

Preliminary Regulatory Impact Analysis

1. Executive Orders 12866 and 14094 Statement

Under Executive Order (E.O.) 12866, “significant” regulatory actions are subject to review by the Office of Management and Budget (OMB). E.O. 12866 Section 3(f) has been amended by E.O. 14094. This amendment defines a “significant regulatory action” as an action that is likely to result in a rule (1) having an annual effect on the economy of \$200 million or more (adjusted every 3 years by the Administrator of OIRA for changes in gross domestic product); or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, territorial, or tribal governments or communities (also referred to as “significant”); (2) creating serious inconsistency or otherwise interfering with an action taken or planned by another agency; (3) materially altering the budgetary impacts of entitlement grants, user fees, or loan programs or the rights and obligations of recipients thereof; or (4) raising legal or policy issues for which centralized review would meaningfully further the President’s priorities or the principles set forth in this Executive order, as specifically authorized in a timely manner by the Administrator of OIRA in each case.

OIRA has determined that this regulatory action is significant. Therefore, the Department provides the following assessment of its benefits and costs.

2. Background

a. Statement of Need

Title II of the ADA prohibits discrimination based on disability in all services, programs, and activities offered by public entities (public entities). The ADA and the Department’s implementing regulations have always mandated provision of accessible equipment under the

program accessibility, reasonable modification, auxiliary aids and services, and barrier removal requirements.

In this proposed rule, the Department proposes to revise its regulations under Title II of the Americans with Disabilities Act (ADA) to adopt the U.S. Architectural and Transportation Barriers Compliance Board's (Access Board) Standards for Medical Diagnostic Equipment (MDE), including medical examination tables, weight scales, dental chairs, and radiological diagnostic equipment. These specific technical requirements are designed to ensure that MDE used by public entities to offer services, programs, and activities at places such as hospitals and other health care facilities is accessible to individuals with disabilities. Accessible equipment and furniture are often critical to an entity's ability to provide a person with a disability equal access to its services. Without accessible MDE, individuals with disabilities may not have an equal opportunity to receive medical care, including routine examinations, which could seriously undermine their health. The Department also proposes to adopt scoping requirements for accessible MDE.

The Department of Health and Human Services also issued a Notice of Proposed Rulemaking addressing the requirements of Section 504 of the Rehabilitation Act of 1973 (Section 504). It includes technical standards and scoping requirements for accessible MDE, so that persons with disabilities have an opportunity to participate in or benefit from health care programs and activities that is equal to the opportunity afforded others.

Virtually all entities that are covered by Title II of the ADA and use MDE are covered by Section 504 of the Rehabilitation Act as well. Given the prevalence of federal financial assistance, including Medicare, Medicaid, and other grants totaling more than \$1.2 trillion in 2021, it would be exceedingly rare to find a public entity in the health care sector that receives

no federal funds. Title II of the ADA is modeled on Section 504 of the Rehabilitation Act.¹ Title II of the ADA and Section 504 are generally understood to impose similar requirements, given the similar language employed in the ADA and the Rehabilitation Act.² The legislative history of the ADA makes clear that title II of the ADA was intended to extend the requirements of section 504 to apply to all state and local governments, regardless of whether they receive Federal funding, demonstrating Congress's intent that title II and section 504 be interpreted consistently.³ Further, courts have sought to interpret Section 504 consistently with Title II of the ADA. Therefore, in this Notice of Proposed Rulemaking under Title II of the ADA, the Justice Department seeks to maintain consistency between the regulations under Section 504 and those under Title II. Both proposed rules impose virtually identical obligations on covered entities.

b. Overall Impact

The Department has examined the impacts of the proposed rule under E.O. 12866, E.O. 13563, E.O. 14094, the Regulatory Flexibility Act (5 U.S.C. 601-612), and the Unfunded Mandates Reform Act of 1995 (Pub. L. 104-4). E.O.12866, E.O. 13563, and E.O. 14094 direct the Department to assess all costs and benefits of available regulatory alternatives and, when regulation is necessary, to select regulatory approaches that maximize net benefits (including potential economic, environmental, public health and safety, other advantages, distributional impacts, and equity). This proposed rule is a significant regulatory action as defined by E.O. 12866 and E.O. 14094.

¹ See, e.g., H. Rept. 101-485(II) at 84 (May 15, 1990).

² See, e.g., 42 U.S.C. 12201(a).

³ See H. Rep. 101-485(II) at 84 (May 15, 1990).

The Regulatory Flexibility Act requires the Department to analyze regulatory options that would minimize any significant impact of a rule on small entities. The Department proposes to certify that the proposed rule will not have a significant economic impact on a substantial number of small entities due to two reasons: (1) the costs of the proposed rule are small relative to the revenues of affected entities, including affected small entities; and (2) even the smallest affected entities would be unlikely to face a significant impact. The findings show that compliance costs of the proposed regulation account for no more than 1 percent of annual revenue for small governmental entities. *See Section 8* (pp. 72-81, *infra*). This suggests an insignificant economic impact of the proposed regulation on small governmental entities.

The Unfunded Mandates Reform Act of 1995 (Section 202(a)) generally requires the Department to prepare a written statement, which includes an assessment of anticipated costs and benefits, before proposing “any rule that includes any Federal mandate that may result in the expenditure by State, local, and tribal governments, in the aggregate, or by the private sector, of \$100,000,000 or more (adjusted annually for inflation) in any one year.” The current threshold after adjustment for inflation is \$177 million, using the most current (2022) Implicit Price Deflator for the Gross Domestic Product.⁴ This proposed rule is not subject to the Unfunded Mandates Reform Act because the proposed rule falls under an exception for regulations that establish or enforce any statutory rights that prohibit discrimination on the basis of race, color, religion, sex, national origin, age, handicap, or disability.⁵

⁴ U.S. Bureau of Economic Analysis. National Income and Product Accounts. Table 1.1.9. Implicit Price Deflators for Gross Domestic Product. Retrieved April 28, 2023, from <https://www.bea.gov/data/prices-inflation/gdp-price-deflator> [https://perma.cc/7DGS-X9MS].

⁵ 2 U.S.C. 1503(2).

The Background and Reasons for the Proposed Rulemaking sections at the beginning of this preamble contain a summary of this proposed rule and describe the reasons it is needed.

c. Summary of Costs and Benefits

In this Preliminary Regulatory Impact Analysis (PRIA), the Department has examined the impacts of the Title II ADA regulation, which sets forth (1) a requirement to acquire accessible medical examination tables and weight scales within two years, and (2) a scoping requirement for newly acquired MDE.

- 1) Where a service, program, or activity of a public entity utilizes MDE, at least 10 percent of the total number of units in a location, but no fewer than one unit, of each type of equipment in use must meet the Standards for Accessible MDE. This scoping requirement is 20 percent for public entities specializing in treating conditions that affect mobility. This 10 or 20 percent requirement applies to all MDE that public entities purchase, lease, or otherwise acquire over 60 days after the final rule publication. Examples of MDE include weight scales, examination tables, examination chairs, and radiological diagnostic equipment.
- 2) Public entities that use at least one examination table and one weight scale in their service, program, or activity, must purchase, lease, or otherwise acquire, within two years after the final rule publication, at least one examination table and one weight scale per public entity that meets the requirements of the Standards for Accessible MDE, unless the entity already has one in place.

The Department estimates that the Title II ADA regulation will affect 6,905 public entities.⁶ In this RIA, the Department quantifies incremental costs that affected entities may incur in (1) purchasing or leasing accessible MDE and (2) ensuring qualified staff operate MDE. The Department also quantifies incremental benefits that people with mobility disabilities may enjoy due to higher shares of accessible MDE, which yield improved health outcomes. In addition, the Department discusses other benefits flowing from the proposed rule that cannot be quantified due to lack of data or other methodological reasons.

⁶ The estimate of 6,905 public entities comes from the Department of Health and Human Services and the Centers for Medicare & Medicaid Services, based on information in the U.S. Census Bureau's 2019 SUSB Annual Data Table by Establishment Industry, U.S. & states, 6-digit NAICS. See Table 2 for more information.

Table 1 below summarizes findings of the economic impact analysis of the likely incremental monetized costs and benefits of the proposed rule, on an annualized basis. All monetized costs and benefits are estimated for a 10-year period using a discount rate of 3 or 7 percent.

Table 1: Annualized Value of Monetized Costs and Benefits under the Proposed Rule Over a 10-Year Period in 2022 Dollars (millions)

	Discount Rate (3 percent)	Discount Rate (7 percent)
Monetized Incremental Costs	\$38.5	\$38.7
Monetized Incremental Benefits	\$7.7	\$4.8

Regarding costs, the Department finds that the proposed rule would result in annualized costs over a 10-year period of \$38.5 million or \$38.7 million, corresponding to a 3 or 7 percent discount rate.⁷ The Department in this PRIA separately reports a full range of cost estimates of \$18.6 million to \$68.6 million at a 3 percent discount rate, and a full range of cost estimates of \$18.7 million to \$68.8 million at a 7 percent discount rate.

Regarding benefits, the PRIA finds that the proposed rule would result in annualized benefits over a 10-year period of \$7.7 million at a 3 percent discount rate, and \$4.8 million at a 7 percent discount rate. The Department in this PRIA separately reports a full range of benefit estimates of \$5.1 million to \$10.2 million at a 3 percent discount rate, and a full range of benefit estimates of \$3.2 million to \$6.4 million at a 7 percent discount rate.

In addition to this monetized benefit estimate, the PRIA discusses potential enormous unquantified benefits under the proposed rule. The Department expects that the proposed rule will result in a myriad of benefits for individuals with mobility disabilities flowing from greater access to health care and a reduction in discriminatory actions, such as the benefits of the successful drug dosing for persons with disabilities who will now be able to be weighed and

⁷ See Table 11 for derivation of the point estimate.

given proper drug regimens due to accessible weight scales, and the removal of multiple causes of loss of self-esteem, frustration, and embarrassment.

The PRIA includes both quantitative and qualitative discussions of regulatory alternatives directed toward the same goals while imposing lower costs. The PRIA concludes that the proposed rule maximizes net benefits to society while also achieving the regulatory goals.

d. Alternative Baseline

As noted, there are likely no public entities in the healthcare sector that do not receive some form of federal financial assistance. Therefore, all, or virtually all, entities that are subject to Title II of the ADA are also subject to Section 504 of the Rehabilitation Act. Further, as also noted, Title II and Section 504 impose parallel requirements, and courts have interpreted them to be consistent. Maintaining that consistency, this rule under Title II imposes virtually the same obligations on public entities as HHS's rule imposes under Section 504.

If we take as an alternative baseline the prior adoption of HHS Section 504 rule, public entities will incur no additional costs to comply with Title II as to accessible MDE. Entities that comply with the Section 504 rule as to MDE will necessarily comply with the Title II rule as well.

Under this alternative baseline, it also follows that the Title II rule would engender no affirmative benefits with regard to accessible MDE. However, the Title II rule could potentially avert significant administrative or transaction costs. Absent the proposed rule setting technical standards and scoping requirements for accessible MDE under Title II of the ADA, courts might interpret Title II to impose obligations on public entities that differ in some respects from those under Section 504. Such differences would result in confusion, uncertainty, duplication,

litigation, and increased compliance costs for regulated entities. One advantage of adopting the Title II rule is thus avoidance of these pitfalls.

3. **Affected Entities**

a. Number of Affected Entities

In this NPRM, the Department is proposing revisions to its Title II ADA regulations to adopt the Access Board's Standards for MDE. This NPRM will affect all public entities that offer health care services, programs, and activities through or with the use of MDE, although the impact on such entities already providing accessible MDE will be negligible compared with the impact on those that do not. Some public entities already use accessible MDE because even in the absence of the NPRM, Title II of the ADA requires public entities to ensure that their programs, services, and activities are readily accessible to and usable by people with disabilities and to provide reasonable modifications when necessary to avoid discrimination based on disability unless those modifications would fundamentally alter the nature of the public entity's service, program, and activity.

We identify the scope of the proposed regulation as to those public entities based on data for Sector 62, "Health Care and Social Assistance" in the 2019 Statistics of U.S. Business (SUSB) published by the U.S. Census Bureau.

All public entities that use MDE to provide diagnostic programs and activities belong to Sector 62. Sector 62 consists of four Subsectors: ambulatory health care services (621), hospitals (622), nursing and residential care facilities (623), and social assistance (624). If commenters believe that public entities not in Sector 62 use MDE, we invite comment on them.

While virtually all entities that use MDE are in Sector 62, not all entities in Sector 62 use MDE. Three groups of Sector 62 providers either are not likely public entities or do not use MDE. They therefore are excluded from this analysis.

First, Subsector 624 firms provide social assistance services, not health services. Less than 2% of their workers are health care professionals; most of them are nurses without an MD (Doctor of Medicine) degree typically required to diagnose health conditions. As Subsector 624 firms are not in the business of diagnosing health conditions, they generally do not use MDEs. Therefore, we do not include them in our analysis.

Second, providers in Industry Groups 6211 (Offices of Physicians) and 6212 (Offices of Dentists) are private entities. Provider of Service (POS) data from HHS's Center for Medicare and Medicaid Services (CMS) appear to confirm that the providers in Industry Group 6211 and 6212 are not public entities. Insofar as physicians and dentists are employed by public institutions, they likely fall within Subsector 622 (Hospitals) or 623 (Nursing and Residential Care Facilities).

Third, the Department expects that public entities in the Industry Group of Home Health Care Services (NAICS code: 6216) already provide accessible MDE under the Title II requirement so the NPRM will have a negligible impact on these entities. This is because public entities in this industry group are primarily engaged in providing skilled nursing services in the home. To attract and retain patients, these entities have strong incentives to procure portable MDE designed for the specific needs of their patients, including accessibility for people with mobility impairments, and acquire as many accessible units as the number needed for patients that they are scheduled to serve on a given day and time. The Department solicits comments on

the impact that public entities in the 6216 industry group may experience in conforming to the requirements set forth in this NPRM.

In addition, Industry Group 6219 consists of three National Industries, but providers belonging to only one of them, “All Other Miscellaneous Ambulatory Health Care Services” (621999), typically supply medical diagnostic services. Within Industry Group 6219, 621999 firms account for 39.80% of the establishments, 22.35% of the employees, and 29.72% of the revenues.⁸ As for the other two National Industries, Ambulance Services (621910) and Blood and Organ Banks (621991), the proposed rule is unlikely to affect them, and hence they are not included in the analysis below. Therefore, in our analysis, Industry Group 6219 includes only National Industry 621999.

Table 2 below suggests that 6,905 public entities are in the relevant industry groups and therefore will be affected by the NPRM. As shown in column [1], these include 398 in the industry groups of general medical and surgical hospitals, 206 in the group of psychiatric and substance abuse hospitals, 37 in the group of specialty hospitals, 2,691 in the group of offices of other health practitioners, 990 in the group of outpatient care centers and other ambulatory health care services, 258 in the group of medical laboratories, and 334 in the group of diagnostic imaging centers. In addition, 1,991 are in the industry groups of nursing care facilities, residential intellectual and developmental disabilities, mental health, and substance abuse facilities, continuing care retirement communities and assisted living facilities for the elderly, and other residential care facilities. Column [4] reports the total number of entities (public and non-public) in each industry group, while column [5] reports the share of entities affected by the

⁸ See *infra* notes 26 and 31, SUSB 2019 and SUSB 2017.

NPRM (i.e., the number in column [1] divided by that in column [4]). This share ranges from 2 to 48 percent, with the lowest in the industry group of offices of other health practitioners (2 percent) and the highest in the group of psychiatric and substance abuse hospitals (48 percent).

The Department assumes, based on the nature of the relevant industries, that all industry groups in Table 2, except medical and diagnostic laboratories (6215), use examination tables and weight scales. In other words, medical and diagnostic laboratories will be affected by the scoping requirement of newly acquired MDE, but not appreciably by the two-year requirement of examination tables and weight scales.

Table 2: Public entities affected by the NPRM

[1] Number of firms affected by NPRM	[2] Firm description	[3] NAICS	[4] Total number of firms affected by NPRM	[5] Share of firms
398	General Medical and Surgical Hospitals	6221	2,484	16%
206	Psychiatric and Substance Abuse Hospitals	6222	428	48%
37	Specialty Hospitals	6223	301	12%
2,691	Offices of Other Health Practitioners	6213	141,853	2%
990	Outpatient Care Centers & Other Ambulatory Health Care Services	6214 & 6219	23,642	4%
258	Medical Laboratories	621511	3,132	8%
334	Diagnostic Imaging Centers	621512	4,060	8%
1,991	Nursing Care Facilities Residential Intellectual and Developmental Disabilities Continuing Care Facilities Other Residential Care Facilities	6231 6232 6233 6239	40,956	5%
0	Office of Physicians	6,211	168,459	
0	Office of Dentists	6,212	124,384	
6,905	All	All	509,699	

Sources: Total number of firms comes from U.S. Census Bureau's 2019 SUSB Annual Data Tables by Establishment Industry, U.S. & states, 6-digit NAICS, (last visited Mar. 10, 2023). <https://www.census.gov/data/tables/2019/econ/susb/2019-susb-annual.html>. Number of firms affected by the NPRM was estimated by the Department of Health and Human Services and the Centers for Medicare & Medicaid Services based on POS data for NAICS codes 6221, 6222, 6223, and 6213, and on BLS data for NAICS codes 6213, 6214 & 6219, 621511, 621512, 6231, 6232, 6233, and 6239. NAICS refers to the 2017 North American Industry Classification System codes. NAICS code 6232 includes residential intellectual and developmental disability, mental health, and substance abuse facilities. 6233 includes continuing care retirement communities and assisted living facilities for the elderly.

b. Examination Table and Weight Scale in a Public Entity: Baseline Accessibility, Required Accessibility, and Accessibility Gap

To estimate the impacts of the two-year requirement of examination tables and weight scales, the Department reports in Table 3 the baseline accessibility, required accessibility, and accessibility gap associated with this requirement. The unit of compliance is a public entity. Baseline accessibility is defined as, in the absence of the NPRM, the share of public entities that have at least one accessible examination table (weight scale). Required accessibility is defined as the share of public entities required under the proposed regulation to have at least one accessible examination table (weight scale). Required accessibility is therefore 100 percent due to the requirement that a public entity covered by the proposed rule acquire at least one accessible examination table (weight scale) within two years. Accessibility gap is defined as the difference between required and baseline accessibility.

Due to lack of data, the Department assumes based on professional judgment that baseline accessibility in public entities in the relevant industries is the same as that in non-public entities.⁹ This assumption holds for other accessibility measures. The Department solicits comments on this assumption. The Department estimates baseline accessibility by using three peer-reviewed articles that surveyed clinics from 2013 to 2018 and professional judgment, and reports estimated baseline accessibility as a share of required accessibility. The estimated

⁹ We base this assumption on several factors: (1) Even absent the Access Board standards, the ADA prohibition of discrimination based on disability has applied to both public and private institutions since 1990; (2) the requisite medical standard of care is the same for public and private institutions; (3) public and nonpublic institutions have similar incentives in providing MDE to meet the standard of care without incurring unnecessary costs, and (4) our observations over many years of experience with both public and private medical institutions that serve people with disabilities suggests these institutions have roughly equivalent baseline accessibility.

baseline accessibility is 61.4% of required accessibility for examination tables. This share is 35.6% for weight scales.¹⁰

Table 3: Examination Tables and Weight Scales in a Public Entity: Baseline Accessibility, Required Accessibility, and Accessibility Gap

[1] MDE Type	[2] Baseline Accessibility (%)	[3] Required Accessibility (%)	[4] Accessibility Gap (percentage points)
Examination Table	61.4	100	38.6
Weight Scale	35.6	100	64.4

Baseline accessibility is defined as, in the absence of the NPRM, the share of public entities that have at least one accessible examination table (weight scale). Required accessibility is defined as the share of public entities required to have at least one accessible examination table (weight scale). Accessibility gap is defined as the difference between required and baseline accessibility.

c. All MDE in a Public Entity Location: Baseline Accessibility, Required Accessibility, and Accessibility Gap

To estimate the impacts of the scoping requirement of newly acquired MDE, the Department reports in Table 4 the baseline accessibility, required accessibility, and accessibility gap associated with this requirement. The unit of compliance is a public entity location.¹¹ Baseline accessibility is defined as, in the absence of the NPRM, the share of accessible MDE in a public entity location. Required accessibility is defined as, after considering the distribution of public entity size, the share of MDE units that must be accessible under the 10 or 20 percent scoping requirement.¹² Accessibility gap is defined as the difference between required and baseline accessibility.

¹⁰ The Department estimates the share by taking the average of the varying shares of accessible examination tables and weight scales reported in the three peer-reviewed articles. Pharr, James, & Yeung (2019) indicates that 60% of hospital-based clinics had at least one wheelchair accessible weight scale. This share was 95% for accessible examination tables. Agaronnik, Campbell, Ressalam, & Iezzoni (2019) reports that 35% of clinics had wheelchair accessible weight scales. This share was 70% for accessible examination tables. Mudrick, Swager, & Breslin (2019) indicates that 11% of primary care offices had accessible weight scales. This share was 19% for accessible examination tables.

¹¹ A public entity may have multiple locations.

¹² The rationale for the choice of 10 percent and 20 percent as the scoping requirement is articulated at pages 18-21 of the NPRM. The Department considered alternative scoping requirements, as discussed at pages 70-72 of this Regulatory Impact Analysis.

The Department estimates baseline accessibility by using peer-reviewed articles on accessibility in health care settings, and professional judgment, and reports estimated baseline accessibility as a share of required accessibility. For this estimation, the Department divides all MDE into two categories: basic and complex.

- 1) Basic MDE is mass-produced and less expensive; examples include examination tables, weight scales, and examination chairs.
- 2) Complex MDE is innovative and of high value; examples include mammography equipment, x-ray machines, magnetic resonance imaging (MRI) scanners, and computed tomography (CT) machines.

The Department divides public entities into two groups for this estimation. The first includes nursing and residential care facilities, psychiatric and substance abuse hospitals, offices of other health practitioners, and medical laboratories (NAICS codes: 623, 6222, 6213, and 621511). As entities in this group typically use basic MDE, the Department estimates the baseline accessibility by taking the average of the estimated baseline accessibility of examination tables and weight scales reported above in section 3b, that is, 48.5% of required accessibility $[(61.4+35.6)/2]$.

The second group includes general medical and surgical hospitals, specialty hospitals, outpatient care center, other ambulatory health care services, and diagnostic imaging centers (NAICS codes: 6221, 6223, 6214, 6219, and 621512). These entities are large providers that typically use complex MDE for a variety of services, such as cancer screening. The Department estimates this group's baseline accessibility to be 45% of the required accessibility, a judgment informed by results in Stillman, Bertocci, Smalley, Williams, & Frost (2017). In that study, 54% of wheelchair users believed they received incomplete care in outpatient facilities, and 57%

believed their physician had no more than a moderate understanding of their disability-specific medical concerns.¹³

Table 4: All MDE in a Public Entity Location: Baseline Accessibility, Required Accessibility, and Accessibility Gap

[1] NAICS Code	[2] Industry	[3] Baseline Accessibility (%)	[4] Required Accessibility (%)	[5] Accessibility Gap (percentage points)
6221	General Medical and Surgical Hospitals	18.3	40.6	22.3
6222	Psychiatric and Substance Abuse Hospitals	26.2	53.9	27.7
6223	Specialty Hospitals	18.5	41.2	22.7
6213	Offices of Other Health Care Practitioners	26.2	53.9	27.7
6214 & 6219	Outpatient Care Centers and Other Ambulatory Care Facilities	18.3	40.6	22.3
621511	Medical Laboratories	26.2	53.9	27.7
621512	Diagnostic Imaging Centers	18.3	40.6	22.3
623	Nursing and Residential Care Facilities	28.0	57.6	29.6

Baseline accessibility is defined as, in the absence of the NPRM, the share of accessible MDE in a public entity location. Required accessibility is defined as, after considering the distribution of public entity size, the share of MDE units that must be accessible under the 10 or 20 percent scoping requirement. Accessibility gap is defined as the difference between required and baseline accessibility.

As defined earlier, required accessibility refers to, after considering the distribution of public entity size, the share of MDE units in a location that must be accessible under the NPRM’s 10 or 20 percent scoping requirement. The 10% scoping requirement applies to public entities that do not specialize in treating conditions affecting mobility. When these entities use MDE to provide services, programs, or activities, they must ensure that at least 10%, but no fewer than one unit, of each type of equipment in a location complies with the MDE standards. In contrast, the 20% scoping requirement applies to public entities that specialize in treating conditions affecting mobility. When these entities use MDE to provide services, programs, or

¹³ Although the Access Board published its standards for MDE in 2017, those standards were not fully enforceable, a limitation that the proposed rule would rectify. If the increasing awareness of the ADA and the need, in providing medical care, to afford access to people with disabilities, has increased accessibility since 2017, that would mean that medical providers have less to do to meet the accessibility standards in the proposed rule. The costs of compliance therefore would likely be less than projected in this RIA, and the benefits would be less as well, but the conclusion of this analysis would be unaffected.

activities, they must ensure that at least 20%, but no fewer than one unit, of each type of equipment in a location complies with the MDE standards.

The Department estimates required accessibility based on data from the Organization for Economic Cooperation and Development (OECD), the American College of Radiology (ACR), and the U.S. Census Bureau and Bureau of Labor Statistics (BLS). For this estimation, the Department further divides the two groups of public entities specified previously (p. 12) into four, based on (1) whether they typically use basic or complex MDE, and (2) whether they specialize in treating conditions affecting mobility.

The first group includes general medical and surgical hospitals, outpatient care centers, other ambulatory health care services, and diagnostic imaging centers (NAICS codes: 6221, 6214, 6219, and 621512), where complex MDE predominates. The 10% scoping requirement applies to this group because these entities typically do not specialize in treating conditions affecting mobility. These entities usually incur large capital expenses in acquiring radiology equipment listed in Table 5, which shows required accessibility under 10% scoping is 40.6%. The Department therefore applies this 40.6% figure to be the required accessibility of public entities in this group.

Table 5 uses OECD data on the number of radiology equipment units in the United States in 2019¹⁴ and ACR data on the number of locations in the United States¹⁵ to calculate the

¹⁴ Organization for Economic Cooperation and Development. Health Care Resources. Retrieved September 13, 2022, from https://stats.oecd.org/index.aspx?DataSetCode=HEALTH_REAC [https://perma.cc/3MXT-KDTY].

¹⁵ American College of Radiology. Accredited Facility Search. Retrieved June 19, 2022, from <https://www.acraccreditation.org/accredited-facility-search> [https://perma.cc/E86G-E5XB]. The Department uses the list as of June 19, 2022. Lists as of previous dates, for example dates in 2019, are not publicly available. The number of mammography machine locations from this ACR website closely matches the number from the list (as of August 31, 2020) published by the U.S. Food and Drug Administration (U.S. Food and Drug Administration. (2020, August 31). Search for a Certified Facility. Retrieved from <https://www.fda.gov/radiation-emitting-products/consumer-information-mqsa/search-certified-facility> [https://perma.cc/4R5T-JK89]).

average number of units per location¹⁶ and then estimates the required number of accessible MDE units under the 10% or 20% scoping requirement. This estimation assumes that MDE units are evenly distributed across locations.¹⁷ For each type of radiology equipment, Table 5 reports requirements in columns [5] and [6], respectively, the estimated number of required accessible units under the 10% and 20% scoping requirements. For example, concerning radiation therapy equipment, the required number of accessible units is 684 under 10% scoping,¹⁸ and 1,114 under 20% scoping.¹⁹ For all radiology equipment types, column [2] shows that the total number of units is 70,627, while column [5] shows that the total required number of accessible units is 28,698 under 10% scoping. Therefore, required accessibility under 10% scoping is 40.6% ($=28,698/70,627$). Likewise, required accessibility under 20% scoping is 41.2% ($=29,128/70,627$).

¹⁶ ACR values for “modality” are associated with OECD radiology equipment type as follows (ACR modality in parentheses): Computed Tomography Scanners (CTAP), Gamma Cameras (NMAP), Magnetic Resonance Imaging Units (BMRAP, MRAP), Mammography (MAP), Positron Emission Tomography Scanners (PETAP).

¹⁷ This assumption is more realistic than an alternative, which assumes that MDE units are very unevenly distributed across locations. That is, each location except one hosts exactly one unit (which needs to be accessible), with the lone remaining location hosting all other units. A sensitivity analysis is conducted for this alternative assumption in section 6a.

¹⁸ Concerning radiation therapy equipment, the average number of units per location is 5.63. The evenly distributed assumption indicates that 254 locations have 5 units, while 430 locations have 6 units. To meet the 10% scoping requirement, each location must have one accessible unit. Therefore, the required number of accessible units for all of the 684 locations is 684.

¹⁹ To meet the 20% scoping requirement, locations with 5 units must have one accessible unit, while locations with 6 units must have two accessible units. Therefore, the required number of accessible units for all the 684 locations is 1,114 ($=254*1+430*2$).

Table 5: Required Accessibility, Based on Radiology Equipment Units and Locations and Scoping Requirement

[1] Radiology Equipment Type	[2] Number of Units	[3] Number of Locations	[4] Average Number of Units Per Location	[5] Required Number of Accessible Units (10% Scoping)	[6] Required Number of Accessible Units (20% Scoping)
(a) Computed Tomography Scanners	14,750	7,138	2.07	7,138	7,138
(b) Gamma Cameras	16,010	3,287	4.87	3,287	3,287
(c) Magnetic Resonance Imaging Units	13,275	7,671	1.73	7,671	7,671
(d) Mammography	20,952	8,286	2.53	8,286	8,286
(e) Positron Emission Tomography Scanners	1,790	1,632	1.10	1,632	1,632
(f) Radiation Therapy Equipment	3,850	684	5.63	684	1,114
Total	70,627	28,698	2.46	28,698	29,128
Required Accessibility	-	-	-	40.6%	41.2%

The second group includes specialty hospitals (NAICS code : 6223), where the use of complex MDE predominates. The 20% scoping requirement applies to this group because so many of these facilities rehabilitate patients with mobility impairments. Therefore, the Department applies the 41.2% figure in Table 5 to be the required accessibility of public entities in this group.

The third group includes offices of other health practitioners, psychiatric and substance abuse hospitals, and medical laboratories (NAICS codes: 6213, 6222, and 621511), which typically use basic MDE. The 10% scoping requirement applies to this group because these entities usually do not specialize in treating conditions affecting mobility. Required accessibility is reported in panel [A] of Table 6. Due to lack of data, the Department assumes that the required accessibility of psychiatric and substance abuse hospitals and medical laboratories is the same as that of offices of other health practitioners. For entities in this group, the Department estimates required accessibility by using the 2019 BLS data on the size distribution of establishments, panel [B], and the 2019 BLS data that show diagnosing or treating healthcare

practitioners as a share of employees, panel [C]. We use these data because entities in this group typically utilize basic MDE (e.g., weight scales, examination tables, and examination chairs). However, concerning these types of MDE, the Department is not aware of any data on either the number of units in use or their distribution across locations. Therefore, due to lack of data, the Department estimates the number of units in use and their locational distribution for types of diagnostic equipment as an approximately fixed proportion of the number of health providers at a location. For example, we can reasonably assume that the distribution of exam tables or chairs is in an approximately 1:1 fixed proportion relative to diagnosing health care workers. That is, it is reasonable to assume that each diagnosing health care worker has one exam table or chair in the ambulatory office.

Since there are fixed proportions between equipment type and the number of diagnosing health care workers for entities in this group, the Department uses BLS data to estimate required accessibility under the 10% or 20% scoping requirement. The estimated required accessibility is 53.9% for offices of other health practitioners under the 10% scoping requirement.²⁰

²⁰ The estimation is performed as follows. In offices of other health practitioners, 28.5% of employees are diagnosing or treating healthcare practitioners. The Department applies this share to the upper and lower bounds of establishment size in panel [B] to approximate a lower and upper bound of healthcare practitioners at each establishment size. For example, for “5 to 9 employees,” the lower bound is 2 (i.e., rounding 28.5% of 5) and the upper bound is 3 (i.e., rounding of 28.5% of 9). The Department then computes the number of units in use and the number of units to be accessible corresponding to lower bounds, which are a set of 9 numbers, one for each establishment size, and sums up across the 9 establishment sizes the number of units in use and the number of units that must be accessible. Finally, the Department divides the total number of units that must be accessible by the total number of units in use to obtain the estimated required accessibility. Information on total number of establishments, total number of employees, and the share of total employees who are "diagnosing or treating healthcare practitioners" comes from BLS data (Occupational Employment and Wages, May 2019, https://www.bls.gov/news.release/archives/ocwage_03312020.pdf). A perma archive link was unavailable for this citation.

Table 6: Required Accessibility, for MDE in 1:1 Proportion to Health Workers at a Location

Industry Group--	
[1] 6213 Offices of Other Health Practitioners	
[A] Required Accessibility (i.e., % of units in a location to be accessible)	
10% scoping	53.9%
20% scoping	57.6%
[B] Employees per Establishment	Share of Total Number of Establishments
Fewer than 5	66.58%
5 to 9	18.87%
10 to 19	9.43%
20 to 49	3.87%
50 to 99	0.79%
100 to 249	0.37%
250 to 499	0.07%
500 to 999	0.03%
1000 or more	0.01%
Total Number of Establishments	164,708
Total Number of Employees	963,091
[C] Number of Diagnosing or Treating Healthcare Practitioners	
As Share of Total Employees	28.5%
Number	274,167

Sources: Information on employees per establishment and share of total number of establishments comes from the BLS Quarterly Census of Employment and Wages (First Quarter, 2019), <https://www.bls.gov/cew/> (last visited Sept. 13, 2022). A perma archive link was unavailable for this citation.

The fourth group includes nursing and residential care facilities (NAICS code: 623), where the use of basic MDE predominates. The 20% scoping requirement applies to this group because providers in these facilities usually rehabilitate patients with mobility impairments. Due to lack of data, the Department applies the required accessibility estimated for offices of other health practitioners under the 20% scoping requirement, which is 57.6%.

The Department solicits comments on the estimation of baseline and required accessibility for these four groups.

4. Costs

a. *Overview of Methodology*

The economic costs associated with the NPRM fall into three categories: (1) purchase costs to acquire new MDE units to meet the required accessibility, (2) leasing costs to acquire MDE units to meet the required accessibility, and (3) training costs to ensure that qualified staff are able to successfully operate accessible MDE, assist with transfers and positioning of individuals with disabilities, and carry out the program access obligation regarding existing MDE. The Department distinguishes purchase from leasing costs because some health care providers acquire complex MDE (e.g., magnetic resonance imaging (MRI) by outright purchasing them, while others lease them instead.

The Department estimates costs associated with two requirements of the NPRM: (1) the two-year requirement for acquiring examination tables and weight scales, and (2) the scoping requirement for newly acquired MDE. The Department takes a “bottom-up” approach to estimate incremental costs associated with the two-year requirement of examination tables and weight scales. The “bottom-up” approach refers to estimating incremental purchase costs by multiplying (1) the number of additional accessible MDE units needed to meet the requirement by (2) the unit purchase price differential between inaccessible and accessible MDE units. It is feasible to implement the “bottom-up” approach because this requirement only includes two types of MDE, and proxies of unit purchase price differentials can be found in a report from the U.S. Access Board.²¹ The Department make two assumptions for this estimation based on economic principles and our professional judgment:

²¹ U.S. Access Board. (2016). Final Regulatory Assessment: Medical Diagnostic Equipment Accessibility Standards (36 CFR Part 1195), <https://www.access-board.gov/files/mde/mde-assessment.pdf> [https://perma.cc/UH6K-7KN7].

- 1) Public entities purchase, as opposed to lease, examination tables and weight scales to meet this requirement because they are less expensive MDE.
- 2) Training costs are negligible because examination tables and weight scales are basic MDE.

Due to data scarcity, the Department takes a “top-down” approach, not a “bottom-up” approach, to estimate incremental purchase costs associated with the scoping requirement of newly acquired MDE. In the “top-down” approach, the Department uses data published by the U.S. Census Bureau concerning health care providers’ annual expenditures on capital equipment that they purchase. The Department estimates the amounts of annual expenditures that can be attributed to public entities’ purchasing MDE units covered by accessibility standards, and then adjusts the estimate to take into account the two-year requirement for examination tables and weight scales. The “bottom-up” approach is not feasible for the scoping requirement because that requirement includes many types of MDE, and the “bottom-up” methodology requires data on an exhaustive list of MDE types and their unit purchase or lease price differentials. Most of these data are not available. The Department assumes, as a matter of economic logic and professional judgment, that public entities seek to minimize costs and thus will not acquire new MDE units until their existing units reach the ends of their useful lives.

The Department implements the top-down approach in three steps. First, the Department uses the Census data on capital expenditures (hereafter CAPEX) for all types of MDE in 2019 to estimate what public entities spent on MDE units covered by the MDE Standards in 2019. The Department interprets this estimate of annual expenditures as the estimate of the amount that public entities spend when MDE units covered by current accessibility standards reach the ends of their useful lives and need to be replaced.²² The Department computes the overall stock value

²² The Department does not expect efforts by entities to extend the useful life of products to affect the calculations. Rational economic actors, as a rule, will use MDE until it reaches the end of its useful life, absent incentives to

of MDE units to be replaced by multiplying the estimates of annual expenditures by the estimated useful life of MDE units. For example, if the estimated useful life of an MDE unit is 10 years, the Department estimates its stock value by multiplying its annual CAPEX amount by 10.²³

Second, the Department estimates the price differential between an accessible and inaccessible MDE unit.²⁴

Third, the Department obtains an estimate of incremental purchase costs by multiplying three values: (1) the estimated stock value of MDE units in step 1, (2) the accessibility gap in column [5] of Table 4, and (3) the estimate of price differential between an accessible and inaccessible MDE unit.²⁵

The Department seeks comments on its methodology and estimates.

b. Estimation of Incremental Purchase Costs Associated with the Two-Year Requirement of Examination Tables and Weight Scales

Table 7 reports findings from the “bottom-up” approach that estimates incremental purchase costs associated with the two-year deadline to require accessible examination tables and weight scales. Overall, the costs are \$471,540 (= \$259,500 + \$212,040) in the first year (in 2016 dollars) and \$2,667,626 (= \$2,150,859 + \$516,766) in the second year. Row [a] reports that 6,708

obtain new MDE or significant value-enhancing advantages offered by the new equipment. If MDE has reached the end of its useful life, it would either fail to provide accessibility, in which case it would not satisfy the legal requirement, or it would be uneconomical to operate, because of the need for frequent repairs, or both, because the need for repairs leaves the entity without sufficient accessible MDE while repairs are undertaken.

²³ See Table 9 for the first step.

²⁴ See column [3] of Table 10 for the second step.

²⁵ See columns [4]-[10] of Table 10 for the third step.

public entities will be affected by this requirement.²⁶ The Department assumes based on our understanding of the industry and our professional judgment that examination tables and weight scales are used by all industry groups listed in Table 2, except medical and diagnostic laboratories (6215). The Department solicits comments on this assumption.

Row [b] reports accessibility gaps, which are identical with those reported in column [4] of Table 3. Row [c] reports the number of additional units needed to meet the requirement, which is the product of the values in rows [a] and [b]. Row [d] reports useful life, which is 15 years for examination tables²⁷ and 12 years for weight scales.²⁸

Rows [e] and [f] use a report from the U.S. Access Board to estimate unit purchase prices of inaccessible and accessible examination tables and weight scales, with the assumption that public entities minimize costs.²⁹ Row [g] shows that the unit purchase price differential between an accessible and inaccessible examination table is \$1,500. This unit purchase price differential

²⁶ $6,708=4,914*(1-0.04)+1,991$. As shown in Table 2, 4,914 is the number of public entities in 7 industry groups (6221, 6222, 6223, 6213, 6214, 6215, and 6219). Data from the U.S. Census Bureau, Statistics of U.S. Business, 2019 (<https://www.census.gov/programs-surveys/susb.html> [<https://perma.cc/4TXJ-YG55>]) indicate that 178,851 firms are in these 7 industry groups, while 7,192—i.e., 4%—are in medical and diagnostic laboratories. Therefore, the Department assumes that 4% of the public entities in these 7 groups are medical and diagnostic laboratories ($=7,192/178,851$). As shown in Table 2, 1,991 is the number of public entities in the 623 industry group.

²⁷ <https://ohiocea.files.wordpress.com/2011/04/medical-equipment-life-expectancy-list.pdf> [<https://perma.cc/S854-TX6T>].

²⁸ <https://www.umaryland.edu/media/umb/af/cost/service-center/AppendixF.pdf> [<https://perma.cc/5HT7-9XWE>].

²⁹ U.S. Access Board. (2016). Final Regulatory Assessment: Medical Diagnostic Equipment Accessibility Standards (36 CFR Part 1195), <https://www.access-board.gov/files/mde/mde-assessment.pdf> [<https://perma.cc/UH6K-7KN7>]. In this report, Table 4 displays manufacturer suggested retail price (MSRP) ranges of lower- and higher-cost products for four types of examination tables. Conditional on examination table type, the Department uses the highest MSRP of lower-cost products as a proxy for the price of an inaccessible examination table. The Department obtains the price estimate of an inaccessible examination table by taking the average of the four proxy prices. Likewise, conditional on examination table type, the Department uses the lowest MSRP of higher-cost products as a proxy for the price of an accessible examination table. The Department obtains the price estimate of an accessible examination table by taking the average of the four proxy prices. The Department uses the same approach to estimate unit purchase prices for inaccessible and accessible weight scales, whose MSRP ranges are reported in Tables 16, 18, and 20.

is \$589 for weight scales. The Department solicits comments on using the Access Board report to estimate purchase prices of inaccessible and accessible examination tables and weight scales.

Row [h] estimates that 173 ($=2,589/15$) units of accessible examination tables will be purchased during the first year. This estimate hinges on the assumption that the value of an inaccessible examination table uniformly depreciates across its useful life. Therefore, one fifteenth ($1/15$) of inaccessible units will reach the ends of their lives during the first year and will need to be replaced. Row [i] reports a zero residual value of the replaced inaccessible examination tables because they have reached the ends of their lives. Row [j] estimates incremental purchase costs during the first year to be \$259,500 for examination tables, which are the product of the value in row [h] and the difference in values between rows [g] and [i] [$=173*(1,500-0)$]. By the same token, the Department estimates that 360 units of accessible weight scales will be purchased during the first year, and that their incremental purchase costs are \$212,040.

Row [k] estimates that 2,416 ($=2,589-173$) units of accessible examination tables will be purchased during the second year. This is because 2,416 public entities that use examination tables still would not have at least one accessible examination table. Therefore, they would need to purchase one to meet the two-year requirement, regardless of whether their existing inaccessible examination tables reach the ends of their lives or not. Row [l] estimates the average residual value of an inaccessible examination table to be \$609.³⁰ Row [m] estimates incremental purchase costs during the second year to be \$2,151,750 for examination tables,

³⁰ Of inaccessible examination tables that will be replaced in the second year, the Department assumes their remaining useful lives are evenly distributed from 0 to 13 years. The residual value of an inaccessible examination table is defined as the product of 0.75, the purchase price of an inaccessible examination table, and the share of remaining useful life (i.e., remaining useful life divided by 15). A 0.75 multiplier is used because the Department assumes that public entities minimize costs. That is, they will either sell the replaced inaccessible examination tables or use them in another situation that will not prevent the entity from complying with the NPRM.

which are the product of the value in row [k] and the difference in values between rows [g] and [l] [=2,416*(1,500-609)]. By the same token, the Department estimates that 3,960 units of accessible weight scales will be purchased during the second year, and their incremental purchase costs are \$517,028.

Table 7: Estimation of Incremental Costs Associated with the Two-Year Requirement of Examination Tables and Weight Scales (in 2016 dollars)

	[1] Examination Table	[2] Weight Scale	[3] Sum
[a] Number of Affected Entities	6,708	6,708	
[b] Accessibility Gap (percentage points)	38.6	64.4	
[c] Number of Additional Units Needed	2,589	4,320	
[d] Useful Life (years)	15	12	
Unit Purchase Price			
[e] Inaccessible Unit	\$1,875	\$1,467	
[f] Accessible Unit	\$3,375	\$2,056	
[g] Price Differential	\$1,500	\$589	
First Year			
[h] Number of Units Purchased	173	360	
[i] Average Residual Value	0	0	
[j] Incremental Purchase Costs	\$259,500	\$212,040	\$471,540
Second Year			
[k] Number of Units Purchased	2,416	3,960	
[l] Average Per-Unit Residual Value	\$609	\$458	
[m] Incremental Purchase Costs	\$2,151,750	\$517,028	\$2,668,778

c. Estimation of Incremental Purchase Costs Associated with the Scoping Requirement of Newly Acquired MDE

As mentioned above, the Department uses the “top-down” approach to estimate incremental purchase costs associated with the 10 or 20 percent scoping requirement of newly acquired MDE and then adjusts the estimate to take into account the two-year deadline for acquiring examination tables and weight scales. First, the Department estimates the amount of

CAPEX attributable to public entities’ spending in MDE units covered by accessibility standards in 2019. The Department starts with Table 8, which reports the CAPEX data for NAICS codes associated with affected entities (i.e., column [3] of Table 2). Note that for some NAICS codes (e.g., 6222 and 6223), only aggregate CAPEX data combining two 4-digit NAICS codes are reported.

Table 8: Capital Expenditure for New Equipment, 2019

[1] NAICS Code	[2] Industry	[3] Expenditures for New Equipment (\$m)
6221	General Medical and Surgical Hospitals	27,238
6222 & 6223	Psychiatric and Substance Abuse Hospitals & Specialty Hospitals	1,120
6213 & 6212	Offices of Other Health Practitioners & Offices of Dentists	3,647
6214 & 6219	Outpatient Care Centers & Other Ambulatory Health Care Services	4,114
6215	Medical and Diagnostic Laboratories	1,409
623	Nursing and Residential Care Facilities	2,434
Total	N/A	39,962

Source: U.S. Census Bureau, 2020 Annual Capital Expenditures Survey Table 4b - Capital Expenditures for Structures and Equipment for Companies with Employees by Industry: 2019 Revised, <https://www.census.gov/data/tables/2020/econ/aces/2020-aces-summary.html> [https://perma.cc/MEM3-QK6C].

The Department performs the estimation in Table 9, in which column [3] reports expenditures for new equipment for NAICS codes associated with affected entities. These expenditures come from Table 8 with some refinements. Specifically, Table 8 reports the aggregate CAPEX amount for psychiatric and substance abuse hospitals (6222) and specialty hospitals (6223), while Table 9 breaks down this aggregate amount by allocating it to each industry group proportionally based on the latest available Census revenue data (i.e., SUSB data in 2017). Likewise, Table 8 reports the aggregate CAPEX amount for the combined category of offices of dentists (6212) and offices of other health practitioners (6213). Since 6212 providers are not public entities, Table 9 estimates the CAPEX amount for 6213 by excluding 6212 providers from the aggregate CAPEX amount. This exclusion is performed proportionally based

on the latest available Census revenue data for these two industry groups (i.e., SUSB data in 2017). Next, the Department refines the CAPEX amount for 6214 and 6219 by reducing it from \$4,114 million in Table 8 to \$3,565 million in Table 9.³¹ This reduction is justified because, as

Table 9: Estimated Affected Entities' MDE CAPEX and Average Useful Life

[1] NAICS Code	[2] Industry	[3] Expenditures for New Equipment (CAPEX, \$M)	[4] Share Pertaining to public entities	[5]=[3]*[4] Estimated PE's CAPEX	[6] % Spent on Medical Equipment	[7] % Medical CAPEX Subject to MDE Standards	[8]=[5]*[6]*[7] Annual MDE CAPEX (\$M)	[9] Estimated Average Useful Life
6221	General Medical and Surgical Hospitals	27,238	16.0%	4,359.4	78.6%	61.6%	2,109.0	6.25
6222	Psychiatric and Substance Abuse Hospitals	393	48.0%	188.7	30.6%	15.4%	8.9	11.25
6223	Specialty Hospitals	727	12.5%	90.5	65.3%	61.6%	36.4	6.25
6213	Offices of Other Health Practitioners	1,463	1.9%	27.8	35.5%	15.4%	1.5	11.25
6214 & 6219	Outpatient Care Centers and Other Ambulatory Health Care Services	3,565	4.2%	149.3	58.4%	30.8%	26.8	10.00
621511	Medical Laboratories	928	8.2%	76.4	85.4%	6.2%	4.0	11.25
621512	Diagnostic Imaging Centers	481	8.2%	39.6	92.7%	92.3%	33.9	5.00
623	Nursing and Residential Care Facilities	2,434	4.9%	118.3	28.2%	15.4%	5.1	11.25
Total or Weighted Average (by CAPEX)		37,229	13.6%	5,049.9	74.8%	57.0%	2,225.6	6.76

noted previously, in industry group 6219, the proposed regulation will affect only subgroup 621999, other miscellaneous ambulatory health services, and not ambulance services (621910) or blood and organ banks (621991), which do not provide diagnostic services. Finally, the Department breaks down the CAPEX amount of 6215 for each of its two sub-industries: medical

³¹ \$3,565 million is 86.7% (=1-13.3%) of \$4,114 million. 13.3% is chosen because according to the latest available Census revenue data (SUSB data in 2017), ambulance services (621910) and blood and organ banks (621991) account for about 13.3% of total revenues in the combined 6214 and 6219 industry groups.

laboratories (621511)³² and diagnostic imaging centers (621512).³³ This breakdown is needed because the NPRM applies to most of the MDE units in the latter sub-industry, but few of the MDE units in the former sub-industry. Medical laboratories (621511) primarily use MDE that patients do not personally access (e.g., hematology analyzers), while diagnostic imaging centers (621512) use MDE that patients need to access (e.g., ultrasound machine). This breakdown is proportional to the latest available Census revenue data for these two sub-industry groups (i.e., SUSB data in 2017).

Column [4] of Table 9 reports the estimated share of CAPEX pertaining to public entities. The estimates for the 6221, 6222, and 6223 industry groups come from BLS data on the share of total employees working at state and local government hospitals for each of the three groups (i.e., 16%, 48%, and 12.5%, respectively). For each of the remaining industry groups, the Department estimates its share of CAPEX pertaining to public entities by using the Provider of Service (POS) data offered by the Centers for Medicare & Medicaid (CMS) and performs the estimation by multiplying (1) the share of total providers participating in Medicare or Medicaid (also known as CMS recipients) by (2) the share of CMS recipients that are public entities. Concerning offices of other health practitioners (6213), POS data report that 2.06% of CMS recipients are public entities, but the share of providers participating in Medicare or Medicaid is unknown. To address this lack of data, the Department reasonably assumes based on professional judgment that offices of other health practitioners and offices of physicians have the same share of providers participating in Medicare or Medicaid. This assumption is justified

³² This sub-industry includes blood analysis laboratories, pathology, and bacteriological laboratories and similar laboratories performing analysis of body fluids and specimen.

³³ This sub-industry includes centers primarily engaged in producing images of the patient [e.g., computer tomography (CT) scans, x-rays, and ultrasound images].

because these two types of offices provide similar health services. Data from the 2021 National Electronic Health Records Survey (NEHRS) show that 92.26% of physicians participated in Medicare or Medicaid. The Department uses this share for the 6213 industry group and estimates its share of CAPEX pertaining to public entities to be 1.9% ($=92.26\%*2.06\%$).

Concerning the 6214 and 6219 industry groups, POS data reports that 5.13% of CMS recipients are public entities, and the Department uses the Census data to estimate that 81.63% of providers participate in Medicare or Medicaid. The estimated share of CAPEX pertaining to public entities is 4.2% ($=81.63\%*5.13\%$).

Concerning the 621511 and 621512 sub-industry groups, the Department uses POS data on establishments primarily engaged in laboratory activities to estimate that 8.2% of CMS recipients are public entities.³⁴ The Department reasonably assumes based on professional judgment that 100% of providers participate in Medicare or Medicaid.³⁵ The estimated share of CAPEX pertaining to PE is 8.2% ($=8.2\%*100\%$).

Concerning the 623 industry group, POS data report that 7.46% of CMS recipients are public entities. The Department estimates that 65.13% of providers participate in Medicare or Medicaid.³⁶ The estimated share of CAPEX pertaining to PE is 4.9% ($=7.46\%*65.13\%$).

³⁴ The use of POS data on establishments primarily engaged in laboratory activities is justified because, for these two sub-industry groups, the Census CAPEX data refer to establishments primarily engaged in laboratory activities and therefore exclude establishments such as hospitals or ambulatory locations where laboratory equipment is present and where laboratory activities are carried out, but where such laboratory activities are not the primary service that the entity provides.

³⁵ This assumption originates from comparison of the Census Bureau's report that there were about 18,000 establishments in 2019 in the 6215 industry group (Medical and Diagnostic Laboratories), and the POS data reporting about 33,000 establishments primarily engaged in laboratory activities. Although the Census Bureau and CMS use different methodologies to count establishments, since the number of establishments in the 6215 industry group reported by the Census Bureau is smaller than that reported by CMS, the Department reasonably assumes that 100% of providers participate in Medicare or Medicaid.

³⁶ This estimation is reasonable because, among other things, the number of unique establishments reported by POS data is approximately 65.13% of the total number of establishments reported by the Census Bureau in 2019.

Column [5] of Table 9 reports the CAPEX amount attributable to public entities. The values in this column are the products of the values reported in columns [3] and [4]. The values in this column, however, include expenditures for both medical and non-medical equipment. Since the NPRM only applies to medical equipment, the Department reports in column [6] the estimated share of the value in column [5] that can be attributed to medical equipment. This estimation uses data from the U.S. Bureau of Economic Analysis (BEA), which reports that expenditures for medical equipment accounted for 77.6% of the CAPEX amount in the 622 industry group. In the 621 and 623 industry groups, the share of expenditures for medical equipment was 65.3% and 28.2%, respectively. The estimation is performed as follows.

The 6221, 6222, and 6223 industry groups make up the 622 industry group. For these three 4-digit groups, the Department uses the overall 77.6% of CAPEX estimated as expenditures for medical equipment as their weighted average to estimate the share for each of the three groups. Findings of this estimation indicate that expenditures for medical equipment accounted for 78.6% of the CAPEX amount in the 6221 group. This estimate was 30.6% and 65.3%, respectively, for the 6222 and 6223 groups. This estimate assumes that the share in the 6222 group (psychiatric and substance abuse hospitals) is smaller than that in the 6221 (general medical and surgical hospitals) and 6223 (specialty hospitals) because psychiatric and substance abuse hospitals rely less heavily on medical equipment than hospitals in the other two groups.³⁷

³⁷ The 77.6% for the 622 industry group is the weighted average for the shares in the three 4-digit industry groups (6221, 6222, and 6223). First, the Department generates all possible triplets of unknown shares X_{6221} , X_{6222} , and X_{6223} that fall between 0.1% and 99.9%. That is, $999^3=997,002,999$ distinct triplets. Second, among all 999^3 triplets, the Department keeps only triplets that meet two inequalities (i.e., $X_{6221} > X_{6222}$ and $X_{6223} > X_{6222}$) and with a weighted average falling within a $\pm 5\%$ interval centered on 77.6%. The boundaries of this interval are 73.7% and 81.5%. The weights come from dollar amounts of expenditures for new equipment reported in column [3] of Table 6 and are therefore 0.9605, 0.0139, and 0.0256, respectively, for the 6221, 6222, and 6223 industry groups. Finally, the Department averages values across all remaining triplets and reports such averages as the estimates for each of the 6221, and 6222, and 6223 industry groups.

Likewise, the 621 industry group consists of sub-groups pertaining to public entities (i.e., 6213, 6214 & 6219, 621511, and 621512) and those not (i.e., 6211, 6212, and 6216). To estimate the shares for sub-groups pertaining to public entities, the Department uses the 65.3% reported by the BEA for the 621 industry group as the weighted average for all sub-groups. Findings of this estimation indicate that expenditures for medical equipment accounted for 35.5% of the CAPEX amount in the 6213 sub-group. This estimate was 58.4% for the 6214 and 6219 sub-groups and 76.4% and 39.6%, respectively, for the 621511 and 621512 sub-groups. This estimation hinges on the following assumptions:

- 1) The share for 6212 (offices of dentists) is greater than that for 6211 (offices of physicians) because the former is more likely than the latter to use expensive imaging equipment and electro-medical instruments (e.g., chairs, drills, and sterilization equipment).
- 2) The share for 6211 is greater than that for 6213 (offices of other health practitioners) because the latter provides health services for mental and behavioral conditions and therefore relies less heavily on medical equipment.
- 3) The share for 6215 (medical and diagnostic laboratories) is greater than that for 6212 because the former's core business involves an extensive use of expensive imaging and laboratory equipment to collect and analyze specimens.
- 4) Within the 6215 industry group, the share for 621512 (diagnostic imaging centers) is greater than that for 621511 (medical laboratories) because the former typically uses more expensive medical equipment (e.g., imaging equipment) than the latter.³⁸

Note that the Department does not make any ordinal assumption about the share for the 6214 and 6219 industry groups and therefore allows their share to have any value from 0% to 100%.

Column [7] of Table 9 reports the estimated share of medical CAPEX subject to MDE standards. This estimation is needed because MDE accessibility standards do not apply to all

³⁸ The methodology employed for this estimate is essentially the same as that employed for the 622 industry group. *See* fn. 37, *supra*.

medical equipment used by health care providers.³⁹ The Department performs the estimation using a study published by the Minnesota Department of Health (hereafter MN study) concerning all types of health care providers' large capital projects in the state.⁴⁰ The MN study makes it feasible to estimate the share of medical CAPEX subject to MDE standards because it reports that over one-third of major spending commitments (37.7%) was devoted to diagnostic imaging equipment, including magnetic resonance imaging (MRI), computed tomography (CT), and other imaging, 14.6% was for surgical equipment, with the remaining 47.7% spent on other medical equipment, including radiation oncology equipment.

Given the lack of relevant data, the Department reasonably assumes, based on our knowledge of the industry and professional judgment, that the share of medical CAPEX subject to MDE standards consists of the share devoted to diagnostic imaging equipment plus half of the share spent on other medical equipment, which is 61.6% ($=37.7\%+0.5*47.7\%$). The Department applies the 61.6% share to the 6221 group (general medical and surgical hospitals) because although this share comes from all entities analyzed in the report, it is mostly driven by hospitals that accounted for about 75% of the total medical CAPEX. The Department uses this share as the basis to assign shares to other industry groups with the following assumptions:

- 1) 6223 (specialty hospitals): The Department assumes its share is the same as the share for 6221 (general medical and surgical hospitals), which is 61.6%.
- 2) 6214 & 6219 (outpatient care centers and other ambulatory health care services): The Department reasonably assumes its share is half of the share for 6221, which is 30.8%, because patients in these ambulatory entities (which include wellness centers

³⁹ For example, both exam table and electrocardiogram machines are medical equipment. A patient may need an accessible exam table to receive an electrocardiogram evaluation, but the electrocardiogram machine intrinsically satisfies the MDE accessibility standard because no patient will lie or sit on it.

⁴⁰ Health Care Capital Expenditures in Minnesota – A Data Short Take -- Minnesota Department of Health (March 2019), <https://www.health.state.mn.us/data/economics/docs/hccapexpmn.pdf> [https://perma.cc/3KRQ-D37M]. Under Minnesota law, large capital projects are those over \$1 million.

and rehabilitation facilities) often do not need to access expensive diagnostic imaging equipment often used in hospitals.

- 3) 621511 (medical laboratories): The Department assumes its share is 10% of the share for 6221, which is 6.2%, because most of the medical equipment in these laboratories is accessed by technicians, not patients.
- 4) 621512 (diagnostic imaging centers): The Department assumes its share is 150% of the share for 6221, which is 92.3% ($=1.5*61.6\%$), because these entities' medical CAPEX is almost exclusively spent on equipment that patients need to access.
- 5) For the remaining industry groups (i.e., 6222, 6213, and 623), the Department assumes their share is 25% of the share for 6221, which is 15.4% ($=0.25*61.6\%$), because these entities typically use inexpensive medical equipment required to be accessible (e.g., exam tables and chairs), with other electro-medical equipment that is not required to be accessible, yet may be expensive (e.g., defibrillators and oxygen machines).

Column [8] of Table 9 reports public entities' annual medical CAPEX subject to MDE standards. The values in this column are the products of the values reported in columns [5], [6], and [7].

Finally, column [9] of Table 9 reports the estimated average useful life for medical equipment in each industry group. For example, this estimate is 5 years for the 621512 industry group (diagnostic imaging centers) because these entities primarily use high technology equipment with steeper depreciation curves. The estimates come from four sources: (1) the Internal Revenue Service (IRS) Publication 946 ("How to Depreciate Property"), (2) the Medicare Provider Reimbursement Manual, (3) the American Hospital Association's "Useful Lives of Depreciable Hospital Assets", and (4) discussions with the Administration for Community (ACL) in the Department of Health and Human Services and ACL's partners with direct experience on this topic. These sources report useful lives as short as five years for highly technical medical equipment, and longer useful lives for less complex equipment. For example, most sources report the useful lives of exam tables and chairs to range from 10 to 15 years.

Table 10 combines annual amounts that public entities spend in purchasing MDE (column [8] of Table 9) with accessibility gap (column [5] of Table 4) to estimate by how much public entities' CAPEX invoice will increase because accessible MDE is more expensive. Column [3] reports the estimated percentage increase in purchase price from inaccessible to accessible units for each industry group. These estimates come from multiple data sources, including price data from the December 2016 U.S. Access Board Final Regulatory Assessment,⁴¹ information from ACL staff and ACL's partners, stakeholders' public comments in previous relevant regulatory proceedings, and web sources. The Department computes these estimates by comparing the highest manufacturer suggested retail prices for lower-cost products (as a proxy for inaccessible MDE) with corresponding lowest prices for higher-cost products. This is because cost-minimizing public entities, absent other reasons to select high-quality products, will meet accessibility requirements by purchasing the cheapest compliant MDE.

⁴¹ U.S. Access Board. (2016). Final Regulatory Assessment: Medical Diagnostic Equipment Accessibility Standards (36 CFR Part 1195), <https://www.access-board.gov/files/mde/mde-assessment.pdf> [https://perma.cc/UH6K-7KN7].

Table 10: Estimation of Incremental Purchase Costs Associated with the Scoping Requirement of Newly acquired MDE

[1] NAICS Code	[2] Industry	[3] % Increase in Purchase Price	Existing MDE		[6] Adjustment Factor	[7] Adjusted MDE Stock Value (\$M)	[8] Accessibility Gap (percentage points)	Incremental Purchase Costs (\$M)	
			[4] Stock Value (\$M)	[5] % Inaccessible				[9] One-time Costs to Achieve Compliance	[10] Spreading-out Costs to Achieve Compliance
6221	General Medical and Surgical Hospitals	5%	13,181.3	82%	1.01	13,050.7	22.3	145.7	23.3
6222	Psychiatric and Substance Abuse Hospitals	50%	100.1	74%	1.08	92.7	27.7	12.9	1.1
6223	Specialty Hospitals	50%	227.5	81%	1.08	210.6	22.7	23.9	3.8
6213	Offices of Other Health Practitioners	50%	16.9	74%	1.10	15.3	27.7	2.1	0.2
6214 & 6219	Outpatient Care Centers and Other Ambulatory Health Care Services	5%	268.0	82%	1.01	266.3	22.3	3.0	0.3
621511	Medical Laboratories	50%	45.0	74%	1.08	41.7	27.7	5.8	0.5
621512	Diagnostic Imaging Centers and Other	5%	169.5	82%	1.01	167.4	22.3	1.9	0.4
623	Nursing and Residential Care Facilities	50%	57.4	72%	1.08	53.1	29.6	7.9	0.7
Total	N/A	N/A	14,065.6	N/A	N/A	13,897.4	N/A	203.1	30.3

1. % increase in purchase price refers to the price increase from inaccessible to accessible units.
2. Adjustment factor refers to the factor that adjusts the stock value of existing MDE to the stock value as if all MDE were inaccessible.
3. Adjusted MDE stock value refers to the stock value as if all MDE were inaccessible.

Column [4] reports the estimated total stock value of public entities' existing MDE, which equals the product of columns [8] and [9] in Table 9. For example, the estimated average useful life of MDE in general medical and surgical hospitals (6221) is 6.25 years (column [9] of Table 9), and public entities are estimated to replace \$2,109 million worth of it each year (column [8] of Table 9), which is a *flow* figure. To convert this flow figure into a stock value, the Department multiplies it by the 6.25-year average useful life of the equipment to obtain an estimated stock value of \$13,181.3 million ($=\$2,109 \times 6.25$). Note that the 6221 industry group accounts for 94% ($=\$13,181.3 / \$14,065.6$) of public entities' MDE stock values across all relevant NAICS groups.

Column [5] reports the share of inaccessible units in existing MDE, which equals one minus baseline accessibility reported in column [3] of Table 4. For example, in general medical and surgical hospitals (6221), 82% ($=1 - 0.183$) of existing MDE units are inaccessible.

Column [6] reports relative stock value between existing MDE and the scenario in which all MDE were inaccessible (hereafter relative stock value). For example, the relative stock value of general medical and surgical hospitals (6221) is 1.01.⁴²

Column [7] reports the adjusted MDE stock value as if all MDE were inaccessible (hereafter adjusted MDE stock value). The Department computes the adjusted MDE stock value by dividing the stock value of existing MDE in column [4] by the relative stock value in column [6]. For example, concerning the 6221 group, the adjusted MDE stock value is \$13,050.7 million ($=\$13,181.3 / 1.01$). Column [8] reports the accessibility gap, which is identical to the value reported in column [5] of Table 4.

⁴² The Department obtains the relative stock value of 1.01 by setting the value of inaccessible MDE to 1, and the value of accessible MDE to 1.05 (column [3] of Table 10). The value of existing MDE is therefore 1.01 [$=1 \times 0.78 + 1.05 \times (1 - 0.78)$].

Column [9] reports one-time incremental purchase costs to achieve compliance, which are the products of adjusted MDE stock value in column [7], percentage increase in purchase price in column [3], and accessibility gap in column [8]. For example, concerning the 6221 group, one-time incremental purchase costs are \$145.7 million ($=\$13,050.7*0.05*0.223$).

Column [10] reports “spreading-out,” incremental purchase costs to achieve compliance (hereafter spreading-out costs). These spreading-out costs are the incremental purchase costs that public entities would spend each year to achieve compliance, based on the reasonable economic assumption that public entities minimize costs and therefore generally will not purchase accessible MDE until their existing MDE reaches the end of useful life. The Department estimates spreading-out costs by dividing one-time costs in column [9] by the estimated average useful life in column [9] of Table 9. To simplify the calculation, this estimation assumes the purchase of accessible MDE is evenly distributed across MDE useful life. For example, concerning the 6221 group, spreading-out costs are \$23.3 million ($=\$145.7/6.25$).

The last row of Table 10 indicates that total spreading-out costs are \$30.3 million across all relevant NAICS groups. This suggests that incremental purchase costs spent by public entities each year to comply with the scoping requirement of newly acquired MDE would be \$30.3 million, without taking into account the requirement that public entities acquire accessible examination tables and weight scales within two years.

To avoid double counting, the Department calculates that meeting the two-year requirement would reduce the incremental purchase costs associated with the scoping

requirement by 1%,⁴³ to \$30.0 million ($=\$30.3*0.99$) per year. The Department solicits comments on this calculation.

d. Estimation of Incremental Leasing Costs Associated with the Scoping Requirement of Newly acquired MDE

Health care providers acquire complex MDE [e.g., magnetic resonance imaging (MRI)] not only by outright purchases, but also by operational leases. With an operational lease, the provider pays recurring rental fees to the lessor, who retains ownership of the equipment in use at the lessee's location and replaces it as needed.

The Department estimates incremental operational leasing costs (hereafter incremental leasing costs) by using the U.S. Bureau of Economic Analysis (BEA) Input-Output Accounts Data, especially figures for BEA code 532RL, "Rental and leasing services and lessors of

⁴³ The Department derives the 1% figure as follows. First, concerning the two-year requirement, the Department focuses on examination tables because they account for most of the incremental costs associated with this requirement. Concerning the scoping requirement, the Department focuses on hospitals (622) because they account for 93% of the spreading-out costs reported in column [10] of Table 9 [$=(19.1+1.1+3.1)/25.1$]. Second, the Department estimates the incremental number of examination tables purchased by hospitals to meet the two-year requirement. This number is 1,175 ($=3,044*0.386$). In 2019, there are 3,044 firms (public and non-public) in the 622 industry group. Their accessibility gap is 38.6 percentage points [column [5] of Table 2]. Third, the Department estimates the incremental number of examination tables purchased by hospitals to meet the scoping requirement of newly acquired MDE. This number is 113,954 ($=6,078,477*0.556*0.733*0.184*0.25$). In 2019, there are 6,078,477 employees working in the 622 industry group. Of these, 55.6% are health care practitioners & technicians. Of health care practitioners and technicians, 73.3% are diagnosing or treating practitioners. The Department assumes one examination table is needed for every four diagnosing or treating practitioners. The accessibility gap is 18.4 percentage points for the 622 industry group. Fourth, the Department obtains the figure of 1% by dividing (1) the incremental number of examination tables purchased by hospitals to meet the two-year requirement by (2) the incremental number of examination tables purchased by hospitals to meet the scoping requirement of newly acquired MDE. Due to data scarcity, the Department does not distinguish public hospitals from non-public hospitals in this estimation. This estimation uses data from three sources: (1) U.S. Census Bureau, Statistics of U.S. Businesses, 2019, <https://www.census.gov/programs-surveys/susb.html> [https://perma.cc/463M-VRGX]; (2) U.S. Small Bus. Admin., Table of Size Standards, Effective Aug 19, 2019, <https://www.ccsb.com/wp-content/uploads/2022/02/Covid-19-SBA-Table-of-Size-Standards-effective-August-19-2019.pdf> [https://perma.cc/C8RQ-8ZKX]; (3) U.S. Bureau of Labor Statistics, Occupational Employment and Wages - May 2019 (Mar. 31, 2020), https://www.bls.gov/news.release/archives/ocwage_03312020.pdf. A perma archive link was unavailable for this citation.

intangible assets.”⁴⁴ The highest level of detail of the BEA data is at the 3-digit NAICS code. In 2019, 532RL expenses were \$5,765 million for hospitals (NAICS: 622), \$5,844 million for ambulatory health care service (621), and \$829 million for nursing and residential care facilities (623). The Department assumes that all these expenses were for operational leases, not capital leases, although some portion of these expenses might be capital lease expenses. The Department solicits comments on this assumption.

The Department estimates incremental leasing expenses for hospitals (622) and diagnostic imaging centers (621512), but not the 623 group or other sub-groups under 621. This is because operational leases are common in 622 and 621512 due to the prevalence of high-value diagnostic imaging equipment.⁴⁵

The Department uses the top-down approach to estimate incremental leasing expenses for hospitals (622). Across all types of hospitals (i.e., 6221, 6222, and 6223 combined), public entities’ annual MDE CAPEX are \$2,154.3 million ($=\$2,109+8.9+\36.4 , column [8] of Table 9), which accounts for 7.6% of the \$28,358 million in total CAPEX for all hospitals ($=\$27,238+\$1,120$, column [3] of Table 8). The Department estimates public entities’ annual MDE leasing expenses in hospitals to be \$438 million ($=\$5,765*7.6\%$).

The Department estimates the accessibility gap in hospitals to be 22.4 percentage points. This estimation is performed by weighting the accessibility gaps across 6221, 6222, and 6223 (column [8] of Table 10). The weight is the adjusted MDE stock value in column [7] of Table 10. The weighted accessibility gap (22.4 percentage points) is very close to the accessibility gap for general medical and surgical hospitals (6221), 22.3 percentage points, because they account

⁴⁴ U.S. Department of Commerce, Bureau of Economic Analysis, Input-Output Accounts Data, Use Tables 71 Industries (2019), <https://www.bea.gov/industry/input-output-accounts-data> [https://perma.cc/P9U-6J3D].

⁴⁵ Operational leases are much less common for other MDE, such as examination tables and weight scales.

for 98% of the public entities' adjusted MDE stock value in hospitals (622). Likewise, the Department estimates the percentage increase in lease price from inaccessible to accessible MDE to be 6.02%. This estimation is performed by weighting the percentage increase across 6221, 6222, and 6223 (column [3] of Table 10). The weight is the adjusted MDE stock value in column [7] of Table 10.

The Department estimates that \$98.1 million ($=\$438*22.4$ percentage points) is the amount of leases currently for inaccessible MDE that will need to be replaced by more expensive leases of accessible MDE to achieve compliance. Based on the 6.02% increase in lease price from inaccessible to accessible MDE, the Department estimates that the MDE accessibility requirements will impose incremental leasing costs of \$5.91 million ($=\$98.1*6.02\%$) for hospitals (622).

The Department estimates incremental leasing costs for the 621512 group to be \$0.084 million ($=\$5.91*1.42\%$). The 1.42% figure is the ratio between incremental, spreading-out purchase costs for 621512 and the corresponding costs for 622 [$=0.4/(23.3+1.1+3.8)$] (column [10] of Table 10).

Overall, incremental leasing costs for the 622 and 621512 groups are \$5.994 million ($=\$5.91+\0.084). The Department makes the reasonable economic assumption that public entities will incur these incremental leasing expenses as contracts with lessors come up for renewal and that the length of the contracts closely matches the useful life of the MDE. Since the 6221 sub-group accounts for most of the leasing expenses in the 622 and 621512 groups, and the average useful life of MDE in this sub-group is 6.25 years (column [9] of Table 9), the Department uses a six-year contract length for operational leases. Annual incremental leasing costs are thus one-sixth of \$5.994 million, or \$1.0 million per year.

e. Estimation of Incremental Training Costs

The NPRM requires that staff be able to successfully operate accessible MDE, assist with transfers and positioning of individuals with disabilities, and implement the accessibility obligation regarding existing MDE. Public entities may achieve these requirements by training relevant staff, but not all staff. Relevant staff includes workers who operate MDE and thus interact with patients, as well as those creating and implementing policies and procedures to achieve compliance.

The Department estimates incremental training costs associated with the NPRM by connecting training cost estimates with estimates of incremental purchase costs and by closely following the approach that HHS recently adopted in its proposed rule to implement Section 504 of the Rehabilitation Act of 1973⁴⁶ with a few minor changes as described below. This estimation uses data from the U.S. Bureau of Labor Statistics (BLS).⁴⁷

The Department assumes that 75% of employees of health care providers would receive training, and that this training would last one hour.⁴⁸ For all the NAICS codes listed in Table 9, the Department counts employees in four of the five employment codes considered by the Section 504 NPRM.⁴⁹ That is,

⁴⁶ 87 FR 47824-920 (August 4, 2022).

⁴⁷ U.S. Bureau of Labor Statistics, Occupational Employment and Wages – May 2019, https://www.bls.gov/news.release/archives/ocwage_03312020.pdf. A perma archive link was unavailable for this citation.

⁴⁸ Manufacturers and sellers of the equipment would have a strong incentive to ensure that health care providers know how to operate the equipment properly, and the health care providers would have a strong incentive to acquire that expertise. Some equipment, however—particularly less complex items—would likely require little or no training to operate, and some personnel will likely have the technical expertise to forgo formal training. Based on this assessment, we conclude that 75% is a reasonable estimate of the proportion of employees who would receive training and that the training would last on average 1 hour.

⁴⁹ The Department excludes Office and Administrative Support Occupations (43-0000) because the Department does not expect these employees to be extensively involved in interacting with patients and/or creating and implementing MDE accessibility policies.

- 1) Healthcare Diagnosing or Treating Practitioners (29-1000)
- 2) Health Technologists and Technicians (29-2000)
- 3) Healthcare Support Occupations (31-1000)
- 4) Medical and Health Services Managers (19-9111)⁵⁰

Concerning hospitals (622), the Department uses BLS data on the number of employees at public entities and their corresponding median wages. The Department multiplies the number of employees by the accessibility gap from column [5] of Table 4. This captures the number of employees covered by the NPRM and the incremental effort required over the levels they may already have in place for their existing MDE (some of which is accessible).

Concerning the remaining NAICS codes, the Department multiplies employment counts for each occupation and NAICS code by the corresponding share pertaining to public entities (column [4] of Table 9) and the accessibility gap from column [5] of Table 4.

The Department monetizes expenses by multiplying the hours associated with employment counts by the corresponding fully loaded wage, which the Department sets equal to two times the median hourly wage. The estimated incremental training costs are \$6.3 million in the first year (in 2019 dollars).

In subsequent years, the Department expects that the NPRM would result in incremental training costs associated with ongoing training, such as annual refresher training for returning employees and training for new employees. The Department estimates these costs to be one third of the first-year costs, which are \$2.1 million per year (in 2019 dollars).

⁵⁰ The Department includes Medical and Health Services Managers (19-9111) because they carry out program access obligations with respect to existing MDE.

f. Summary of Incremental Costs

The estimation so far uses 2016 dollars for incremental costs associated with the requirement to acquire accessible examination tables and weight scales within two years and 2019 dollars for incremental costs associated with the scoping requirement for newly acquired MDE. According to the U.S. Bureau of Economic Analysis (BEA), \$1 in 2016 corresponds to \$1.203 in 2022, and \$1 in 2019 corresponds to \$1.133 in 2022.⁵¹ Since 2022 is the latest full calendar year for which GDP inflator data are available, Table 11 summarizes estimates of incremental costs for ten years in 2022 dollars.

Undiscounted total incremental costs in year 1 is \$42.9 million. In year 2, the costs are \$40.8 million. In subsequent years, the costs are \$37.5 million per year. These annual costs are substantially lower than \$200 million, a threshold for a significant regulatory action. The decline in costs from year 1 to 2 is \$2.1 million. This decline is due to the reduction in training costs associated with the scoping requirement of newly acquired MDE outweigh the increase in purchase costs associated with the two-year requirement of examination tables and weight scales.

Over a 10-year period, undiscounted total incremental costs are \$384.0 million. The Department estimates that the proposed rule would result in annualized costs over a 10-year period of \$38.5 million or \$38.7 million, corresponding to a 3 or 7 percent discount rate.

⁵¹ U.S. Bureau of Economic Analysis. National Income and Product Accounts. Table 1.1.9. Implicit Price Deflators for Gross Domestic Product. Retrieved April 28, 2023, from <https://www.bea.gov/data/prices-inflation/gdp-price-deflator> [https://perma.cc/DM58-JE7Y].

Table 11: Summary of Incremental Costs for 10 Years (\$ million in 2022 dollars)

Undiscounted Costs, by Year												Annualized Costs	
	1	2	3	4	5	6	7	8	9	10	Total	3% Discount Rate	7% Discount Rate
1. Two-Year Requirement of Examination Tables and Weight Scales													
Purchase Costs ⁵²	0.6	3.2									3.8		
2. Scoping Requirement of Newly acquired MDE													
Purchase Costs ⁵³	\$34.0	\$34.0	\$34.0	\$34.0	\$34.0	\$34.0	\$34.0	\$34.0	\$34.0	\$34.0	\$340.3		
Leasing Costs ⁵⁴	\$1.1	\$1.1	\$1.1	\$1.1	\$1.1	\$1.1	\$1.1	\$1.1	\$1.1	\$1.1	\$11.3		
Training costs ⁵⁵	\$7.1	\$2.4	\$2.4	\$2.4	\$2.4	\$2.4	\$2.4	\$2.4	\$2.4	\$2.4	\$28.5		
Total Incremental Costs	\$42.9	\$40.8	\$37.5	\$37.5	\$37.5	\$37.5	\$37.5	\$37.5	\$37.5	\$37.5	\$384.0	\$38.5	\$38.7

Source: The Department's calculations

⁵² Purchase costs in the first two years come from Table 7 (in 2016 dollars), with an inflation adjustment of 1.203 to 2022 dollars (see section 4f for the details).

⁵³ Purchase costs per year are obtained by multiplying three figures: (1) spreading-out costs in column [10] of Table 10 (i.e., \$30.3 million in 2019 dollars), (2) 99% (=1-1%), where 1% is the adjustment factor used to avoid double counting due to the two-year requirement of examination tables and weight scales and scoping requirements (see section 4c for the details), and an inflation adjustment of 1.133 to 2022 dollars (see section 4f for the details).

⁵⁴ Leasing costs per year come from section 4d (i.e., \$1 million per year in 2019 dollars), with an inflation adjustment of 1.133 to 2022 dollars.

⁵⁵ Training costs per year come from section 4e (i.e., \$6.3 million in the first year and \$2.1 million in subsequent years in 2019 dollars), with an inflation adjustment of 1.133 to 2022 dollars.

5. Benefits

Based on its analysis of the regulatory impact of the proposed rule, the Department has concluded that the benefits of the proposed rule justify its costs. The Department invites comments on the benefit and cost estimates, especially any additional data commentors may offer on the impacts that result when public entities provide accessible MDE.

After reviewing the literature on the experiences of individuals with disabilities in utilizing health care,⁵⁶ the Department anticipates that the proposed rule will provide three primary benefits to people with mobility disabilities:

- 1) A reduction in inequitable treatment by health care professionals (i.e., individuals with disabilities would be less likely to receive poor or inadequate care as a result of their disabilities, compared with similarly situated individuals without disabilities)
- 2) Fewer violations of dignity that individuals with disabilities suffer when they encounter inaccessible MDE (i.e., individuals with disabilities would be less likely to feel shame and humiliation during visits to health care providers)
- 3) An improvement in social standing and feelings of self-worth for individuals with disabilities as a result of their increased ability to access appropriate health care (i.e.,

⁵⁶ The literature review includes multiple peer-reviewed articles: Heather Becker et al., *Reproductive Health Care Experiences of Women with Physical Disabilities: A Qualitative Study*, 78 Archives of Physical Med. & Rehab. S-26 (1997); M. Drainoni et al., *Cross-Disability Experiences of Barriers to Health-Care Access*, 17 J. of Disability Pol'y Stud.101 (2006); M. Story et al., *Perspectives of Patients with Disabilities on the Accessibility of Medical Equipment: Examination Tables, Imaging Equipment, Medical Chairs, and Weight Scales*, 2 Disability &Health J. 169 (2009); Lisa I. Iezzoni, *Eliminating Health and Health Care Disparities Among the Growing Population of People with Disabilities*, 30 Health Aff.1947 (2011); M.T. Neri & T. Kroll, *Understanding the Consequences of Access Barriers to Health Care: Experiences of Adults with Disabilities*, 25 Disability & Rehab.85 (2003); M.D. Stillman et al., *Healthcare Utilization and Associated Barriers Experienced by Wheelchair Users: A Pilot Study*, 10 Disability & Health J. 502 (2017).

the broader message sent by accessible MDE to individuals with disabilities about their standing and membership in the society).

a. Estimation of Incremental Benefits

The Department expects that the proposed rule will incentivize individuals with mobility disabilities to seek health care (or reduce disincentives to seek health care) and reduce cases where providers fail to treat patients with mobility disabilities at all, or at a lower quality of care, compared with similarly situated patients without disabilities. This increase in incentive would benefit individuals with mobility disabilities, with fewer instances of delayed or unrendered care that in turn would lower mortality and morbidity risks.⁵⁷

⁵⁷ National Council on Disability, *Enforceable Accessible Medical Equipment Standards* (May 20, 2021), available at [NCD Medical Equipment Report 508.pdf](#) [A perma archive link is unavailable for this link], states that:

"Without widespread availability of height adjustable examination tables, accessible mammography equipment, accessible weight scales and lift equipment to facilitate transfers, among other accessible medical and diagnostic equipment, people with mobility disabilities will remain less likely to receive recommended preventive health care services—like cervical cancer screening; colorectal cancer screening; obesity screening; and breast cancer screening. Moreover, the absence of such equipment will continue to perpetuate health care disparities between people with physical disabilities and their nondisabled counterparts." (P. 9).

The Report observes in addition that:

"Adults with physical disabilities are at higher risk of foregoing or delaying necessary care and having unmet medical, dental, and prescription needs compared to adults without disabilities. Lack of timely access to primary and preventive care can result in the development of chronic and secondary conditions as well as the exacerbation of the original disabling condition itself, resulting in poorer health outcomes." (P. 13).

With regard to women, the Report notes their complaints that:

"[T]he inability to transfer to fixed height examination tables limits their access to preventative cancer screenings, like Pap tests:

Tables are so high. So, I couldn't do it [transfer to a fixed height exam table]. I told my doctor I couldn't do it, and he was like okay and that was that. And so I went like 5 years without a Pap smear or a mammogram . . . He tried to do it sitting in my wheelchair, but I said no." (*Woman with a physical disability*). " (P. 17).

The Department's first step in estimating incremental benefits is to quantify the number of beneficiaries (i.e., the number of individuals with mobility disabilities who might benefit from the proposed rule requiring public entities to offer accessible MDE). The Department estimates the number of beneficiaries to be 1.3 million people with mobility disabilities, which are the product of 6% and 21.5 million.⁵⁸ The figure of 21.5 million, which comes from the 2020 National Health Interview Survey (NHIS)⁵⁹ and 2019 American Community Survey (ACS),⁶⁰ refers to the total number of Americans with serious mobility disabilities. This total number consists of five sub-groups:

- 1) 4.6 million adults who use a wheelchair or a scooter for getting around
- 2) 11.3 million adults who use a cane or walker for getting around
- 3) 1 million adults who use other equipment or receive help for getting around
- 4) 4.2 million adults who have a lot of difficulty walking, climbing steps, or cannot do these things at all
- 5) 0.3 million children who have serious difficulty walking or climbing stairs.

The share of 6% comes from Table 2 and the Department's professional judgment and refers to the share of people with mobility disabilities receiving health care from public entities. Table 2 indicates that public entities account for 3% of the firms in relevant industry groups.⁶¹ The Department doubles that share, equal to 6% ($=3\%*2$), to be the share of people with mobility disabilities potentially receiving health care from public entities. This could be attributed to

⁵⁸ Due to the wording of survey questions in NHIS and ACS, the Department could not rule out the possibility that this number includes people with temporary disabilities. Still, people with both temporary and permanent disabilities will benefit from accessible MDE, and therefore both groups benefit from the proposed rule.

⁵⁹ Centers for Disease Control & Prevention. 2020. National Health Interview Survey, <https://www.cdc.gov/nchs/nhis/2020nhis.htm> [https://perma.cc/U56J-FD3D].

⁶⁰ Young, N. A. (2021). Childhood Disability in the United States: 2019. *American Community Survey Briefs ACSBR-006*.

⁶¹ Table 2 shows that 6,905 public entities will be affected by the NPRM, and the total number of firms in the relevant industry groups is 216,856 ($=2,484+428+301+141,853+23,642+3,132+4,060+40,956$). This indicates that public entities account for 3% ($=6,905/216,856$) of the firms in the relevant industry groups.

several factors. For example, public hospitals are usually much larger and can accommodate more patients than private hospitals.⁶² In addition, studies suggest that public hospitals treat a higher proportion of low-income patients,⁶³ and people with disabilities represent a disproportionate share of that group.⁶⁴ The Department solicits comments on this estimation.

Quantifying benefits from increased access to mammography machines.

We conclude that an upper bound estimate for the proposed rule’s benefits associated with accessible mammography machines is \$15.34 million per year at a 3 percent discount rate (in 2022 dollars) or \$9.5 million at a 7 percent discount rate (in 2022 dollars). We focus on estimating benefits from accessible mammography machines because breast cancer is the most common cancer by location (the second-most common is prostate cancer),⁶⁵ and mammography machines, which are subject to the MDE Standards, are vital for early breast cancer detection.⁶⁶ Quantifying the benefits for mammography machines provides a way to quantify the benefits of accessible MDE for the prevention and treatment of all cancer diagnoses.

A higher percentage of accessible mammography machines will likely result in more women with mobility disabilities participating in suggested periodic screening, and thus shrink the gap in mammography rates (e.g., percentage of eligible women who get screened) between

⁶² Public vs. Private Hospitals – Your Options in the U.S., <https://www.immihelp.com/public-vs-private-hospitals-your-options-in-the-us/#:~:text=Public%20hospitals%20are%20not%2Dfor,employ%20more%20doctors%20and%20nurses>. [https://perma.cc/R49Y-B3PE].

⁶³ Frazee, T., Elixhauser, A., Holmquist, L., & Johann, J. (2010, September). Public Hospitals in the United States, 2008. *Agency for Healthcare Research and Quality Statistical Brief #95*. Retrieved from <https://hcup-us.ahrq.gov/reports/statbriefs/sb95.pdf> [https://perma.cc/XW6F-8TYZ].

⁶⁴ Houteenville, A., Bach, S., & Paul, S. (2023). *Annual Report on People with Disabilities in America: 2023*. Durham, NH: University of New Hampshire, Institute on Disability.

⁶⁵ R.L. Siegel et al., *Cancer statistics, 2022*, 72 CA: A Cancer J. for Clinicians 7 (2022).

⁶⁶ There are types of diagnostic equipment to which the MDE Standards do not apply. For instance, an electrocardiogram machine is not a piece of diagnostic equipment to which a patient needs to transfer.

women with disabilities and women without disabilities.⁶⁷ Higher screening rates result in fewer deaths and fewer cases of non-fatal advanced breast cancer, as quantified in terms of occurrences per 100,000 women screened each year.⁶⁸ Avoiding developing advanced breast cancer increases quality of life with the estimate that a year lived with advanced (malignant) breast cancer comes at 0.0156 points (out of 1.0) lower quality of life, as measured using the EQ-5D.⁶⁹

Breast cancer screenings are recommended when women turn 50 years old, and it is prudent to repeat them (biannually) up to 75 years of age. NHIS data for 2020 reports that there are about 5.9 million women in the 50 to 74 age range with a serious mobility disability.⁷⁰

In order to quantify (in dollar terms) the benefits from increased access to mammography machines, we rely on HHS's Office of the Assistant Secretary for Planning and Evaluation (ASPE), which uses a value of \$590,000 at a 3 percent discount rate (in 2022 dollars) or \$980,000 at a 7 percent discount rate (in 2022 dollars) per Quality Adjusted Life Year (QALY) in regulatory impact analyses.⁷¹

⁶⁷ Lisa Iezzoni et al., *Trends in Mammography over Time for Women with and without Chronic Disability*, 24 J. of Women's Health 593 (2015).

⁶⁸ Stephen Duffy et al., *Mammography Screening Reduces Rates of Advanced and Fatal Breast Cancers: Results in 549,091 Women*, 126 Cancer 2971 (2020).

⁶⁹ Patrick Sullivan et al., *Preference-Based EQ-5D Index Scores for Chronic Conditions in the United States*, 26 Med. Decision Making 410 (2006).

⁷⁰ U.S. Dep't of Health & Hum. Servs., Ctrs. for Disease Control & Prevention, 2020 National Health Interview Survey, <https://www.cdc.gov/nchs/nhis/2020nhis.htm> [https://perma.cc/562N-LHBN].

⁷¹ U.S. Dep't of Health & Hum. Servs., Office of the Assistant Secretary for Planning and Evaluation. Appendix D: Updating Value per Statistical Life (VSL) Estimates for Inflation and changes in Real Income (2021). Retrieved October 17, 2023, from <https://aspe.hhs.gov/reports/updating-vsl-estimates> [https://perma.cc/S26Y-XFY5]. Appendix D is also used to estimate QALY loss from dying within 10 years since diagnosis. In particular, the 4.09 figure in row [8] (at a 3 percent discount rate) or 1.50 figure in row [10] (at a 7 percent discount rate) is the difference between the ASPE QALYs at a 3 percent discount rate (19.6) or at a 7 percent discount rate (11.8) and the (lower) average QALY a person would enjoy if the person were to live five fewer years. The Department averaged across all possible years the earlier death may occur and picked five fewer years because it is the midpoint between 0 and 10.

Note that the \$590,000 (at a 3 percent discount rate) or \$980,000 (at a 7 percent discount rate) per 1 QALY figure refers to an *average* U.S. person — of average disability (as well as average gender and other demographic traits). Consistent with ASPE guidance, we use the number of life-years achieved per life saved for an average 40-year-old person and do not vary the level of utility achieved based on the level of disability of the life saved.

Table 12 illustrates the steps leading to our conclusion that the proposed rule’s benefits associated with accessible mammography machines are \$15.3 million per year at a 3 percent discount rate (in 2022 dollars) and \$9.5 million at a 7 percent discount rate (in 2022 dollars) under a scenario where the proposed rules eliminate the gap in mammography rates between women with disabilities and women without disabilities.

As a baseline, participation in breast cancer screenings for women with a mobility disability remains lower than participation for women without disabilities (fewer screenings per year, as a percentage of relevant population). In our benefit estimate, due to accessible mammography machines, the participation of women with a mobility disability in breast cancer screenings matches that of women without a disability, meaning that on any given year more screenings will occur.

As the flows of yearly screenings increase, each year many cases of negative outcomes (early deaths per year) are avoided. We attach dollar values to these yearly flows of avoided negative outcomes (via dollar value of QALY). For avoided non-fatal breast cancer, the yearly flows of benefits would (if they were quantifiable) come from having a higher quality of life. For avoided early (within 10 years of diagnosis) deaths, we estimate the average loss of QALYs across deaths occurring five years (midpoint between 0 and 10) after diagnosis, where diagnosis

can occur in any of the remaining years from 40 onward. We then use such average value to monetize the yearly benefits flowing from avoided early death (i.e., more years lived).

Having provided a conceptual overview of our methodology, we proceed as follows. We start from the number of women with mobility disabilities who are eligible for breast cancer screenings and have not yet been diagnosed with breast cancer (row 1). These numbers represent the flows of potential beneficiaries.

We use data from a 2015 academic paper on differences in mammography rates between women with disabilities and women without disabilities to estimate how many more screenings would occur if the differences in mammography rates became zero (rows [2] to [5]). Iezzoni et al. (2015) reports mammography rates, defined as “mammogram within the prior 2 years for women who did not have a history of breast cancer.” In other words, in each survey year, the mammography rate is the percentage of surveyed women who responded affirmatively to the question about whether they had a mammogram within the prior two years; we use rates from the most recent year in the survey.

We use data from a 2020 academic paper to translate incremental screenings in row 5 into gains in terms of life saved and better health outcomes (row [6]). Duffy et al. (2020) surveyed women over several years and, for each year of observation, classified surveyed women “according to each woman’s current participation in screening. This was defined as follows: if a woman participated in her most recent scheduled screening mammogram, she was classified as participating in screening. Those not participating were classified as nonparticipants. This classification was made annually on the last day of each year.” Having split the surveyed women into two groups, the paper compares death rates from breast cancer between groups, where death rates are defined as the average yearly number of deaths per

100,000 women in each group. Among women participating in screening, there were 28.6 deaths per year per 100,000 women, 17.3 fewer than among those who did not participate in screening (45.9 deaths, see Table 2 in Duffy et al., 2020).

We monetize these benefits relying on HHS's approach to valuing mortality risk reductions in Regulatory Impact Analyses (rows [7] to [10]) at a 3 or 7 percent discount rate: row [11] and row [14] break down the total net benefits in row [15] and [16] by the source, and indicate the simple formula used for their quantification.

Table 12: Estimated Benefits from Increased Access to Mammography

Row	Description	Use wheelchair or scooter for getting around	Use other equipment or need help for getting around	No equipment/help for getting around but "Cannot do at all" or "Serious difficulty" walking and climbing steps	Total
[1]	Women aged 50–74 with mobility disability AND who were never told they had breast cancer (million), NHIS 2020	1.197	3.023	1.687	5906
[2]	% of women with mobility difficulty who had a mammogram in the prior 2 years*	60.4%	66.1%	72.1%	-
[3]	% of women with no disability who had a mammogram in the prior 2 years*	77.3%	77.3%	77.3%	-
[4]	Difference: row 3 – row 2	16.9%	11.2%	5.2%	-
[5]	Additional women participating in screening (million) =row 1 * row 4	0.202	0.339	0.088	0.629
[6]	Yearly reduction in deaths within 10 years since diagnosis** = 17.3 * 10 * row 5	35	59	19	109
[7]	ASPE: value of 1 QALY in 2022 dollars at 3% discount rate	\$590,000	\$590,000	\$590,000	-
[8]	Estimated QALY loss from dying within 10 years since diagnosis, based on ASPE (2021) at 3% discount rate***	4.09	4.09	4.09	-
[9]	ASPE: value of 1 QALY in 2022 dollars at 7% discount rate	\$980,000	\$980,000	\$980,000	-
[10]	Estimated QALY loss from dying within 10 years since diagnosis, based on ASPE (2021) at 7%	1.5	1.5	1.5	-
[11]	Estimated yearly benefits (millions of 2022 dollars) from fewer deaths, at 3% discount rate = row 6 * row 7 * row 8	\$84.5	\$141.5	\$36.7	\$262.7
[12]	Estimated yearly benefits (millions of 2022 dollars) from fewer deaths, at 7% discount rate = row 6 * row 9 * row 10	\$51.5	\$86.7	\$27.9	\$166.1
[13]	Estimated yearly costs (millions of 2022 dollars) of follow-up testing (mostly false positives) = row 5 * 10% * average (\$161, \$304)/2	\$2.4	\$3.9	\$1.0	\$7.3
[14]	Number of beneficiaries as % of population	6%	6%	6%	-
[15]	Total annual net benefits, at 3% discount rate (=row [11] - row [13]) * row [14]	\$4.9	\$8.3	\$2.1	\$15.3
[16]	Total annual net benefits, at 7% discount rate (=row [12] - row [13]) * row [14]	\$2.9	\$5.0	\$1.6	\$9.5

* Data for survey year 2010 from Iezzoni et al. (2015), Table 2: Mammogram Rates.

** Duffy et al. (2020) Table 2 which reports 17.3 fewer deaths per 100,000 women participating in screening.

***Footnote 71 explains how this was calculated.

In a recent mammography-related regulatory analysis, the Food and Drug Administration estimated that roughly 10 percent of screening mammograms yield positive results (mostly false positives). Follow-up testing—ultrasound or needle core breast biopsy with pathology—generates costs ranging from \$161 to \$304.⁷² In Table 12 these estimated costs are subtracted from the benefits estimates associated with the same more widespread mammography attributed to the proposed rule. Note that these costs are proportional to false-positive results of mammograms; since women participating in screening take the test once every two years, the number of additional women participating in screening needs to be divided by two to count how many additional mammograms there will be each year (with 10% of them assumed to yield a false positive).

The Department's \$15.3 million/year (at a 3 percent discount rate) or \$9.5 million/year (at a 7 percent discount rate) estimate assumes that accessible MDE is the only reason behind the observed gap in mammography rates, and that the erasing of the gap can be fully attributed to the proposed rule. The Department recognizes that this scenario is unlikely and that factors other than MDE accessibility explain the observed gap, including inability to pay co-pays, inability to arrange transportation to the health provider's location, etc. The \$15.3 million/year (at a 3 percent discount rate) or \$9.5million/year (at a 7 percent discount rate) estimate is an upper bound.

On the other hand, a lower bound estimate for the benefits is \$0 per year, or no effect. While the lower bound also appears somewhat extreme, the Department acknowledges that a

⁷² U.S. Food and Drug Administration, *Mammography Quality Standards Act; Amendments to Part 900 Regulations*, Docket No. FDA-2013-N-0134, <https://www.fda.gov/media/166062/download> [https://perma.cc/AFL9-QQBD]. Page 17 of this FDA report provides costs ranging from \$144.14 to \$271.90 (in 2020 dollars). The Department converts this range to 2022 dollars by using an inflation adjustment of 1.118 (see section 4f for the details). The costs therefore range from \$161 to \$304 (in 2022 dollars).

reasonable base estimate should not be the midpoint between the lower and upper bound because high values are less likely than lower values. The Department expects a reasonable base estimate to be closer to the lower bound than the upper bound. The Department concludes that a reasonable estimate could be in the range of 5 to 10%, meaning that 90% to 95% of the gap is not due to MDE accessibility. This conclusion yields benefits between \$0.8 million and \$1.5 million per year at a 3 percent discount rate (i.e., 5% and 10% of \$15.3 million/year in Table 12) or between \$0.5 million and \$1 million per year at a 7 percent discount rate (i.e., 5% and 10% of \$9.5 million in Table 12).

In addition, newly diagnosed female breast cancer cases are a small portion of all new cancer cases, with one source reporting that female breast cancer cases represent 15% of the 1.918 million newly diagnosed cancer cases in the U.S.⁷³

Carrying out diagnosis-specific base estimates would likely be overly burdensome as available statistics list 46 types of cancers (e.g., breast, stomach, Hodgkin's lymphoma, etc.). The Department approximates a base estimate for benefits for all cancer diagnoses by dividing our base estimate range by 15% (i.e., multiplying them by 6.66). This admittedly rough approach produces a ballpark range for total benefits between \$5.1 and \$10.2 million at a 3 percent discount rate and between \$3.2 and \$6.4 million at a 7 percent discount rate (in 2022 dollars). The Department uses the midpoint of the benefit range as the base estimate. Therefore, the base estimate for benefits is \$7.7 million at a 3 percent discount rate or \$4.8 million at a 7 percent discount rate (in 2022 dollars). Of course, accessible MDE will have positive effects on the prevention and treatment of non-cancer conditions as well. The Department does not attempt to quantify such benefits here.

⁷³ R.L. Siegel et al., *Cancer statistics, 2022*, 72 CA: A Cancer J. for Clinicians 7 (2022).

While the Department is aware of other health care benefits beyond those addressed in dollar amounts in this PRIA, it has been unable to quantify those health care benefits here. For example, other diseases and health complications beyond cancer can be diagnosed and treated shortly after their first occurrence when appropriate accessible exam tables, weight scales, imaging equipment, and other MDE are used by recipients. Additionally, accessible weight scales allow for accurate anesthesia measurements, a requirement for surgeries that require general anesthesia.

The Department solicits comments on the estimation of incremental benefits.

b. Discussion of Unquantified Benefits

This rulemaking is promulgated under the ADA—a Federal civil rights law. Congress stated that a purpose of the ADA is “to provide a clear and comprehensive national mandate for the elimination of discrimination against individuals with disabilities.” 42 U.S.C. 12101(b). This proposed rule is intended to further the ADA’s broad purpose by helping to eliminate discrimination against people with disabilities seeking medical services from public entities. Access to such services is critical to furthering the Nation’s goal, as articulated in the ADA, to ensure “equality of opportunity, full participation, independent living, and economic self-sufficiency. . .” for people with disabilities. 42 U.S.C. 12101. This rulemaking thus implicates benefits like dignity and independence for people with disabilities. Such benefits can be difficult or impossible to quantify yet provide tremendous benefit to society. The January 20, 2021, Presidential Memorandum titled “Modernizing Regulatory Review”⁷⁴ states that the regulatory review process should fully account for regulatory benefits that are difficult or impossible to

⁷⁴ Presidential Memorandum, Modernizing Regulatory Review, January 20, 2021 *available at* <https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/20/modernizing-regulatory-review/> [https://perma.cc/FT8D-3PAY].

quantify. Many of the benefits in this rulemaking are exactly the type of benefits contemplated by the January 20, 2021, Presidential Memorandum on “Modernizing Regulatory Review.” These benefits are central to this proposed rule’s potential impact as they include concepts inherent to any civil rights law—like equality—that reverberate throughout society and personally affect individuals with disabilities.

There are many benefits of this proposed rule—like equality and dignity—that have not been monetized in this PRIA due to limited availability of data and the inherent difficulty of quantifying values that are emotional and abstract but have tangible impact on individuals. Those benefits are discussed here qualitatively. The Department requests comments and data that could assist in further quantifying these important benefits of the proposed rule and the impact it will have on the everyday lives of people with disabilities, so that the Department can present these benefits at the same level of detail as the largely monetized costs of the proposed rule.

i. Reducing violations of individual dignity.

It may be impossible to put a price on the feelings of embarrassment, frustration, and helplessness that individuals with disabilities feel when they are denied basic medical care because a public entity providing health care does not have accessible MDE or is unsure how to use it. Even in instances where individuals with mobility disabilities are able to transfer to non-adjustable exam tables or chairs because multiple public entity employees are able to physically move them, such arrangements deny the individual autonomy and increase the possibility of injury for all involved. Some individuals also report the experience to be degrading and feel embarrassed when crude measures such as masking tape are used in an attempt to secure them during transfer, or multiple people must physically move them, especially during sensitive

examinations where the patient is partially undressed.⁷⁵ Diagnostic examinations can place patients in highly vulnerable positions, both physically and emotionally, and accessible MDE provides individuals with disabilities a measure of autonomy and dignity.

Research that quotes individuals with disabilities affirms the depth of these violations of dignity. Below is an illustrative example drawn from these interviews:

- “The tables you must lie on for those are up so high you couldn’t dream of lying up there. They are just not accessible, and the only way to get up there is to have people lift you. They make you feel very awkward. I weigh about 130 pounds, and they will bring five people to lift me up on the table, and everyone starts pulling at your pants on one leg. They think nothing of it. They think, ‘let’s throw her up there and strip her.’”⁷⁶

In addition, a representative of a managed care organization described circumstances where persons with a disability had to endure humiliating conditions in order to get weighed, which is an important part of a preventive care examination:

- “In New Mexico, we heard a story of a doctor’s office that had made a member go down to the zoo to get weighed because they didn’t have an accessible weight scale, and [the] same thing in Ohio, except they made them go down to the local loading dock.”⁷⁷

The Department was unable to quantify the monetary value of this benefit, but the Department expects individuals with disabilities to benefit from greater dignity as a result of this rulemaking. This benefit is also associated with a greater sense of confidence, self-worth, empowerment, and fairness, which are also benefits which will accrue as a result of this rulemaking.

⁷⁵ Lisa I. Iezzoni et al., *Physical Access Barriers to Care for Diagnosis and Treatment of Breast Cancer Among Women with Mobility Impairments*.” *Oncology Nursing F.* 37 (6): 711 – 7 (2010).

⁷⁶ M.T. Neri, T. Kroll, *Understanding the Consequences of Access Barriers to Health Care: Experiences of Adults with Disabilities*, 25 *Disability & Rehab.* 85, 89 (2003).

⁷⁷ National Council on Disability, *Enforceable Accessible Medical Equipment Standards* (May 20, 2021) at 18, available at [NCD_Medical_Equipment_Report_508.pdf](#) [An archive perma link is unavailable for this link].

ii. Avoiding denigration of social standing.

Beyond the quantifiable health benefits from a suitable diagnostic examination, the presence and use of accessible MDE in appropriate situations signal that individuals with disabilities are entitled to the same standing as other members of society.⁷⁸ Qualitative research studying individuals with disabilities underscores these broader effects of inaccessible MDE on perceptions of social identity and standing. One study participant explained, “You get to where you feel useless, and you get to where you really don’t want to go on any further. You get tired of fighting the system.”⁷⁹ Indeed, “[m]any individuals have expressed feelings of frustration and anger resulting from the multiple barriers to care that they faced as well as instances of insensitivity, disrespect, and lack of understanding,” leading to a sense of distrust.⁸⁰

iii. Lowering frustration

The feelings expressed by individuals who have disabilities also reflect frustration at their inability to access medical care and to be treated with the respect and dignity they deserve. This frustration deters many from seeking medical care that is important to their physical and psychological wellbeing. The quantifiable consequences of this reluctance are discussed above. Beyond those quantifiable aspects, the frustration itself is a harm that these individuals should not have to endure.

⁷⁸ For a summary of empirical research documenting the connection between individuals’ experiences with public policies, including anti-discrimination policy, and their sense of citizenship and belonging, *see, e.g.*: S. Mettler et al., *The Consequences of Public Policy for Democratic Citizenship: Bridging Policy Studies and Mass Politics*, 2 Perspectives on Pol. 1 (2004).

⁷⁹ M.T. Neri & T. Kroll, *Understanding the Consequences of Access Barriers to Health Care: Experiences of Adults with Disabilities*, 25 Disability & Rehab. 85, 89 (2003).

⁸⁰ M. Drainoni et al., *Cross-Disability Experiences of Barriers to Health-Care Access*, 17 J. of Disability Pol’y Stud. 101, 111 (2006).

iv. Decreasing the need for assistance by companions

Where medical facilities do not have accessible MDE, individuals with disabilities sometimes must rely on companions and family members to help them gain access to, for example, examination tables. In addition to the significant benefits discussed above that accrue when individuals with disabilities are able to access medical services independently instead of being forced to rely on a companion for assistance, both individuals with disabilities and their companions will benefit in other ways that are difficult to quantify. Both will be spared the embarrassment stemming from the companion's necessary intrusion into what may be awkward, undignified, and intensely private circumstances.

v. Benefits for Public Entities

As noted above, virtually all public entities that use MDE are also subject to Section 504 of the Rehabilitation Act of 1973, 29 U.S.C. § 794, and therefore to the proposed rule that the Department of Health and Human Services is promulgating. The substantial conformance of the Section 504 rule and this Title II regulation will create efficiencies and prevent inefficiencies for regulated entities, providing a single coherent set of standards for accessible MDE.

The Department seeks comments regarding ways to quantify these benefits.

6. Uncertainty

Although the literature is limited, the Department has carefully quantified costs and benefits associated with the Title II ADA regulation. However, these estimates contain uncertainty based on factors discussed below.

a. Potential Underestimation or Overestimation of Incremental Purchase Costs of the Scoping Requirement of Newly Acquired MDE

As shown in Table 11, incremental purchase costs of the scoping requirement of newly acquired MDE (hereafter incremental purchase costs) are the largest category of total

incremental costs because they account for 89% of total incremental costs (=340.3/384.0). The estimation of incremental purchase costs depends on several factors, which are listed in columns of Table 10. One of these factors is the percentage increase in purchase price from inaccessible to accessible MDE (column [3] of Table 10). As discussed in section 4c, the Department obtains estimates of the percentage increase (in purchase price from inaccessible and accessible MDE) by using MDE price data⁸¹ as proxies for purchase prices of inaccessible and accessible MDE. These proxies may under- or over-estimate the increase in purchase price and therefore may result in under- or over-estimation of incremental purchase costs. To assess the range of potential under- or over-estimation of incremental purchase costs, the Department uses the estimates reported in column [3] of Table 10 as base estimates of the percentage increase in purchase price. The Department determines the upper bound of overestimation to be 60% over or triple the base estimate based on HHS expert evaluation. Likewise, the Department determines the lower bound of underestimation to be 50% or 60% below the base estimate. These base estimates and their upper- and lower-bound values are reported in columns [3]-[5] in Table 13. Similar to column [9] of Table 10, columns [6]-[8] of Table 13 report incremental one-time purchase costs by using the lower-bound, base, and upper-bound estimates of percent increase in purchase price from inaccessible to accessible MDE. Likewise, columns [9]-[11] of Table 13 report incremental spreading-out costs by using the lower-bound, base, and upper-bound estimates of percent increase in purchase price. As discussed in section 4c, these spreading-out costs are incremental purchase costs that public entities would spend each year to achieve compliance. Overall, incremental purchase costs range from \$12.8 million to \$57.4

⁸¹ These MDE price data come from the December 2016 U.S. Access Board Final Regulatory Assessment, <https://www.access-board.gov/files/mde/mde-assessment.pdf> [https://perma.cc/UQM5-48KW].

million (in 2019 dollars). The Department uses this range to estimate overall annualized costs of the NPRM to be between \$18.6 million and \$68.6 million at a 3 percent discount rate (in 2022 dollars), and between \$18.7 million and \$68.8 million at a 7 percent discount rate (in 2022 dollars).

Another factor that affects incremental purchase costs is the accessibility gap (column [8] of Table 10), which is defined as the difference between required and baseline accessibility. The Department reports in Table 5 estimates of required accessibility based on radiology equipment units and locations and the scoping requirement. As discussed in section 3c, that estimation assumes MDE units are evenly distributed across locations. This assumption is more realistic than an alternative, which assumes that MDE units are very unevenly distributed across locations. That is, under the alternative assumption, each location except one hosts exactly one unit (which needs to be accessible), with the lone remaining location hosting all other units. In section 3c, the Department divides public entities into four groups. When the Department uses this alternative assumption, required accessibility for the first group of public entities increases from 40.6% to 46.6%.⁸² This increase is from 41.2% to 52.5% for the second group of public entities.⁸³ The Department estimates that this increase in required accessibility will raise incremental purchase costs from \$30.3 million (in 2019 dollars, column [10] of Table 10) to \$34.9 million (in 2019 dollars). Finally, the Department estimates that this increase in required accessibility will raise overall annualized costs of the NPRM from \$38.5 million to \$43.7 million

⁸² As discussed in section 3c, the 10% scoping requirement applies to the first group, which includes general medical and surgical hospitals, outpatient care centers, other ambulatory health care services, and diagnostic imaging centers (NAICS codes: 6221, 6214, 6219, and 621512).

⁸³ The 20% scoping requirement applies to the second group, which includes specialty hospitals (NAICS code: 6223). The remaining two groups of public entities are not affected by this alternative assumption because the use of basic MDE predominates.

at a 3 percent discount rate (in 2022 dollars), and from \$38.7 million to \$43.8 million at a 7 percent discount rate (in 2022 dollars).

Table 13: Uncertainty of Percent Increase in Purchase Price from Inaccessible to Accessible MDE

[1] NAICS Code	[2] Industry	Percent Increase in Purchase Price			Incremental One-time Purchase Costs			Incremental Spreading-out Purchase Costs		
		[3] Lower bound	[4] Base	[5] Upper bound	[6] Lower bound	[7] Base	[8] Upper bound	[9] Lower bound	[10] Base	[11] Upper bound
6221	General Medical and Surgical Hospitals	2%	5%	8%	\$47.7	\$119.2	\$190.7	\$7.6	\$19.1	\$30.5
6222	Psychiatric and Substance Abuse Hospitals	25%	50%	150%	\$6.4	\$12.9	\$38.6	\$0.6	\$1.1	\$3.4
6223	Specialty Hospitals	25%	50%	150%	\$9.8	\$19.5	\$58.6	\$1.6	\$3.1	\$9.4
6213	Offices of Other Health Practitioners	25%	50%	150%	\$1.1	\$2.1	\$6.4	\$0.1	\$0.2	\$0.6
6214 & 6219	Outpatient Care Centers and Other Ambulatory Health Care Services	2%	5%	8%	\$1.0	\$2.4	\$3.6	\$0.1	\$0.2	\$0.4
621511	Medical Laboratories	25%	50%	150%	\$2.9	\$5.8	\$17.3	\$0.3	\$0.5	\$1.5
621512	Diagnostic Imaging Centers and Other	2%	5%	8%	\$0.6	\$1.5	\$2.3	\$0.1	\$0.3	\$0.5
623	Nursing and Residential Care Facilities	25%	50%	150%	\$3.9	\$7.9	\$23.6	\$0.3	\$0.7	\$2.1
Total	-	-	-	-	\$73.4	\$171.3	\$341.2	\$10.7	\$25.3	\$48.4

b. Potential Underestimation or Overestimation of Incremental Benefits

In section 5, the Department estimates benefits by using findings from Iezzoni (2015) to calculate the number of additional women participating in screening (row [5] in Table 12) and assuming the number of beneficiaries of the proposed regulation is 6% of the population. This calculation and assumption may underestimate or overestimate incremental benefits, so the Department conducts a sensitivity analysis to quantify the range of potential underestimation or overestimation of incremental benefits.

First, if the number of additional women participating in screening were to be 25 percent below the figure reported in row [5] of Table 12, that would reduce the estimate of benefits from \$7.7 to \$5.7 million at a 3 percent discount rate or from \$4.8 to \$3.4 million at a 7 percent discount rate (in 2022 dollars). In contrast, if the number of additional women participating in screening were to be 25% above the figure reported in row [5] of Table 12, that would increase the estimate of benefits from \$7.7 to \$9.6 million at a 3 percent discount rate or from \$4.8 to \$5.7 million at a 7 percent discount rate (in 2022 dollars).

Second, if the number of beneficiaries were to be 4% of the population (i.e., 2 percentage points lower than the 6% reported in row [14] of Table 12), that would reduce the estimate of benefits from \$7.7 to \$5.1 million at a 3 percent discount rate or from \$4.8 to \$3.2 million at a 7 percent discount rate (in 2022 dollars). In contrast, if the number of beneficiaries were to be 9% of the population (i.e., 3 percentage points higher than the 6% reported in row [14] of Table 12), that would increase the estimate of benefits from \$7.7 to \$11.5 million at a 3 percent discount rate or from \$4.8 to \$7.1 million at a 7 percent discount rate (in 2022 dollars).

7. Regulatory Alternatives

In this NPRM, the Department proposed a multi-faceted approach to ensure that the absence of accessible MDE does not deny healthcare to people with disabilities. The Department seeks to (1) adopt standards for accessible MDE, (2) impose a requirement that public entities acquire accessible examination tables and weight scales within two years, (3) set forth a scoping requirement of newly acquired MDE, and (4) ensure that qualified relevant medical staff (i.e., those directly involved in patient interaction) are able to successfully operate accessible MDE.

The Department considered several alternatives to the regulatory provisions on accessible MDE in this NPRM. First, the Department considered the option of no regulatory action on accessible MDE. Under such an approach, the Department would continue to rely on the general nondiscrimination provisions of the ADA. The Department has determined that such an approach would be ineffective in addressing the lack of access for people with disabilities to health care due to the absence of accessible MDE. The Department has investigated and entered into settlement agreements with hospitals to address the lack of accessible MDE.⁸⁴ Also, people with disabilities and organizations representing them have submitted statements and other information to the Department detailing how the lack of accessible MDE discriminates against

⁸⁴ U.S. Department of Justice, Justice Department Settles with Tufts Medical Center to Better Ensure Equal Access for Individuals with Disabilities (Feb. 28, 2020), <https://www.justice.gov/opa/pr/justice-department-settles-tufts-medical-center-better-ensure-equal-access-individuals> [https://perma.cc/M29Z-HMBB]. U.S. Department of Justice, Justice Department Reaches ADA Settlement with Beth Israel Deaconess Medical Center (Oct. 22, 2009), <https://www.justice.gov/opa/pr/justice-department-reaches-ada-settlement-beth-israel-deaconess-medical-center> [https://perma.cc/LKC6-BRQC]; U.S. Department of Justice, Washington Hospital Center Agreement Fact Sheet (Nov. 2, 2005), <https://www.ada.gov/whcfactsheet.htm> [https://perma.cc/SP77-LH25]; Settlement Agreement between the United States of America and Valley Radiologists Medical Group, Inc. (Nov. 2, 2005), <https://www.ada.gov/vri.htm> [https://perma.cc/N8D3-4X2N].

people with disabilities and denies them adequate healthcare. They have stressed the pressing need for the Department to issue substantive rules to prevent and remedy these harms. Finally, the Department is aware that the National Council on Disability has issued multiple reports urging the Department to regulate in this area and to adopt the Standards for Accessible Medical Diagnostic Equipment that the U.S. Access Board has issued. The Department's direct experience, the firsthand accounts for people harmed as a result of inaccessible MDE, and the recommendations of experts in the field persuaded the Department that the status quo is unfair and unsustainable.

Second, the Department considered issuing a regulation that would require public entities to provide accessible MDE, without specifying standards for what constitutes accessible MDE or addressing how many pieces or what types of the equipment should be made accessible. The Department has decided against this approach because it would provide inadequate guidance, cause confusion for public entities, fall short in addressing discrimination, and engender unnecessary litigation. It would also fail to capitalize on the initiative of the U.S. Access Board in developing standards for what constitutes accessible MDE.

Third, the Department considered requiring the purchase, lease, or other acquisition of all accessible MDE within two years, rather than just one examination table and one weight scale. This approach would substantially increase the costs to public entities. The Department estimates that (1) in the base scenario at a 3 percent discount rate, incremental costs of this approach would be 56% higher than those of the proposed rule, and (2) in the base scenario at a 7 percent discount rate, incremental costs of this approach would be 63% higher than those of the proposed rule. However, this approach would more quickly achieve the 10 or 20 percent scoping requirement for newly acquired MDE.

The Department has asked stakeholders for their comment on whether the 10% and 20% scoping requirements are appropriate, reasonable, and strike the right balance between providing access and avoiding undue costs. If the Department were to cut the scoping requirements by half, to 5% and 10%, respectively, annualized costs would drop by \$0.2 million (from \$38.5 million to \$38.3 million) at a 3% discount rate, and by \$0.2 million (from \$38.7 million to \$38.5million) at a 7% discount rate. If the Department were to double the scoping requirements, to 20% and 40%, respectively, annualized costs would increase by \$1.9 million (from \$38.5 million to \$40.4 million) at a 3% discount rate, and by \$1.8 million (from \$38.7 million to \$40.5 million) at a 7% discount rate. An increase in scoping to 100% would result in a \$47.6 million increase (from \$38.5 million to \$86.1 million) at a 3% discount rate, and a 47.6 million increase (from \$38.7 to \$86.3 million) at a 7% discount rate.⁸⁵ However, the Department does not envision requiring that every new piece of diagnostic medical equipment must be accessible. The Department is aware of the costs that such a requirement would impose and that such numbers are not required to provide full service to persons with disabilities in this country. The Department is following well-established precedent with this approach. For example, the 2010 Standards for Accessible Design do not require that every toilet room or every parking space be accessible, but has scaled the requirement to those numbers that will serve the numbers of persons with disabilities whose disabilities require accessible features. Nonetheless, the Department calculated the costs of increasing scoping requirements to 100%. Required

⁸⁵ Under the 10% and 20% scoping requirements, required accessibility is 40.6% and 41.2%, respectively, in Table 5 and 53.9% and 57.6%, respectively, in panel [A] of Table 6. If the Department were to cut the scoping requirements by half, to 5% and 10%, respectively, required accessibility will reduce to 40.6% and 40.6%, respectively, in Table 5 and 52.6% and 53.9%, respectively, in panel [A] of Table 6. If the Department were to double the scoping requirements, to 20% and 40%, respectively, required accessibility will increase to 41.2% and 53.7%, respectively, in Table 5 and 57.6% and 76.5%, respectively, in panel [A] of Table 6. The decrease/increase in required accessibility lowers down/drives up annualized costs, which are calculated by using the same methodology that produces estimates of annualized costs in Table 11.

accessibility would increase to 100% in Table 5 and panel [A] of Table 6. The increase in required accessibility would drive up annualized costs, which are calculated by using the same methodology that produces estimates of annualized costs in Table 11.

In addition, the Department considered two phase-in alternatives to the requirement that public entities acquire accessible examination tables and weight scales within two years. The first is to require that public entities acquire accessible examination tables and weight scales within three years. This alternative would decrease annualized costs by \$ 0.1 million (from \$38.5 to \$38.4 million) at a 3 percent discount rate, and by \$0.2 million (from \$38.7 to \$38.5 million) at a 7 percent discount rate. The second is to require that public entities acquire accessible examination tables and weight scales within four years. This alternative would keep annualized costs the same at \$38.5 million at a 3 percent discount rate, but reduce annualized costs by \$0.1 million (from \$38.7 to \$38.6 million) at a 7 percent discount rate. The Department seeks comments on the alternative estimates.

Preliminary Regulatory Flexibility Act (PRFA) Analysis

The Department has examined the impact of the proposed rule on small entities as required by the Regulatory Flexibility Act (RFA). For the purpose of this analysis, impacted small entities are independent State and local governmental units in the United States that serve a population less than 50,000.⁸⁶ Based on this definition, the Department estimates in Table 13 a total of 38,514 small governmental entities that could be affected by the NPRM. The distribution of population of small governmental entities is also shown in Table 14.

⁸⁶ 5 U.S.C. 601(5) and Small Business Administration. (2017). A Guide for Government Agencies: How to Comply with the Regulatory Flexibility Act. Retrieved from <https://advocacy.sba.gov/resources/the-regulatory-flexibility-act/a-guide-for-government-agencies-how-to-comply-with-the-regulatory-flexibility-act/>

However, less than 7 percent of the 38,514 small governmental entities would be affected by the NPRM. This is because Section 3 reports that 6,905 public entities in Sector 62, “Hospital Care and Social Assistance,” currently do not provide sufficient accessible MDE and therefore will be affected by the NPRM (hereafter affected public entities), and the Department assumes 35 percent of these public entities are in small governmental entities.⁸⁷ Based on this assumption, approximately 2,417 affected public entities are in small governmental entities. If all 2,417 affected public entities are in different small governmental entities, this suggests that 2,417 small governmental entities would be affected by the NPRM, which account for 6.3 percent of total small governmental entities ($=2,417/38,514$). This is the highest share of small governmental entities that would be affected by the NPRM because some small governmental entities have more than one affected public entity, which lowers the number of small governmental entities that will be affected by the NPRM.

⁸⁷ This assumption is based on the 2021 data from the American Hospital Association, which show that 3,357 hospitals are in urban areas, while 1,800 are in rural areas. These numbers suggest that 35 percent of the hospitals are in rural areas [$=1,800/(3,357+1,800)$]. Retrieved from <https://guide.prod.iam.aha.org/stats/total-us> [<https://perma.cc/FXY2-DLA3>].

Table 14: Number and Distribution of Population of Small Governmental Entities

[1] Government Type	[2] Number of Small Entities	Population Size			
		[3] Mean	[4] 10 th Percentile	[5] Median	[6] 90 th Percentile
County	2,105	18,520	3,688	15,665	39,072
Municipality	18,729	4,220	142	1,042	12,311
Township	16,097	2,846	61	898	6,977
Special district (health & hospital)	1,583	N/A			
All	38,514	N/A			

Table 14 includes the governments of counties, municipalities, and townships with populations below 50,000 in the 2020 Census of Governments.⁸⁸ No State governments qualify as small. This table also includes 1,583 special district governments⁸⁹ whose function is either

⁸⁸ U.S. Census Bureau. (2022, September 20). 2020 State & Local Government Finance Historical Datasets and Tables. Retrieved from <https://www.census.gov/data/datasets/2020/econ/local/public-use-datasets.html> [https://perma.cc/ND4C-XYR5].

⁸⁹ The proposed rule defines “special district governments” as “a public entity – other than a county, municipality, or township, or independent school district – authorized by State law to provide one function or a limited number of designated functions with sufficient administrative and fiscal autonomy to qualify as a separate government and whose population is not calculated by the United States Census Bureau in the most recent decennial Census or Small Area Income and Poverty Estimates.”

health or hospitals in the 2022 Census of Governments – Organizations.⁹⁰ The Department includes all 1,583 special district governments whose function is health or hospitals in the analysis because total population for special district governments could not be determined, and the Department wants to ensure small governments are not undercounted. The Department does not include special district governments with a function other than health or hospitals in the analysis because they are unlikely to have public entities in Section 62, “Health Care and Social Assistance.”

The Department has compared compliance costs to revenue for small governmental entities to evaluate the economic impact to these governments. The findings show that compliance costs of the proposed regulation account for less than 1 percent of annual revenue for small governmental entities. This suggests an insignificant economic impact of the proposed regulation on small governmental entities. The Department started from comparing annualized costs attributable to small governmental entities with total annual revenue for small governmental entities. This comparison shows that annualized costs attributable to small governmental entities account for 0.004% of total annual revenue for small governmental entities. Table 11 shows annualized costs of the proposed regulation amount to \$38.5 million (at a 3 percent discount rate) or \$38.7 million (at a 7 percent discount rate). The Department assumes up to 35 percent of these annualized costs are attributable to small government entities,⁹¹ which amount to \$13.48 million (at a 3 percent discount rate) or \$13.53 million (at a 7

⁹⁰ U.S. Census Bureau. (2023, September 22). 2022 Census of Governments – Organization; Table 8. Special District Governments by Function and State: 2022. Retrieved from <https://www.census.gov/data/tables/2022/econ/gus/2022-governments.html> [https://perma.cc/6F2M-H94M].

⁹¹ This assumption is based on the 2021 data from the American Hospital Association, which suggests 35 percent of the hospitals are in rural areas, and the observation that hospitals in rural areas may be smaller than those in urban areas. Smaller hospitals are required to purchase fewer accessible MDEs than their larger counterparts, which lowers compliance costs that they may bear.

percent discount rate). Column [3] of Table 15 shows that total annual revenue for small governmental entities amounts to \$338,721 million. This suggests that annualized costs attributable to small governmental entities account for 0.004% of total annual revenue for small governmental entities ($=13.48/338,721$, at a 3 percent discount rate, or $=13.53/338,721$, at a 7 percent discount rate).

Table 15: Number and Revenue of Small Governmental Entities

[1] Government Type	[2] Number of Small Entities	[3] Total Annual Revenue for Small Governments (\$ million in 2022 dollars)	[4] Average Annual Revenue Per Small Government (\$ million in 2022 dollars)
County	2,105	\$69,601	\$33.1
Municipality	18,729	\$197,466	\$10.5
Township	16,097	\$59,729	\$3.7
Special district (health & hospitals)	1,583	\$11,925	\$7.5
All	38,514	\$338,721	\$8.8

Table 15 uses the most recent revenue data from U.S. Census Bureau’s State and Local Government Finances by Level of Government and by State: 2020.⁹² However, these data do not disaggregate revenue by entity type or size. Therefore, the Department first estimated the proportion of total local government revenue in each local government entity type and size using the 2012 U.S. Census Bureau’s database on individual local government finances.⁹³ The

⁹² U.S. Census Bureau. (2022, September 20). 2020 State & Local Government Finance Historical Datasets and Tables. Retrieved from <https://www.census.gov/data/datasets/2020/econ/local/public-use-datasets.html> [https://perma.cc/R336-N5TP].

⁹³ Available at U.S. Census Bureau. (2021, October 8). Historical Data. Retrieved from <https://www.census.gov/programs-surveys/cog/data/historical-data.html> [https://perma.cc/JJM7-MEJA]. The

Department then multiplied these proportions of the total local government revenues in each entity type by the 2020 total local government revenue to calculate the 2020 revenue for the small entities in each government type.⁹⁴ According to the U.S. Bureau of Economic Analysis (BEA), \$1 in 2020 corresponds to \$1.118 in 2022.⁹⁵ Since 2022 is the latest full calendar year for which GDP inflator data are available, Table 15 reports revenue in 2022 data.

However, the economic impact of the proposed rule on small governmental entities would be uneven across 38,514 small governmental entities. This is because greater than 93 percent of small governmental entities do not have affected public entities that are required to purchase accessible MDE; they are unlikely to be affected by the NPRM. Of the less than 7 percent of the 38,514 small governmental entities that may have an affected public entity, the economic impact of the proposed rule would still be uneven because Table 11 shows that purchase costs arising from scoping requirements of newly-acquired MDE account for over three quarters of compliance costs,⁹⁶ and column [10] of Table 10 shows that 77 percent (=23.3/30.3) of incremental purchase costs are attributable to the 6221 industry group of General Medical and Surgical Hospitals. This suggests that small governmental entities that have an affected public entity in the 6221 industry group would be financially impacted the most by the proposed regulation. Column [1] of Table 2 shows 398 affected public entities in the 6221 industry group.

Department was unable to find more recent data with this level of detail. Population counts were adjusted for estimated population growth over the applicable period.

⁹⁴ Total annual revenue for special district governments is prorated to account for the fact that there are 39,555 special district governments in 2022, but only 1,583 with a function in health or hospitals.

⁹⁵ U.S. Bureau of Economic Analysis. National Income and Product Accounts. Table 1.1.9. Implicit Price Deflators for Gross Domestic Product. Retrieved April 28, 2023, from <https://www.bea.gov/data/prices-inflation/gdp-price-deflator> [<https://perma.cc/3M3H-QDCY>].

⁹⁶ Table 11 shows that purchase costs arising from scoping requirements of newly acquired MDE account for 79 percent (=34.0/42.9) of total incremental costs in the first year. This share is 83 percent (=34.0/40.8) in the second year and 91 percent (=34.0/37.5) from the third to tenth years.

Of these, the Department assumes 139 (i.e., 35 percent of 398)⁹⁷ are in small governmental entities. Furthermore, the Department assumes that one governmental entity has one general medical and surgical hospital only. This suggests that 139 small governmental entities have an affected entity in the 6221 industry group. The Department estimates the upper bound of the compliance costs that these 139 small governmental entities may bear by assuming that affected public entities in industry groups other than 6221 are evenly distributed across governmental entities with a general medical and surgical hospital. This suggests that a small governmental entity with a general medical and surgical hospital could bear annualized compliance costs up to \$0.09 million ($=38.5*0.35^{98}/139$), at a 3 percent discount rate, or \$0.1 million ($=38.7*0.35/139$), at a 7 percent discount rate. Column [4] of Table 15 shows that the average annual revenue of a small governmental entity is \$8.8 million. This suggests that in the 139 small government entities with a general medical and surgical hospital, annualized costs of the proposed rule could account for up to 1 percent ($=0.1/8.8$) of annual revenue. This finding suggests that the economic impact of the proposed rule on a small governmental entity would be no more than 1 percent of its annual revenue.

The PRFA analysis indicates annualized costs attributable to small governmental entities account for 0.004% of total annual revenue for small governmental entities. The small share of 0.004% hinges on the assumption that 35 percent of the 6,905 public entities are in small governmental entities. The Department conducts a sensitivity analysis of this assumption by replacing that share with 25 percent and 45 percent. This sensitivity analysis takes into account

⁹⁷ See n. 91, *supra*, for the assumption that 35 percent of affected public entities are in small governmental entities.

⁹⁸ The multiplier of 0.35 indicates that the Department assumes 35 percent of annualized costs are attributable to small governmental entities, while 65 percent are attributable to large governmental entities. See n. 91, *supra*, for the assumption of 35 percent.

the possible correlation between public entities that do not provide sufficient accessible MDE and their location in urban or rural areas, and hospitals are only a subset of the public entities covered under Title II of the ADA. As shown below, findings of the sensitivity analysis indicate that share would be 0.003% under the 25 percent assumption and 0.005% under the 45 percent assumption.⁹⁹

If the Department were to assume 25 percent of these public entities are in small governmental entities, this suggests that 1,726 ($=6,905*0.25$) small governmental entities would be affected by the NPRM, which account for 4.5 percent ($=1,726/38,514$) of total small governmental entities. Under this assumption, 25 percent of annualized costs are attributable to small governmental entities, which amount to \$9.63 million ($=38.5* 0.25$, at a 3 percent discount rate) or \$9.68 million ($=38.7*0.25$, at a 7 percent discount rate). This suggests that annualized costs attributable to small governmental entities account for 0.003% of total annual revenue for small governmental entities ($=9.63/338,721$, at a 3 percent discount rate, or $=9.68/338,721$ at a 7 percent discount rate). If the Department were to assume 45 percent of these public entities are in small governmental entities, this suggests that 3,107 ($=6,905*0.45$) small governmental entities would be affected by the NPRM, which accounts for 8.1 percent ($=3,107/38,514$) of total small governmental entities. Under this assumption, 45 percent of annualized costs are attributable to small governmental entities, which amount to \$17.33 million ($=38.5* 0.45$, at a 3 percent discount rate) or \$17.42 million ($=38.7*0.45$, at a 7 percent discount rate). This suggests that annualized costs attributable to small governmental entities account for 0.005% of total

⁹⁹ In the previous paragraph, the Department suggests that the economic impact of the proposed rule on a small governmental entity would be no more than 1 percent of its annual revenue. The share of 1 percent holds under the 25 percent or 45 percent assumption. This is because 25 percent or 45 percent is used both in the denominator and numerator when calculating the annualized compliance costs that a small governmental entity would bear (e.g., under the 25 percent assumption at a 3 percent discount rate, the share of financial burden is $1\% = \$38.5 \text{ million} * 0.25 / (398 \text{ hospitals} * 0.25) / \8.8 million).

annual revenue for small governmental entities ($=17.33/338,721$, at a 3 percent discount rate, or $=17.42/338,721$ at a 7 percent discount rate). The Department seeks comments on the PRFA analysis.