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# SYSTEMS REFERENCE DELIVERABLE

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**Economic evaluation of active assisted living services –  
Part 1: Framework**

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

### ECONOMIC EVALUATION OF ACTIVE ASSISTED LIVING SERVICES –

#### Part 1: Framework

#### FOREWORD

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IEC SRD 63234-1, which is a Systems Reference Deliverable, has been prepared by IEC systems committee Active Assisted Living.

The text of this Systems Reference Deliverable is based on the following documents:

Draft SRD	Report on voting
SyCAAL/153/DTS	SyCAAL/165/RVDTS

Full information on the voting for the approval of this Systems Reference Deliverable can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC SRD 63234 series, published under the general title *Economic evaluation of active assisted living services*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

## INTRODUCTION

Under the "Triple Aim" [1]<sup>1</sup> concept (now "Quadruple Aim" [2]), a well defined, inclusive set of objectives for new interventions, leading to improvements in the local and national healthcare systems, consists of the following:

- improve the health of the population;
- improve the patients' (e.g. AAL care recipients) experience of care;
- lower (or hold constant) the per capita cost of care to the healthcare system to ensure sustainability; and
- (the recently added fourth aim) improve the work life of healthcare providers (e.g. healthcare professionals and AAL formal carers), clinicians, and other staff.

Economic evaluations of proposed new healthcare services and technologies involve the assessment of the costs and effects of any interventions in the healthcare system and provide input into the economic sustainability objective above. Where there are important health outcomes that can be evaluated in monetary terms, a cost-benefit analysis can be undertaken as a 'non-reference case analysis' (Alternate Scenario analysis) with details provided on the derivation of the monetary value of the health outcomes. Appropriate economic evaluations will provide evidence to address the financial considerations of proposed new interventions along with the impact on health outcomes.

To achieve the Quadruple Aim objectives, all new technology-supported homecare or Active Assisted Living (AAL) services (such as remote monitoring of patient physiological measurements, in-home medication adherence monitoring and management, as well as mobility aids and emergency reporting services) should be evaluated to ensure they not only improve the quality of the patients' lives but also provide economic benefits greater than the cost of providing the service. Without financial benefits that exceed the cost of the service to the health system funder, or at the very least an economically neutral situation while improving patient outcomes over usual care pathways, the services will not be sustainable – or the healthcare services funder must be prepared to knowingly increase its cost per patient supported by the system to achieve the population health outcomes.

Furthermore, health system funders may be presented with a choice of options for investment in new or expanded services. In order to compare options from a financial costs and benefits perspective (as well as their health outcomes), economic evaluations of the options will provide an equal basis for comparison of the options.

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<sup>1</sup> Numbers in square brackets refer to the Bibliography.

## **ECONOMIC EVALUATION OF ACTIVE ASSISTED LIVING SERVICES –**

### **Part 1: Framework**

#### **1 Scope**

This part of IEC SRD 63234 provides a descriptive framework and template for the economic evaluation of the implementation of technology-supported home healthcare or wellness services, or AAL services that support communications, transportation, etc. as defined in a series of AAL use cases. The financial analysis is completed from the point of view of the healthcare services funder, aged care services funder, or similar governmental or non-governmental organization (e.g. the government in a state-sponsored system or possibly a health management/health insurance company in a privately funded system, a private or governmental organization financing delivery of home support or specialized transportation services).

This document is structured to provide a means of capturing data for a Reference Scenario (typically the current means of providing care, often known as 'usual care', to the target patient population) to compare against an Alternate Scenario (the service or technology intervention) for an economic comparison. Standard economic measures can be estimated (using an electronic spreadsheet or other analysis tool) such as Return on Investment (ROI), Net Present Value (NPV), and Payback Period of the investment.

This document is applicable to all potential AAL services and AAL systems that may be developed or the development and manufacture of any of the underlying components (whether hardware or software).

#### **2 Normative references**

There are no normative references in this document.