dryer to run longer to dry your clothes, using energy needlessly, and lint buildup in the vent can lead to a fire.

- Create and store an emergency survival kit for bad weather.
 Include batteries, candles, water and canned or packaged food that won't spoil.
- Inspect and clean the fireplace and stock up on firewood. Hire a chimney sweep if you haven't had your chimney flue cleaned in a while or if you regularly use your fireplace or wood stove.
- Replace screens with storm windows and remove and clean window air conditioning units.
- □ Fill oil or propane tanks.
- Keep walkways, pathways and driveway clear of leaves and debris.
- Change batteries in smoke and carbon monoxide detectors.

winter

- □ Keep walkways and driveways clear of snow and ice.
- Put a blanket, shovel, sand and first-aid kit in your car.
- Stock up on canned goods and household items, including light bulbs and batteries. Buy compact fluorescent light bulbs. They are more energy efficient and will last longer.
- Check all holiday lights and make sure they are in good working order.
- Make sure space heaters work properly. Never leave them on unattended. Be sure not to place them close to furniture, curtains or anything flammable.
- Check sinks, tubs and toilets for leaks.

free and easy ways to cut your energy bill

With energy bills on the rise, everyone is looking for ways to cut back on energy consumption. Here are some easy and free things anyone can do to help cut energy costs:

Open curtains, blinds or shades on south-facing windows in winter and let the sun warm your rooms. In summer, close window coverings on east- and west-facing windows to keep rooms cool.

Close the fireplace damper when the fireplace is not in use to prevent heated air from going up the chimney. After burning a fire, be sure all embers are out before closing the damper.

Remove window air conditioning units when summer is over to prevent heat from escaping. If the unit can't be moved, put a cover over it to prevent drafts.

Turn off lights in unoccupied rooms, and kitchen and bathroom ventilating fans after they've done their job.

Take showers instead of baths and set the hot water heater at 120 degrees. You'll use less water, and reduce water consumption and heating costs.

Run clothes and dishwashers only when you have a full load. Use the cold water setting on your clothes washer, when possible, to reduce water-heating costs. Clean the lint filter in your clothes dryer after every load and periodically clean the dryer's vent system. Lint buildup in the filter can cause the dryer to run longer, wasting energy. Lint in the vent can lead to a fire.

Clean vents, registers, baseboard heaters and radiators regularly for maximum heating or cooling output, and make sure they aren't blocked by curtains, furniture or carpeting.

Unplug block-type chargers such as phone, computer, small appliance, and toy chargers from the wall when not in use. If the charger is plugged into the wall, it is still on and consuming energy even if you aren't charging.

Lower your thermostat at night and sleep under extra blankets or a comforter during cooler months.

Turn ceiling fans on low and set the blades to force warm air near the ceiling down in the winter. Do the reverse in the summer, making blades turn in the opposite direction so cooled air will be forced up.

Use heat-generating appliances such as clothes dryers and ovens during the coolest time of day. This reduces the load on your air conditioner in the summer and helps heat the house in the winter.

Air dry washed dishes and pots and pans instead of using the dishwasher's drying cycle.

energy conservation

weatherize your home to reduce heating and cooling costs

Sealing air leaks is one of the quickest and least expensive improvements you can make to your home's energy efficiency.



Test for leaks by holding a lit incense stick next to doors, windows, outlets

and other openings. If the smoke stream travels horizontally, you may have an air leak.

Caulk and weatherstrip around windows and doors that leak air.

Caulk and seal air leaks around plumbing and electrical wiring.

Use rubber gaskets behind outlet and switch plates on exterior walls.

Make sure your attic has adequate insulation.

Keep fireplace flue dampers closed tightly when the fireplace is not in use. A fireplace plug — an inflatable polyurethane "pillow" that seals the chimney flue — is easy to install, and can be quickly removed to light a fire.

Change your furnace filter regularly, and make sure that supply air registers and cold air return grills are clear of all obstructions so your heating and cooling system can move and condition air most effectively.

energy efficiency projects that save you money

Install weather stripping or caulk around doors and windows, and place foam gaskets behind outlet plate covers on exterior walls. If there is a gap at the bottom of the door, install a door sweep or door shoe gasket.

Insulate the attic for savings on both heating and cooling costs. Attic insulation is a primary way to maximize heating efficiency.

Install a programmable thermostat to change the set point for heating and cooling when you are regularly away from home or are asleep.

Seal and insulate ducts. Ducts running through unfinished spaces, such as attics, crawl spaces and garages, that are not properly sealed and insulated can waste energy. Seal the joints with a non-hardening sealant and insulate the ducts. Also, seal gaps around pipes that connect to the house from the outside with expanding foam, which comes in convenient aerosol cans.

Wrap the hot water heater, especially older models that don't have much insulation, with an insulation blanket or jacket made specifically for this purpose. (Note: Blankets aren't recommended for gas heaters and those with automatic vent dampers. Check with the manufacturer to see if your unit can be wrapped.) Reduce your water expenses further by installing high-efficiency showerheads and faucets.

Install glass doors on the fireplace opening. This can prevent warm air from escaping up the chimney and prevent embers and ash from flying free.

energy conservation

Remove window air-conditioning units before cold weather to prevent heat from escaping through and around the unit. If the unit can't be removed, put a cover over it to prevent drafts and make sure there are no openings where cold air can seep in.

Replace or clean furnace air filters once a month or according to the manufacturer's instructions. A clogged, dirty filter blocks air flow forcing the furnace to run longer, raising your energy bill.

Check heating and air conditioning systems and have a professional clean and tune them once a year.

Place a heat-resistant reflector between the radiator and the outside wall.

Replace incandescent light bulbs, especially in high-use areas, with Energy Star[®] compact fluorescent light bulbs. While they cost more, compact fluorescent bulbs use less energy than incandescent bulbs, last longer and are better for the environment.

Install white shades or blinds on windows to reflect heat away from the house if you live in a warm climate.

Consider installing awnings over west- and south-facing windows if the roof overhang doesn't shield windows from direct sunlight. They will block solar heat and also protect furnishings from UV damage.

Install a motion detector or photocell unit on exterior lights so they will only turn on when needed and will turn off during the day automatically.

Ask your utility company to do an energy audit. Cost for an audit varies but some companies offer free audits for low-income families.

LOOK FOR LABELS LIKE THESE:



The ENERGY STAR label identifies appliances and other products that meet government standards for energy efficiency.



The Water Sense label identifies products and programs that meet EPA water efficiency and performance standards.



The Green Seal label marks products that meet independent standards for performance and environmental responsibility.



Forest Stewardship Council certification identifies wood and paper products from forests managed under strict environmental standards.



Look for products that have a high post-consumer recycled content and can be recycled after use.

expanding our view of housing options

existing houses fail to address the physical limitations facing older adults



Existing houses and neighborhoods may lack day-to-day services and require more driving, resulting in loss of independence for the young and old alike. As residents, property owners and — let's face it, future older adults — developing an expanded view of housing options is important. We can support and advocate construction of a variety of housing options in our neighborhoods. Communities that facilitate multiple generations with

a mix of living arrangements, including those for older adults, young families, downsizing baby boomers and adult children returning home in locations within walking distance to basic services, are best positioned to meet the future. The article on the following page from Helpguide.org helps define different housing options.

back to the future : the multigenerational family household

Driven in part by the economy, but as much by our dramatic change in demographics, the idea of multiple generations living under the same roof is trending upward. Surprisingly, it is younger adults who are responsible for the increase in this lifestyle. Many are waiting longer to get married and finding the family home a desirable place to stay longer, and some young adults find themselves out of work and lack the financial flexibility to have their own place.

Summarized from: Pew Social & Demographic Trends, The Return of the Multi-Generational Family Household

RESOURCES

www.pewsocialtrends.org/2010/03/18/the-return-of-the-multi-generational-family-household

www.helpguide.org/elder/senior housin residential care types.htm

www.kcccfaa.org/SiteResources/Data/Templates/t2.asp?docid = 517&CodName = HOUSING

Jewish Family Services' Help@Home program provides assistance for minor household repairs and chores. www.jfskc.org/services/older-adult-services/help-at-home/

The social work department of local hospitals can counsel older adult patients regarding housing options upon release.

different housing options

Authors: Joanna Siasan, M.S.W. Monika White, Ph.D

Understanding Older Adult Housing Options

There is a broad array of housing options available to older adults, from staying in your own home to specialized facilities that provide round-the-clock nursing care. The names of the different types of housing options can sometimes be confusing, as the terminology can vary from region to region. The main difference will be in the amount of care provided for activities of daily living and for medical care. When researching a housing option, make sure it covers your required level of care and that you understand exactly the facilities offered and the costs involved.

Aging in Place

Many older adults prefer to stay at home as they age. It has the advantage of being a familiar place and you know your neighbors and the community. There is a wide range of home care services that can help you maintain your independence with the comfort of your own home, from in-home help to day care.

Staying at home may be a good option if:

You have a close network of nearby family, friends and neighbors.

Transportation is easily accessible, including alternate transportation to driving.

Your neighborhood is safe.

Your home can be modified to reflect your changing needs.

Home and yard maintenance is not overwhelming.

Your physical and medical needs do not require a high level of care.

You have a gregarious personality and are willing and able to reach out for social support.

You live within the geographical confines of an integrated community, such as a "village" or NORC (Naturally Occurring Retirement Community).

Aging in place is a less-effective housing option once your mobility is limited. Being unable to leave your home frequently and socialize with others can lead to isolation, loneliness and depression. So, even if you select to age in place today, it's important to have a plan for the future when your needs may change and staying at home may no longer be the best option.

Homesharing

Homesharing programs allow homeowners, often older adults, to share their homes with young persons, often college students. In return for a low-cost place to live, the homeseeker helps with utility costs or chores around the home. In the Kansas City area, Shepherd's Center Central offers this program. http://sccentral. org/aging-in-community/homesharing-program/

*adapted from Helpguide.org

The Village Concept

The village solution to aging in place is a relatively new concept, enabling active seniors to remain in their own homes without having to rely on family and friends. Members of a "village" can access specialized programs and services, such as transportation to the grocery store, home health care, or help with household chores, as well as a network of social activities with other village members. As of 2009, there were 50 village organizations across the United States and one in Australia, with many more communities planned worldwide. Each offers different services depending on the local needs of the individual communities. The cost of membership varies according to area and the level of services required.

Naturally Occurring Retirement Communities (NORC)

Like the village concept, Naturally Occurring Retirement Communities (NORC) enable seniors to stay in their own homes and access local services, volunteer programs and social activities. A NORC may be as small as a single urban high rise, or it may spread out over a larger suburban area.

Independent Living

Independent Living is a general name for any housing arrangement designed exclusively for older adults. Other terms include retirement communities, retirement homes, senior housing and senior apartments. These may be apartment complexes, condominiums or even free-standing homes. In general, the housing is friendlier to older adults — it's more compact, easier to navigate and includes help with outside maintenance. Sometimes recreational centers or clubhouses are also available on site.

You may want to consider independent living if:

You need minor assistance with activities of daily living.

You'd like a place that does not require a lot of maintenance and upkeep.

You like the idea of socializing with peers and having activity options nearby.

If you don't want to live exclusively with others your own age, there are alternatives to an independent living community. You can consider moving in with a family member, or simply moving to a more accessible apartment or condo. The key is being in an area with good access to transportation, services and social networks.

Assisted Living

In general, assisted living is a housing option for those who need help with some activities of daily living, including minor help with medications. Costs tend to vary according to the level of daily help required, although staff is available 24 hours a day. Some assisted-living facilities provide apartment-style living with scaled-down kitchens, while others provide rooms. In some, you may need to share a room unless you're willing to pay a higher cost. Most facilities have a group dining area and common areas for social and recreational activities.

An assisted living facility may be a good choice if:

You need more personal-care services than are feasible at home or in an independent living retirement community.

You don't need the round-the-clock medical care and supervision of a nursing home.

Nursing Homes

A nursing home is normally the highest level of care for older adults outside of a hospital. While they do provide assistance with daily living activities, they differ from other senior housing in that they also provide a high level of medical care. A licensed physician supervises each resident's care and a nurse or other medical professional is almost always on the premises. Skilled nursing care and medical professionals such as occupational or physical therapists are also available. A nursing home may be a good choice if:

Both medical and personal care needs have become too great to handle at home or in another facility. This may be due to a recent hospitalization, or a chronic illness which has gradually been worsening.

You need a higher level of care temporarily after a hospitalization, but it's anticipated you will be able to return to home or another facility after a period of time.

Continuing-Care Retirement Communities

Continuing-Care Retirement Communities (CCRCs) are facilities that include independent living, assisted living and nursing home care in one location, so older adults can stay in the same general area as their housing needs change over time. There is normally the cost of buying a unit in the community as well as monthly fees that increase as you require higher levels of care. You may want to consider a CCRC if you'd like to stay in the same general facility regardless of your care needs. It also can mean spouses can still be very close to one another even if one requires a higher level of care.

*adapted from Helpguide.org

assistive technology to support aging in place

promoting greater independence



According to Wikipedia, "assistive technology is an umbrella term that includes assistive, adaptive and rehabilitative devices for people with disabilities. It promotes greater independence by enabling people to perform tasks that they were formerly unable to accomplish, or had great difficulty accomplishing..." Hearing aids and wheelchairs are just a few examples of assistive technology. As you can imagine, technology is

changing rapidly and the capacity of assistive technology is increasing dramatically. In relation to aging in place, there are many new developments that aid in daily living. **Phone calls** are a low-tech and time-tested alternative to personal visits when family and friends are unavailable. Your community may also sponsor a phoning or visiting program through the local senior center or health department. There are also home health contractors who provide these and other services for hire.

More advanced technology is used in the Personal Response System (PERS) that is frequently advertised on television. PERS uses an auto-dial speakerphone installed in the home. The resident wears a button that, when pressed, immediately dials a call center where someone answers, determines what may be needed and dispatches assistance.

Pill dispensers are also becoming more and more helpful and sophisticated. There are many on the market with varying degrees of patient participation, alerts and notification.

technologies readily available

Many of the technologies currently available evolved through their use in care facilities and now have been adapted for home use, making it possible for devices and sensors to connect older adults living at home to the outside world and help them independently participate in their medical care.

RESOURCES

www.techandaging.org – The New Era of Connected Aging www.cookstop.com www.assistive-tech.com www.seniorsresourceguide.com www.orcatech.org www.MatureMarketInstitute.com

four categories of technology for connected aging

The following framework presents the landscape of technologies for connected aging in four categories based on the purpose and primary location of the technology:



BODY

Products that support monitoring and management of an older adult's physiological status and mental health for maintaining wellness and managing chronic conditions.



HOME ENVIRONMENT

Products that support monitoring and maintaining the functional status of older adults in their home environments.



CAREGIVING

Technologies and products that support both informal and formal caregivers in providing timely and effective care and support to older adults and persons with disabilities in their homes.



COMMUNITY

Technologies that enable older adults to stay socially connected to their families, friends and local communities.

The final category in particular highlights how technologies can be used both to empower older adults in managing their own health and remaining independent while also enabling them to be monitored and supported by either professional or informal caregivers.

connected aging landscape

body		
subcategory	description	example products
Vital sign monitors	Measure vital signs such as weight, blood pressure, blood glucose, heart rate, temperature, ECG, galvanic skin response, gait and hydration. Some products are designed to measure multiple vital signs in one elegant package while others are available only as "professional" models.	Consumer: Jawbone UP™ Fitbit Flex™ Basis Watch Fitbit Aria™ scale Withings blood pressure monitor and scale Provider: CardioNet [®] MCOT Preventice BodyGuardian
		iRhythm Zio®
Activity monitors	A rapidly growing set of activity-tracking products measures steps taken, speed, activity levels, calories spent and amount of time spent in rest or without getting up. Most activity monitors are wrist-worn devices, while others can be carried in the pocket. Smart phones contain accelerometers that enable their use as activity monitors.	Jawbone UP™ Fitbit Flex™ Misfit Wearable's Shine™ FitLinxx Pebble
Sleep monitors	Individuals and clinicians use these products to monitor sleep to adjust behavior (caffeine intake and other elements of sleep hygiene) or to provide indications of other issues that might require a professional intervention, such as sleep apnea.	Fitbit One™ Lark Pro™ sleep monitor BAM Labs® Smart Bed
Mood/depression monitors	Mood/depression monitors provide objective sensing of mood in a reliable manner, though, to date, their efficacy is not clinically substantiated. The standard process for using connected health devices to assess mood or depression is based on a questionnaire format. General availability and mass adoption are a few years out.	Mood Scanner (Android app) M3™ (Android and iOS app)
Emotion monitors	Products enable objective, long-term emotion monitoring. One product is a wearable, wireless biosensor that can detect arousal via skin conductance, a form of electro-dermal activity that grows higher during states of excitement, attention or anxiety, and lower during states of boredom or relaxation. Another product can identify from a caller's voice whether the caller is at risk for suffering from depression or psychological distress or has co-morbid behavioral health conditions. Originally designed for use in call center applications to improve agents' interaction quality and customer engagement, the technology now can be used for remote monitoring of patients vulnerable to mental health problems.	Affectiva Q Sensor Curve and Q Sensor Pod Cogito's Social Signal Platform (SSP)

The New Era of Connected Aging: Touring the Connected Aging Landscape, Center of Technology and Aging, www.techandaging.org

body		
subcategory	description	example products
Mobile PERS with GPS	Products for personal safety, including Personal Emergency Response Systems (PERS) and global positioning service (GPS) tracking devices, have evolved so that they can be activated while outside of the home, providing an important element of protection for older adults. PERS functionality is being combined with a cell phone to provide a powerful mobile tool. Shoes with built-in GPS tracking systems are becoming popular for persons suffering from early stage dementia. Caregivers can create "geo-fencing" to allow movement within a certain boundary around the home, but receive alerts with the geo-position when an older adult "wanders off."	Phillips LifeLine® GoSafe Aetrex Navistar shoes (GPS enabled) Jitterbug® phone with 5Star™ urgent response service
Medication adherence systems	Medication adherence devices can now provide medication reminder alerts via interactive voice response (IVR), text messaging or e-mail. Products are available as multi-day container trays or as lids on pill containers. Caregivers or a pharmacy can program such reminders using a web interface. If an older adult does not open a compartment of a pillbox (or the lid of a pill container) after receiving an alert, the devices can notify a remote caregiver via text messaging or e-mail. In a poly-pharmacy situation, to ensure that an older adult has taken the right medication, one product in this category comes with a built-in scanner that takes images of the medication being loaded and status of the prescription after each use. The back-end system can then confirm if the right medication has been taken.	MedMinder Maya™ SentiCare Pillstation Vitality GlowCap™ Pilljogger
Medication dispensers	Medication dispensers provide the right dosage of medication to a person when his/her medication is due, avoiding harm that can be caused by an overdose, as well as preventing drug abuse, especially for narcotic drugs, sleeping pills, etc.	Phillips' pill dispenser InRange System's Emma®
Smart toilets	Intelligent toilets can passively measure physiological signals using discharged body fluids. Japanese companies have been building smart toilets for more than a decade, but the bathroom products have not yet caught the imagination of U.S. consumers. Products are available but expensive for mass adoption.	Toto's smart toilet
Subjective Health Risk Assessment (HRA)	HRAs include interactive voice response systems, web applications or mobile app-based solutions to assess health risks of older adults using subjective questions and scoring. While body-worn sensors can collect numerous physiological data, care providers still need to assess specific patient health risks that cannot be objectively measured. An interactive voice response system that can automatically call an older adult is well suited for a small number of fixed questions that need to be asked for a limited time (e.g., prevention of 30-day congestive heart failure readmission program). In the future, Internet and app-enabled TV also will be used to deliver HRA content.	Health Interlink's HRA mobile apps (on Beacon [™] platform) Independa's Angela [™] application (for tablet and Internet enabled TV) Proximiti's IVR solution Bosch Health Buddy System Cardiocom telehealth system

The New Era of Connected Aging: Touring the Connected Aging Landscape, Center of Technology and Aging, www.techandaging.org

home environment		
subcategory	description	example products
Fall detection	Fall detection technologies can detect falls and automatically call for help when an older adult cannot get up on his/her own or press a personal emergency response system (PERS) button.	Phillips Lifeline MobileHelp SafetyCare EMTWatch™ FallDetect™
Environment sensors/passive monitoring sensors	Many different sensors are used in passive sensing for safety at home. This is by far the most advanced and well-diffused technology area of the aging-in-place market. Sensor products can check motion patterns, stove on/off status, carbon dioxide or carbon monoxide levels inside the house, presence of smoke, air quality inside the house, humidity and fire. They can dim lights remotely and lock unlocked doors. Motion sensor products can be used solely for monitoring through algorithms to automatically detect movement aberrations and reliably generate appropriate alarms.	Lowe's Iris system GE Quietcare®
Video monitoring	Video cameras can monitor an individual's activities of daily living and provide caregivers with direct video feed on a smart phone, tablet app, or on the Web to check on the status of a family member.	Netgear VueZone™ Lorex LIVE

caregiving		
subcategory	description	example products
Informal caregiver platform	Products are mostly platforms with a portal service (tips and best practices) that match service providers with older adult caregivers who are searching for specific services. These platforms are continuing to mature and in the near future are likely going to include extensive user reviews such as Yelp.com or Angie's List to assist caregivers in making informed decisions.	Caring.com Caregiver.com EldercareLink.com AARP.org/caregiving
Formal care coordination platform	Mature telehealth platforms have been in service for a decade or more. New platforms with web and/or mobile app interfaces are being used by professional care coordinators to either streamline care coordination workflow or manage patients with complex disease conditions through remote monitoring solutions.	Procura clinical solution PatientPoint.com McKesson Vital Lumeris care collaboration platform
The New Era of Connected Aging: Touring the Connected Aging Landscape, Center of Technology and Aging, www.techandaging.org		

community		
subcategory	description	example products
Social communication	Social communication technologies include video-enabled PC or mobile app solutions to communicate with remote family caregivers or friends. Devices include web sites that enable older adults to share experiences in a virtual world in the form of online journaling. They turn older adults into empowered "prosumers" of information in the digital world where they both share and learn from each other.	Video communication: Skype Self-journaling sites: PatientsLikeMe.com CureTogether.com DiabetesMine.com Smart Patients
Gaming and cognitive training	Technologies include both online and mobile app-based cognitive games along with Wii or Kinect games for physical activity and entertainment. Studies of Wii and Xbox Kinect games with gesture recognition have shown good results in improving cognitive ability and/or physical rehabilitation of older adults.	Wii Fit Onlinegamesforseniors.com Lumosity.com PositScience.com Happy-Neuron.com games.AARP.org
Social networking	Includes general online social networking sites, as well as sites that are specially designed for older adults who are among the fastest growing online social networker segments, according to Pew Internet Research.	Facebook.com Aarp.org/onlinecommunity MyBoomerPlace.com
Social contribution	Technologies that support personal activities and societal contributions include websites that enable older adults to pursue their hobbies, make charitable donations for philanthropic projects and volunteer.	<u>Volunteer work sites :</u> SeniorCorps.org TapRootFoundation.org <u>Charitable donation sites :</u> Causes.com Razoo.com

The New Era of Connected Aging: Touring the Connected Aging Landscape, Center of Technology and Aging, www.techandaging.org

emerging technologies

Roles for technology are expanding to help older adults maintain a sense of purpose, a connection to those that care for them and the possibility of managing chronic disease from home. An important concept in these new technologies is that in-home care is the focus. These changes are essential as baby boomers age. We simply do not have the capacity to deliver care in the future the way we have in the past. Three areas, in particular, are ideal for assistive technology innovations:

Support for older adults in the form of social interaction where they previously faced isolation.

Prevention and early intervention related to illness and injury.

Chronic disease management from home rather than the hospital.



social interaction

Social health is becoming recognized as one of the most important factors in overall health and happiness. Monitoring systems are being developed to help measure social health and strategies employed to keep older adults engaged. Such systems may use sensors or other devices to monitor the frequency of phone calls or visits and then transmit that information to family members or caregivers as a heads up. The system raises awareness and results in more contact when it's needed most.

There are also systems in development that augment typical caller ID with photos and other information about the caller. This is important because dementia patients, for example, are often hesitant to answer the phone, fearing they won't know who it is and may misidentify even a close family member.

These emerging technologies could help detect changes in social behavior, remind older adults of important information, connect those who live alone with others in the community and offer online social opportunities.

assistive technology



prevention and early intervention

Our existing health systems operate in a reactive fashion, often when conditions have reached dangerous levels. Imagine if technology could be a key to preventive, homebased care. Sensor network products, such as bed sensors, are doing just that. Bed sensors monitor movement and changes in activity patterns to provide information before a health problem escalates to a crisis.

Systems are also in development to assist with performing the activities of daily living. The "tea-making assistant," for instance, reminds one to drink fluids at the first sign of dehydration and then shows users how to fix a cup of tea, using their own kitchen and utensils through short videos.

disease management

By 2040, nearly one-fourth of the population will consist of older adults, so it's more necessary than ever before that we shift our idea of where chronic care takes place and who provides most of the treatment. Tele-health systems — the delivery of health-related services and information via telecommunications technologies are helping to make the transition through "e-care." Such technologies place special emphasis on managing diabetes, congestive heart failure and other heart diseases, and depression. The collection of real-time vital signs and other health data will continue to be collected at home, but virtual office visits will become the norm. Technology will enable personalized-care plans and self-medication over a longer period.

There is much promise that these innovations will inform practitioners at a higher level than what is currently possible in the traditional doctor's office visit, which should lead to earlier, better diagnoses and treatments.

the new world of connected aging: what's next?

Connected aging technologies have touched the lives of a relatively small percentage of the older adult population. Within the next one to five years a number of new or under developed connected aging technologies and platforms will be available for older adults, family caregivers, and health and social service providers.

body		
technology	description	
Smart medication management	Through an ingestible sensor activated only when inside the body, smart pills objectively determine whether a person has taken their medication. Products are CE-marked and FDA-cleared, but not yet mass marketed in the U.S. Proteus Digital is pioneering the technology.	
Smart body sensors	"Flexible electronics" enables manufacturing of external, tattoo-like sensor patches that can be attached to skin or clothing, depending on what needs to be monitored. They are effective in gauging function of specific organs and in monitoring heart rate, blood oxidation and hydration. Boston-based MC-10 and Sano Intelligence are working on such technologies.	
Electronic Medical Record (EMR) connected medical devices for remote monitoring	Work is ongoing to enable medical devices used for measuring vital signs at home to connect directly to the care provider's EMR system.	
External sensors for remote monitoring	The diabetes foot ulcer detection mat is an emerging technology that will allow detection of foot ulcers in diabetic patients. Boston-based MIT Labs spin- off Podimetrics is developing a sensor pad that will collect blood flow data and transmit it wirelessly when a user steps on the mat. An algorithm in the cloud will detect if the user is developing an ulcer.	
Remote laboratory/ diagnostics	A fast emerging technology is remote diagnostics, or lab-on-a-chip, that will permit home application of many tests (e.g., liver tests for patients on statin) which today can be performed only at a laboratory.	
	The New Fra of Connected Aging: Touring the Connected Aging Landscape. Center of Technology and Aging, www.techandaging.org	

home environment		
technology	description	
Fall prevention	Technologies that prevent rather than monitor falls are being developed with both wearable sensors to measure posture and gait and an algorithm to predict a fall so that caregivers can prevent it with simple assistive technologies (e.g., providing a walker).	

community	
technology	description
Patient/provider/ caregiver communication platform	Technologies are being developed using HIPAA-compliant software platforms that will enable older adults to connect and communicate seamlessly with their provider, family members, friends and other community members. A variation is available today but is not fully mature.

caregiving	
technology	description
Local social and commerce networks for aging in place	Software platforms that will connect older adults, care providers, pharmacies, labs and ancillary service providers are being developed that will create a virtual neighborhood for providing coordinated elder care services to support aging in place.
Assistive robots	Robots that support personal care and chores will likely drive the future of home care. Today robotic technologies are available to do some specific household chores. When this technology becomes broadly available and affordable, it will transform home care for older adults. Currently, almost all major universities with robotics programs are conducting quality-of-life improvement projects. Broader commercialization of multi-function robots is likely in the near future.
	The New Era of Connected Aging: Touring the Connected Aging Landscape, Center of Technology and Aging, www.techandaging.org

paying for aging in place

financing options worth reviewing



Home modifications, home maintenance and installation of assistive technology help us age in place, but they come at a cost during the time of life when incomes typically become more fixed. Financing necessary improvements can be a challenge, but there are some possibilities and options worth reviewing.



AREA AGENCY ON AGING:

Every state offers different incentives, programs and benefits to older adults. Your Area Agency on Aging is the one-stop shop for available programs. For Missouri, find information at the Mid-America Regional Council (www.marc.org/ aging). For Kansas, find information at Johnson County Human Services & Aging (http://hsa.jocogov.org/ aging/aging.shtml) and Wyandotte/ Leavenworth Area Agency on Aging (www.wycokck.org/aging).

GRANT PROGRAMS

Several cities and counties have programs to subsidize remodeling, home modifications and weatherization for households on fixed incomes through federal Community Development Block Grant (CDBG) or Home Opportunities (HOME) programs. Income limits, eligible improvements and financing limits differ widely by jurisdiction. Your local community development department within city hall should be able to assist in accessing these programs.







REBUILDING TOGETHER

This is a national nonprofit organization that provides critical repairs and renovations for low-income homeowners. There are local programs in the Kansas City area. One offered in Clay County targets servicemen and women. Rebuilding Together Shawnee is dedicated to helping Shawnee homeowners with maintenance, home repairs and rehabilitation to live safely and independently. Visit www. rebuildingtogether.org to find out if there is a program in your area.



REVERSE MORTGAGES

After assessing what kind of assistance or living arrangement you need to remain in your home, one option to consider is a reverse mortgage. The program allows people over the age of 62 to convert a percentage of the equity in their paid-off home mortgages to cash. When in the market for a reverse mortgage, seek independent counseling before you talk to a lender, so you can learn about alternatives or tips on negotiating with lenders. A governmentapproved counselor near you can be found through www.hud.gov/offices/ hsg/sfh/hcc/hcs.cfm.

CLAIM DEDUCTIONS

A Certified Public Accountant (CPA) can determine whether you or a loved one is eligible to deduct the cost of home modifications on your federal income tax forms. You'll need a written recommendation from your doctor as proof that the modifications are medically necessary.



AFFORDABLE HOUSING

KCMetroHousing.org is a free resource to help you find a home across the Kansas City Metro that fits your needs and budget. Property owners and managers can post apartments or homes for rent any time, and listings are updated regularly. More information is available through www.kcmetrohousing.org.





Conserving the Past . . . Creating the Future

Fairway, Kan. Gladstone, Mo. Grandview, Mo. Independence, Mo. Kansas City, Kan. Kansas City, Mo. Merriam, Kan. Mission, Kan. Mission Hills, Kan. Mission Woods, Kan. North Kansas City, Mo. Overland Park, Kan. Prairie Village, Kan. Raytown, Mo. Riverside, Mo. Roeland Park, Kan. Sugar Creek, Mo. Westwood, Kan. Westwood Hills, Kan.

> This book is part of a series provided by the First Suburbs Coalition. The First Suburbs Coalition is made up of the cities that were first to grow around the core of Kansas City. Leaders from these communities work together on common issues, including modernizing housing stock, maintaining public infrastructure, and attracting and retaining businesses.



MID-AMERICA REGIONAL COUNCIL

600 Broadway, Suite 200 Kansas City, MO 64105 816/474-4240 www.marc.org