

ANSI/ASA S12.70-2016

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# AMERICAN NATIONAL STANDARD

## **Criteria for Evaluating Speech Privacy in Healthcare Facilities**

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ANSI/ASA S12.70-2016

Accredited Standards Committee S12, Noise

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Standards Secretariat  
Acoustical Society of America  
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**ANSI/ASA S12.70-2016**

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**Criteria for Evaluating Speech Privacy in  
Healthcare Facilities**

**Secretariat:**

**Acoustical Society of America**

**Approved on July 19, 2016 by:**

**American National Standards Institute, Inc.**

**Abstract**

This standard provides acoustical performance criteria, design requirements, and design guidelines to meet the speech privacy needs for both new design and retrofits of healthcare facilities. This document provides a) a method for selecting speech privacy goals based on occupant needs, by type of space and use, b) design requirements and guidelines for developing a strategy for the architectural design and acoustical materials selection, and c) a method for verifying and analyzing speech privacy design performance.

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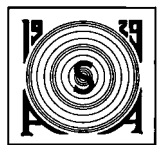
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## Foreword

[This Foreword is for information only, and is not a part of the American National Standard ANSI/ASA S12.70-2016 American National Standard Criteria for Evaluating Speech Privacy in Healthcare Facilities. As such, this Foreword may contain material that has not been subjected to public review or a consensus process. In addition, it does not contain requirements necessary for conformance to the standard.]

This standard comprises definitions, standards, and specifications for use in noise. It was developed and approved by Accredited Standards Committee S12 Noise, under its approved operating procedures. Those procedures have been accredited by the American National Standards Institute (ANSI). The Scope of Accredited Standards Committee S12 is as follows:

*Standards, specifications, and terminology in the field of acoustical noise pertaining to methods of measurement, evaluation, and control, including biological safety, tolerance, and comfort, and physical acoustics as related to environmental and occupational noise.*

This standard is entirely new and uses Articulation Index (AI) and Privacy Index (PI) to evaluate speech privacy in both closed- and open-plan architectural spaces, and is not comparable to any existing ISO Standard.

At the time this Standard was submitted to Accredited Standards Committee S12, Noise, for approval, the membership was as follows:

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Working Group S12/WG 44 Speech Privacy, which assisted Accredited Standards Committee S12, Noise, in the development of this standard, had the following membership.

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Suggestions for improvements to this standard will be welcomed. They should be sent to Accredited Standards Committee S12, Noise, in care of the Standards Secretariat of the Acoustical Society of America, 1305 Walt Whitman Road, Suite 300, Melville, New York 11747. Telephone: 631-390-0215; FAX: 631-923-2875; E-mail: [asastds@acousticalsociety.org](mailto:asastds@acousticalsociety.org).



## Introduction

Good speech intelligibility is an important aspect of oral communications in most architectural spaces, and is critically important in healthcare-related facilities owing to the importance of medical and financial information communicated between medical and professional staff and patients. However, it is also important that such information is only communicated to those to whom it is intended; all reasonable safeguards are needed to ensure that such conversations are not overheard by an unintended listener. Caregiver-patient confidentiality is the primary rationale for this and is mandated by federal regulations such as HIPAA (Health Insurance Portability and Accountability Act of 1996) and the HITECH (Health Information Technology for Economic and Clinical Health, 2009) Act.

Until recently, consideration of speech privacy in architectural design in the U.S. originally focused on productivity in 'work spaces' such as commercial offices<sup>[1]</sup>. It is this work that forms the technical foundation for the development of this standard. Testing and evaluation standards applicable to speech privacy in commercial spaces are currently available from ASTM, but the needs and expectations of persons in healthcare environments are not quite the same as those of employees at work. This has made necessary the introduction of new terminology for expressing expected or desired levels of speech privacy in healthcare settings that harmonize with regulations applicable to healthcare facilities.

The actual level of speech privacy between architectural spaces depends on the combination of speech level, the sound isolation between architectural spaces, and the background sound level at the location of the unintended listener. Accordingly, all three components are addressed in this standard.

This is a preview of "ANSI/ASA S12.70-2016". [Click here to purchase the full version from the ANSI store.](#)

## American National Standard

# Criteria for Evaluating Speech Privacy in Healthcare Facilities

## 1 Scope and application

### 1.1 Scope

**1.1.1** This standard provides a relationship between speech privacy descriptors and speech privacy expectations for various enclosed and open-plan healthcare spaces. Descriptors used to characterize speech privacy expectation are the articulation index (AI)<sup>1</sup> and the privacy index (PI).

**1.1.2** This standard also provides design criteria for achieving acceptable speech privacy in healthcare facilities including treatment rooms, clinicians' offices, pharmacies, reception/waiting areas, etc.

**1.1.3** This standard provides covered entities, architectural design teams, acoustical consultants, and regulators guidelines and objective criteria for designing healthcare facilities that provide sufficient speech privacy to protect personal health information (PHI) as required by the Health Insurance Portability and Accountability Act (HIPAA).

**1.1.4** The standard also provides general guidance on the relationship between expectations of speech privacy and objective descriptors used to evaluate speech privacy.

**1.1.5** The annexes also provide guidance on how speech privacy can be obtained in different types of architectural spaces and circumstances, and how to objectively evaluate speech privacy to verify conformance with these criteria.

### 1.2 Application

**1.2.1** This standard applies to all healthcare-related architectural spaces where patient medical and financial information is communicated orally and where an unintended casual listener may be present.

**1.2.2** This standard applies to the technical implementation of the federal HIPAA and HITECH regulations relative to oral communication of patient personal health information.

## 2 Normative references

The following referenced documents are indispensable for the application of this standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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<sup>1</sup> The current version of ANSI/ASA S3.5-1997 (R2012) *Methods for Calculation of the Speech Intelligibility Index* (SII) replaces articulation index (AI). SII includes the same signal-to-noise consideration forming the basis of AI, but adds other effects that sometimes degrade speech intelligibility such as hearing threshold and masking effects, and adds methods for evaluating SII at the inner ear for telephony applications.