

## King County Emergency Medical Services Fall Prevention Program

### Fall Prevention Program Goals:

- Provide free client and home assessments related to falls and free “in-home” safety devices.
- Educate the elderly, their families about falls and things that can be done to prevent them, including changes in their home environment.
- Keep clients in their own home as long as possible.

### Participant criteria:

To qualify for this free program you must be:

- **Program is available only from Renton, Tukwila, SeaTac, Seattle north to Shoreline and the eastside – Bellevue and Mercer Island**
- 65 years or older
- Living independently - low income (not in an assisted living facility, nursing home, SHAG or KC Housing or retirement facility)
- Client must be ambulatory and at high risk of falling – either by having a fall in the past six months or assessed by a case manager, home healthcare person, nurse, etc.

Each client will be visited by a Physical Therapist (Jean Corr) who will administer the following questionnaires:

- Demographic and health characteristics questionnaire
- Sit-to-stand test

Clients must also sign an Authorization to Release Patient Medical Information (release form) – Jean will contact each client to make an appointment. It is important that Senior Services discuss this program with their client.

Safety devices (determined by our Physical Therapist Jean Corr at the time of her visit) that are given to clients include: bath mats, tub grab bars, wall bars (not installed), night lights, rug slips, shower chairs, shower transfer benches, hand-held shower, toilet safety frames, tread tape, smoke alarms, bed-assist railings, and toilet raisers.

To refer clients to this program, please complete the Client Referral Form and fax to Alan Abe KC EMS 206-296-4866.

## Pilot Randomized Fall Study

Few studies have investigated the effectiveness of Emergency Medical Services (EMS) based fall prevention interventions. These programs are significant because they target a high risk population and build up on an available network of health care delivery. This pilot study was conducted to assess the feasibility of conducting a large scale randomized trial of multi-faceted fall prevention intervention and evaluate the degree and duration of the benefit that would be expected from the intervention.

### Methods

- Eligible participants were  $\geq 65$  years of age
- Experienced an accidental fall that required 911 for assistance
- Ambulate with or without assistance of cane or walker
- Do not have a known terminal illness or a chronic illness significantly affecting cognition (dementia)
- Do not reside in a nursing home
- Have telephone
- Speak English
- Permanent residents of King County
- Were not admitted to the hospital as a result of the fall.

Of the 106 eligible that were contacted, 32 (30%) consented to participate in the study and were randomized to intervention and control groups. Consented participants were randomized after collection of the baseline information. The intervention group received individual-specific education concerning prevention of falls, standardized home and personal safety assessment with appropriate modification and a notification to the patients' medical provider about the fall and potential need for medical follow-up. Environmental hazards identified by the assessment were reviewed with the participant and when indicated home devices were installed (included bathmat, tub and wall grab bars, night light, rug slip, shower chair, shower transfer bench, hand held shower, toilet safety frame, tread tape, bed assist railing and toilet raiser). The intervention visit required approximately three hours for each participant. Installation of devices required an additional hour. After the study was completed, control participants were provided with the same interventions that were provided to the intervention group. Falls were assessed using monthly postcards. Participants were also surveyed at the end of the three-month pilot study to assess satisfaction.

### Findings

Evaluation of baseline characteristics demonstrated adequate randomization. Participants returned  $>80\%$  of their monthly fall postcards and responses were similar between the intervention and control groups. In each of the three months of observation, participants in the intervention group reported decreased incidence of falls as compared to those in the control group (0.23 vs. 0.33, 0.38 vs. 0.67 and 0.42 vs. 0.64 for the first, second and third months respectively). **Overall, intervention group participants experienced a 36% decrease in risk reduction in fall accidents as compared to control participants (RR 0.64 95%CI 0.38-1.06).** However, the decrease in fall risk that was observed during each month and overall failed to reach statistical significance possibly due to lack of power. On average, study participants rated the study intervention highly useful.

