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Managing active and healthy aging with use of caring service robots (MARIO)

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Objectives
In the frame of the European Community funded MARIO, caregivers of 139 dementia patients were recruited in National University of Ireland (NUIG), in Geriatrics Unit of IRCCS "Casa Sollievo della Sofferenza"-Italy (IRCCS) and in Alzheimer Association Bari-Italy (AAB) for a multicenter survey on to determine the needs and preferences of caregivers for improving the assistance of dementia patients, and guiding technological development of MARIO.

Materials and Method
A six minute video on technological devices and functions of MARIO was showed, and all caregivers fulfilled a 43-item questionnaire that explored four areas: A)Acceptability, B)Functionality, C)Support devices, and D)Impact.

Results
Caregivers declared that to facilitate acceptance (over 17.5%) and to improve functionality of MARIO (over 29%) should be important/likely/useful.
Over 20.3% of caregivers reported that following support devices in MARIO could be useful for their patients: 1)for monitoring bed-rest and movements, 2)for monitoring the medication use, 3)for monitoring the ambient environmental conditions, 4)for regulating heating, humidity, lighting and TV channel, 5)for undertaking comprehensive geriatric assessment, 6)for link to care planning, 7)for monitoring physiological deterioration, and 8)for monitoring cognitive deterioration.
Over 21.8% of caregivers declared that MARIO should be useful to improve quality of life, quality of care, safety, emergency communications, home-based physical and/or cognitive rehabilitation programs, and to detect isolation and health status changes of their patients.

Conclusions
MARIO is a novel approach employing robot companions, and its effect will be: 1)to facilitate and support persons with dementia and their caregivers, and 2)reduce social exclusion and isolation.