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In re COVID-19 Related Goods – US Imports and Tariffs, USITC Inv. No. 332-TA-576

BSA | The Software Alliance (BSA)¹ is grateful for the opportunity to provide comments to the United States International Trade Commission (USITC) in relation to its ongoing investigation under section 332 of the Tariff Act of 1930, *In re COVID-19 Related Goods – US Imports and Tariffs*.² BSA appreciates the opportunity to contribute information relating to USITC’s investigation of imported goods relevant to the response to COVID-19.³

After the executive summary, this submission: (1) identifies selected medical and ICT products relevant to the US COVID-19 response (“the subject products”) that are imported from around the world; and (2) details the impact of tariffs on the US COVID-19 response based on their impact on the US government, healthcare sector, essential workers, and general population. The submission also contains appendices that, respectively: (1) further describe the subject products and their relevant uses by the US government, healthcare sector, essential workers and general population; and (2) further detail the sectors and workers—deemed essential by the US government—that rely on the subject products.

A. Executive Summary

A coordinated public-private response is necessary to protect human health and respond to the current medical and economic crisis. The USITC plays a critical role in this response, including by identifying and helping inform Congress and the Administration about imported products that are relevant to the US COVID-19 response.

BSA favors the lifting of tariff restrictions on the importation of the subject products, which represent critical supplies and equipment needed to respond to this medical and economic crisis by federal and state governments; hospitals, clinics, and other healthcare providers; medical device manufacturers; pharmaceutical R&D laboratories and institutions; nursing and dependent care providers; as well as private enterprises and the general population.

As the OECD has explained,

The response to a new pandemic, such as COVID 19, is typically based on four key pillars: (1) surveillance and detection; (2) clinical management of cases; (3) prevention of the spread in the community; and (4) maintaining essential services. Actions across the four pillars complement and closely interact and support one

another. For example, containment measures based on identification of cases and contact tracing heavily depend on excellent surveillance and detection infrastructures.⁴

The subject products are important to each of these four pillars of the US COVID-19 response. As detailed in this submission, the subject products are necessary to:

1. COVID-19 surveillance and detection, which can be accomplished, *inter alia*, through remote contact tracing technologies that allow for the tracing of persons who have been in contact with infected individuals⁵;
2. Clinical case management, in the midst of unprecedented peaks in demand for healthcare services, depends upon focusing deployment of hospital and healthcare resources on COVID-19, while also making available healthcare services and treatment via telemedicine;
3. Reducing the [spread of COVID-19](#) through compliance with federal government [social distancing mandates](#),⁶ including government guidance to “[engage in schooling from home whenever possible](#),”⁷ and to “[work remotely when possible](#)”⁸; and
4. Managing transmission risk while mitigating the economic impact of COVID-19 through adherence to [federal guidance regarding essential services](#).

Effective implementation these four pillars of activity depends to a significant degree upon the widespread deployment and use of the subject products. However, in many cases, the deployment and use of those products are directly restricted by import tariffs.

Tariffs on the subject products have the following healthcare supply-side impacts:

- [Impeding the US manufacture and maintenance of medical and ICT products](#): When applied to key inputs like semiconductors, and other parts and components used in medical devices and ICT products used for the US COVID-19 response, tariffs make it more difficult to manufacture, maintain and repair those devices and products in the United States – benefiting offshore manufacturers and workers at the expense of US-based manufacturers and workers in the downstream medical device and healthcare service supply chain. Higher prices due to tariffs for manufacturing inputs and spare parts also impacts the US supply of such products, to the detriment of US hospitals and other organizations in the healthcare supply chain, and in other sectors deemed essential by CISA.
- [Impeding the provision of healthcare services](#): When applied to finished medical and ICT products needed by hospitals and other organizations in the healthcare supply chain, as well as in other sectors deemed essential by CISA, tariffs make it more difficult for those organizations to procure and deploy those products for the US COVID-19 response.

Tariffs on the subject products have the following healthcare demand-side impacts:

- [Impeding access to healthcare services](#): Tariffs on the subject products impact US public health outcomes for the general population to the extent that the tariffs make it more difficult for US citizens to remotely secure health-related information, diagnoses, prescriptions, and treatment – e.g., via telemedicine and telehealth technologies.
- [Impeding compliance with social distancing mandates](#): Tariffs on the subject products impact US public and economic health to the extent that they make it more difficult for US citizens to comply with social distancing measures, whether through remote work, remote learning, self-quarantine, travel restrictions, or other measures.

In short, under present circumstances, tariffs on the subject products undermine US economic and health interests. Accordingly, we respectfully urge the Administration to lift or suspend these tariffs, at least temporarily and in the identified product categories.

B. Description of the Subject Products Relevant to COVID-19 Response

The healthcare sector has become increasingly dependent upon data analytics and ICT technologies to save lives and improve health outcomes in the United States and abroad. In the past decade, the US healthcare sector has adopted numerous ICT technologies to improve the safety and efficacy of cures and treatment, as well as the operational efficiency of delivery systems. As of 2019, it was estimated that US hospitals averaged 10 to 15 connected devices per bed, and global healthcare demand was expected to grow to roughly \$40 billion for cloud services, and to over \$500 billion for IOT devices, by the mid-2020s.⁹

With the sharp increase in medical services required to respond to COVID-19, a global competition for imported medical-related technologies has emerged. High tariffs make it more difficult and more expensive for everyone—across the US healthcare sector, state and federal governments, and the general population—to procure products needed to respond to the COVID-19 crisis. These tariffs have the perverse and unintended consequence of strengthening the relative purchasing power of non-US bidders for these products. This situation is to the detriment of US economic and public health interests.

The subject products identified in Appendix I are in some cases directly imported (for use medical and healthcare settings) as finished products subject to tariffs. In other cases, they are imported as inputs subject to tariffs, which inputs would then be incorporated into finished products used for the US COVID-19 response.

The imported final products at issue include:

- Health and ICT hubs and all-in-one computer systems used in telehealth and telemedicine settings
- Automatic data processing and server equipment, and components and accessories, used in healthcare regulatory, laboratory, and provider settings, and also used by the general population to comply with social distancing mandates to reduce the spread of disease. This equipment, components and accessories are also used in conjunction with specific medical technologies, including ventilators, computed tomography (“CT”), magnetic resonance imaging (“MRI”), ultrasound and positron emission tomography (“PET”) systems, and other medical and ICT equipment
- Virtual reality equipment used in healthcare simulation, training, and treatment settings
- Networking equipment used to support connectivity within healthcare regulatory, laboratory, and provider settings; used to support connectivity between those institutions and the general public and government agencies; and used by the general population to comply with social distancing mandates. This networking equipment also supports the functioning of the specific medical technologies.

The imported components at issue include semiconductors and integrated circuits classified under HTSUS subheading 8542.31.0001 that are used in the following final products:

- Ultrasound equipment
- Capnography equipment
- Clinical Review Display
- Diagnostic Display
- Diagnostic Robot
- Disinfection Robot
- Drug Delivery Device
- Electronic Bed
- Infusion Pumps
- Nebulizers
- Sequencers/PCRs
- Ventilators
- Vital sign monitors and other displays
- Telepresence robots
- Disinfection robots

Please see Appendix I for a complete list of ICT products that should be considered for tariff relief. Please see Appendix II for a select list of CISA-certified essential personnel who use one or more of these products to carry out their functions deemed essential by the US government.

C. How Tariffs on the Subject Products Impact the US Government, Healthcare Sector, Essential Workers, and the General Population

The subject products are used by organizations and persons involved in the public and private sector response to COVID-19. We categorize these entities below into: (1) suppliers of products and services relevant to responding to COVID-19 and complying with government social distancing mandates; (2) consumers and purchasers of products and services relevant to responding to COVID-19.

1. Impacts of Tariffs on Suppliers of Services Relevant to COVID-19 Response

The subject products are used by organizations and essential workers involved in the medical and healthcare supply chain for purposes of the US COVID-19 response. Below we identify: (1) categories of “essential workers” impacted by tariffs on the subject products in their response to COVID-19, and (2) healthcare and medical organizations impact by tariffs on the subject products.

a. Essential Workers Use the Subject Products to Respond to COVID-19

The Cybersecurity and Infrastructure Security Agency (CISA) has identified [workers](#) across several [sectors](#) as essential to responding to the COVID-19 crisis. These include workers in the healthcare and public health sectors; in the eldercare, nursing care, and other dependent care sectors; and in the IT and communications sectors.¹⁰ Workers in all of these sectors rely upon the subject products – from components used in medical devices to computer and networking equipment and accessories – in healthcare regulatory, laboratory, and provider settings, and also to support the general population in complying with social distancing mandates.

Below is an abbreviated list of workers in the healthcare and public health sectors, whose ability to perform work deemed “essential” by the US government in response to COVID-19 is impacted by tariffs on the subject products.

- Workers in clinical R&D and testing
- Healthcare providers (physicians, nurses, infection control personnel, pharmacists; diagnostic and therapeutic technicians and technologists, etc.)
- Hospital and laboratory personnel (accounting, administrative, engineering, epidemiological, medical records, information technology and operational technology, etc.).
- Workers in other medical facilities (including ambulatory health, home health care, long term and nursing care facilities, procurement organizations, rural health clinics, and retail facilities specializing in medical goods and supplies).
- Manufacturer workers for health manufacturing, materials and parts suppliers, logistics and warehouse operators, distributors of medical equipment (including those who test and repair), etc.;
- Public health / community health workers, including those who compile, model, analyze and communicate public health information.
- Workers who conduct community-based public health functions, conducting epidemiologic surveillance, compiling, analyzing and communicating public health information, who cannot practically work remotely.
- Workers performing information technology and cybersecurity functions at healthcare and public health facilities, who cannot practically work remotely.
- Workers performing security, incident management, and emergency operations functions at or on behalf of healthcare entities including healthcare coalitions, who cannot practically work remotely.
- Pharmacy employees necessary to maintain uninterrupted prescription filling.

- Workers who coordinate with other organizations to ensure the proper recovery, handling, identification, transportation, tracking, storage, and disposal of human remains and personal effects; certify cause of death; etc.

The list above is only a partial list of healthcare and public health sector workers who have been deemed essential by CISA, and whose ability to perform their government-mandated essential functions is impeded by the imposition of tariffs on the subject products. Please see Appendix II and the links to the CISA website for a complete list of essential workers, many of whom are impacted by the imposition of tariffs on the subject products.

b. Organizations Across the Healthcare Supply Chain Use the Subject Products to Respond to COVID-19

Healthcare and medical organizations in both the public and private sectors use the subject products to perform myriad functions to respond to the COVID-19 crisis, including conducting pharmaceutical R&D, administering regulatory approvals, delivering healthcare services, educating the public, and delivering and ICT infrastructure and software services necessary to these health-related functions.

The affected organizations span US federal and state government agencies, including:

- The Food & Drug Administration in reviewing clinical trials data and working towards regulatory approval of treatments for COVID-19¹¹. FDA has issued [COVID-19 related guidance](#) on clinical trials during the COVID-19 crisis, which underscores the importance of using remote digital systems and other electronic means of securing informed consent and fulfilling other key aspects of the clinical trial process.¹²
- The National Institutes of Health (NIH)¹³ and the Centers for Disease Control and Prevention (CDC)¹⁴ for pharmaceutical and epidemiological research and epidemic response relating to COVID-19.
- The Centers for Medicare and Medicaid Services (CMS) and Medicaid administrators across all 50 states that have developed guidance and protocols—including telehealth protocols—for COVID-19 response.¹⁵
- Other branches of the Department of Health and Human Services (HHS)¹⁶ that are increasing deployment of the subject products to respond to COVID-19 and support US national and state-level healthcare needs.
- US governments agencies (including the Veterans Health Administration (VHA), the Department of Education, the Department of the Interior, the Federal Emergency Management Authority, and the Federal Communications Commission) that Congress has authorized to invest in ICT equipment for purposes of building out telehealth, telemedicine, and distance learning services to respond to the COVID-19 crisis.¹⁷
- All other US government agencies undergoing a “[teleworking surge](#)” in response to COVID-19.¹⁸
- State health and employment agencies faced unprecedented demand for ICT services at this time.¹⁹

Affected organizations also span public and private sector entities including:

- Private sector research laboratories, pharmaceutical manufacturing facilities and other enterprises in the medical supply chain.
- Providers of first responder and medical transportation services.
- Hospitals, clinics, and other medical institutions that provide direct treatment of patients.²⁰ These institutions use the subject products equipment in their COVID-19 response, including to monitor patients, to control ventilators and other devices safely and remotely, to create electronic health care records, to communicate with primary care physicians and other caregivers, as well as with testing locations.

- Healthcare providers that offer telehealth, telemedicine, and telepsychiatry services, as well as other means of virtual patient communication. These forms of virtual medical consultation and treatment depend heavily on use of the subject products (among other products) for purposes of videoconferencing, remote home patient monitoring, tele-ICU's, and diagnosis and treatment via virtual/augmented reality devices,²¹ and deploy computer, network and peripheral equipment including “two-way live or streaming video, videoconferencing, store-and-forward imaging along with the internet, email, smart phones, wireless tools and other forms of telecommunication.”²²
- Service providers in remote nursing care, eldercare, and home healthcare contexts that provide critical healthcare and support services to respond to healthcare needs of elderly and other vulnerable populations [placed under quarantine](#).²³ Because many elderly citizens are now quarantined in care facilities, family members and healthcare providers depend upon remote ICT technologies to respond to their medical and daily needs.
- ICT infrastructure providers that construct, install and maintain the IT infrastructure backbone at every stage of the pharmaceutical and healthcare-related R&D, manufacturing, supply, and distribution value chain and
- Software service providers that make available remote cloud computing services, cybersecurity solutions, and AI-powered data analytics solutions that underlie all operational aspects of the healthcare delivery and pharmaceutical R&D process.²⁴

To mitigate impacts on the US healthcare delivery supply chain and to ensure that “essential workers” are able to deliver the services declared by the federal government as essential to the US COVID-19 response, we recommend lifting tariffs on the subject products.

2. Impacts of Tariffs on Consumers of Services Relevant to COVID-19 Response

On the healthcare demand side, the subject products are used: (1) by patients and consumers of healthcare information, services, and products, including via telemedicine technologies, and (2) by the general population to comply with social distancing mandates that are critical to reducing the spread of COVID-19, while mitigating its economic impact. We address each of these two facets of the demand for the subject products below.

a. Healthcare Consumers Use the Subject Products for Their Remote Healthcare Needs

These products are critical to interactions and communications among the general population, healthcare providers, and government officials, as Americans rely on these products to educate and protect themselves from transmission of COVID-19; to secure remote healthcare and telemedical services; to request direct treatment and transportation to hospitals and medical institutions; and to maintain contact and respond to the medical needs of vulnerable populations who are confined under quarantine conditions in nursing homes or other institutions.

The need for telemedicine and telehealth services during the COVID-19 crisis is particularly pronounced. Across the healthcare sector, healthcare providers are taking steps to promote telemedicine²⁵ – helping manage capacity limitations at hospitals; reduce the risk of transmission to patients who can be diagnosed, advised, and treated virtually, rather than in person; and encouraging patients to seek treatment virtually even if they would otherwise postpone treatments for fear of visiting hospital emergency rooms.²⁶

The US government has also declared that expanded access to these services (e.g., under Medicare) is:

part of the broader effort by ... the White House Task Force to ensure that all Americans – particularly those at high-risk of complications from the virus that causes the disease COVID-19 – are aware of easy-to-use, accessible benefits that can help keep them healthy while helping to contain the community spread of this virus. ...

[W]ith the emergence of the virus causing the disease COVID-19, there is an urgency to expand the use of technology to help people who need routine care, and keep vulnerable beneficiaries and beneficiaries with mild symptoms in their homes while maintaining access

to the care they need. Limiting community spread of the virus, as well as limiting the exposure to other patients and staff members will slow viral spread.

*It is imperative during this public health emergency that patients avoid travel, when possible, to physicians' offices, clinics, hospitals, or other health care facilities where they could risk their own or others' exposure to further illness.*²⁷

Reflecting the importance of telemedicine and telehealth services at this time, the Department of Health and Human Services (HHS) has lifted restrictions on reimbursement guidelines and waived other requirements for use of telemedicine²⁸, and state governors, state health departments, and boards of medicine have issued orders, guidance and protocols to facilitate the use of telemedicine and telehealth services.²⁹

Unfortunately, tariffs imposed on the subject products impede the ability of healthcare providers to offer, and healthcare patients to access, telemedicine and telehealth services consistent with these federal and state government directives. The Health Resources and Services Administration (HRSA) defines telemedicine as:

Electronic information and telecommunications technologies to support and promote long-distance clinical health care, patient and professional health-related education, and public health and health administration. Technologies include videoconferencing, the internet, store-and-forward imaging, streaming media, and landline and wireless communications.³⁰

Telemedicine and telehealth services, including those remote health services specifically funded under the Medicare, require use of the subject products – including computing devices, networking equipment, and various accessories and components.³¹ For many, the cost of such equipment deters them from accessing subsidized services under Medicare and Medicaid. Tariffs exacerbate this situation and frustrate official US government policies to promote telemedicine and telehealth services.

b. The General Population Uses the Subject Products to Comply with Social Distancing Mandates

The subject products are also indispensable to meeting federal and state government social distancing mandates that are critical to reducing the transmission rates and ending the COVID-19 outbreak. By some estimates, workplace social distancing measures can reduce disease attack rates by up to 73% and school closures can reduce these rates by up to 40%.³²

The US federal government has issued broad guidance on [social distancing](#),³³ including directives to “[engage in schooling from home whenever possible](#),”³⁴ and to “[work remotely when possible](#).”³⁵ Consistent with that guidance, US state and local authorities have adopted a layered response that includes social distancing measures; travel restrictions and limits on non-essential commercial activities; closures of workplaces, schools, retail and dining establishments, and other gathering places; and the corresponding transition to remote work, remote learning, e-commerce, and associated technologies.³⁶

Continued distribution, installation, and maintenance of the subject products are critical to successful social distancing and keeping Americans safe, while minimizing negative economic impacts. Tariffs on the subject products only increase the challenges faced by:

- The student population in accessing the remote instruction and learning technologies critical to maintaining a skilled and educated US population;
- The US labor force in accessing remote work options necessary to maintain international competitiveness and economic productivity; and
- The general public in accessing e-commerce platforms that create a relatively safe means of purchase necessities and food, while also supporting the economy through consumer spending.

To avoid undermining or frustrating US government social distancing mandates intended to reduce the spread of COVID-19, and to promote increased access to telehealth, remote work, and remote learning services, we recommend lifting tariffs on the subject products.

D. Conclusion

For all of the foregoing reasons, BSA favors the lifting of tariff restrictions on the importation of the subject products, which represent critical supplies and equipment needed to respond to this medical and economic crisis by federal and state governments; hospitals, clinics, and other healthcare providers; medical device manufacturers; pharmaceutical R&D laboratories and institutions; nursing and dependent care providers; as well as private enterprises and the general population.

APPENDIX I**SUBJECT PRODUCT LIST**

HTSUS code	Exemplary products	Uses Relevant to:
8471.41.01 8471.49.00 8471.50.01	Telehealth hubs; VR/AR systems; All-in-one computers, and other computer workstations; servers, etc. (used in various healthcare and other settings for medical, social distancing, and related purposes)	<ul style="list-style-type: none"> • Direct purchase by health-related organizations, including for use in hospitals and other healthcare settings; telemedicine and home health settings; nursing and dependent care settings; pharmaceutical R&D and laboratory settings; pharma/medical device supply chain, manufacturing, office support. VR/AR systems are also used in remote surgery, rehab, medical training, and other contexts. • ICT infrastructure needed for general population to meet social distancing mandates (E.g., through telehealth, telework, and remote learning). Also used in data centers and telecommunications networks; • Used by essential workers across substantially all sectors deemed critical by CISA, including telecommunications, IT, and healthcare/public health.
8471.70.20 8471.70.40 8471.70.50 8471.70.60 8471.70.90	Hard disk drives and other data storage units; card readers (for use with Computed Tomography (“CT”), Magnetic Resonance Imaging (“MRI”), Ultrasound and Positron Emission Tomography (“PET”) systems, and other medical and ICT equipment)	<ul style="list-style-type: none"> • Incorporated as a critical component or accessory for a medical device or ICT product – e.g.,– for use with CT, MRI, Ultrasound and PET systems, and other medical and ICT products.³⁷ • Direct purchase by health-related organizations, including for use in hospitals and other healthcare settings; telemedicine and home health settings; nursing and dependent care settings; pharmaceutical R&D and laboratory settings; pharma/medical device supply chain, manufacturing, office support. • Infrastructure needed for general population to meet social distancing mandates (E.g., through telehealth, telework, and remote learning). Also used in data centers and telecommunications networks; • Used by essential workers across substantially all sectors deemed critical by CISA, including telecommunications, IT, and healthcare/public health.
8471.80.10	Docking Stations, USB Hubs, Adapters (used in various healthcare and other settings for medical, social distancing, and related purposes)	<ul style="list-style-type: none"> • Direct purchase by health-related organizations, including for use in hospitals and other healthcare settings; telemedicine and home health settings; nursing and dependent care settings; pharmaceutical R&D and laboratory settings; pharma/medical device supply chain, manufacturing, office support. • Infrastructure needed for general population to meet social distancing mandates (E.g., through telehealth, telework, and remote learning). Also used in data centers and telecommunications networks; • Used by essential workers across substantially all sectors deemed critical by CISA, including telecommunications, IT, and healthcare/public health.
8473.30.11	Memory modules, including DRAM and RAM; printed circuit assemblies	<ul style="list-style-type: none"> • Incorporated as a critical component into medical devices and ICT products. • Infrastructure used in data centers and telecommunications networks.
8504.40.60 8504.40.85	Power Supply Units (for use with hospitals beds, for mobile clinical workstations, and other medical and ICT equipment).	<ul style="list-style-type: none"> • Direct purchase by health-related organizations for use with hospitals beds³⁸, for mobile clinical workstations,³⁹ and other medical and ICT equipment. This includes hospitals and other healthcare settings; telemedicine and home health settings; nursing and dependent care settings; pharmaceutical R&D and laboratory settings;

HTSUS code	Exemplary products	Uses Relevant to:
		<p>pharma/medical device supply chain, manufacturing, office support.</p> <ul style="list-style-type: none"> • Infrastructure needed for general population to meet social distancing mandates (E.g., through telehealth, telework, and remote learning). Also used in data centers and telecommunications networks; • Used by essential workers across substantially all sectors deemed critical by CISA, including telecommunications, IT, and healthcare/public health
8517.62.00	Networking systems (e.g. modems, switches, routers); and Transmission devices supporting voice and image recognition, (e.g., async network modules, optical modules, wireless NFC modules) – for use in patient monitoring devices, intra-hospital communication devices, and other medical and ICT equipment.	<ul style="list-style-type: none"> • Direct purchase by health-related organizations – for example as patient monitoring devices⁴⁰ or as intra-hospital communication devices among medical staff.⁴¹ This includes hospitals and other healthcare settings; telemedicine and home health settings; nursing and dependent care settings; pharmaceutical R&D and laboratory settings; pharma/medical device supply chain, manufacturing, office support. • Infrastructure needed for general population to meet social distancing mandates (E.g., through telehealth, telework, and remote learning). Also used in data centers and telecommunications networks; • Used by essential workers across substantially all sectors deemed critical by CISA, including telecommunications, IT, and healthcare/public health.
8537.10.91 8537.20.00	Keyboards, input panels, etc. (e.g., used with ventilators and other medical devices as well as ICT products)	<ul style="list-style-type: none"> • Direct purchase by health-related organizations – for example as accessories or components in connection with ventilators⁴² and other medical devices as well as ICT products. This includes hospitals and other healthcare settings; telemedicine and home health settings; nursing and dependent care settings; pharmaceutical R&D and laboratory settings; pharma/medical device supply chain, manufacturing, office support. • Infrastructure needed for general population to meet social distancing mandates (E.g., through telehealth, telework, and remote learning). Also used in data centers and telecommunications networks; • Used by essential workers across substantially all sectors deemed critical by CISA, including telecommunications, IT, and healthcare/public health.
8542.31.00	IC processors (incorporated into ultrasound equipment, capnography equipment, clinical review displays, diagnostic displays, diagnostic robots, disinfection robots, telepresence robots, telehealth hubs, drug delivery devices, electronic beds, infusion pump, nebulizers, sequencers/PCRs, ventilators, and vital sign monitors and other displays, and other medical and ICT equipment).	<ul style="list-style-type: none"> • Incorporated after importation into a wide array of medical devices and ICT products, including ultrasound equipment, capnography equipment, clinical review displays, diagnostic displays, diagnostic robots, disinfection robots, telepresence robots, telehealth hubs, drug delivery devices, electronic beds, infusion pump, nebulizers, sequencers/PCRs, ventilators, and vital sign monitors and other displays.
8544.42.20 8544.42.90 8544.49.10 8544.51.80	Coaxial cables with connectors, adaptors fitted with connectors, etc. (used with ventilators, hospital communication devices, and other medical and ICT equipment).	<ul style="list-style-type: none"> • Used as an accessory or component in connection with ventilators,⁴³ intra-hospital communication devices and call cords,⁴⁴ and other medical devices as well as ICT products: Direct purchase by health-related organizations. This includes hospitals and other healthcare settings; telemedicine and home health settings; nursing and dependent care settings;

HTSUS code	Exemplary products	Uses Relevant to:
		<p>pharmaceutical R&D and laboratory settings; pharma/medical device supply chain, manufacturing, office support.</p> <ul style="list-style-type: none"> • Infrastructure needed for general population to meet social distancing mandates (E.g., through telehealth, telework, and remote learning). Also used in data centers and telecommunications networks; • Used by essential workers across substantially all sectors deemed critical by CISA, including telecommunications, IT, and healthcare/public health.

APPENDIX II

Cybersecurity and Infrastructure Security Agency (CISA) Listing of Essential Workers in Selected Sectors That Use the Subject Products

Healthcare / Public Health

- Workers who perform critical clinical research, development, and testing needed for COVID-19 response.
- Healthcare providers and Caregivers including physicians, dentists, psychologists, mid-level practitioners, nurses and assistants, infection control and quality assurance personnel, pharmacists, physical and occupational therapists and assistants, social workers, optometrists, speech pathologists, chiropractors, and diagnostic and therapeutic technicians and technologists.
- Hospital and laboratory personnel (including accounting, administrative, admitting and discharge, engineering, epidemiological, source plasma and blood donation, food service, housekeeping, medical records, information technology and operational technology, nutritionists, sanitarians, respiratory therapists, etc.).
- Workers in other medical and biomedical facilities (including Ambulatory Health and Surgical, Blood Banks, Clinics, Community Mental Health, Comprehensive Outpatient rehabilitation, End Stage Renal Disease, Health Departments, Home Health care, Hospices, Hospitals, Long Term Care, Nursing Care Facilities, Organ Pharmacies, Procurement Organizations, Psychiatric Residential, Rural Health Clinics and Federally Qualified Health Centers, and retail facilities specializing in medical good and supplies).
- Manufacturer workers for health manufacturing (including biotechnology companies), materials and parts suppliers, logistics and warehouse operators, distributors of medical equipment (including those who test and repair), personal protective equipment (PPE), isolation barriers, medical gases, pharmaceuticals (including materials used in radioactive drugs), dietary supplements, blood and blood products, vaccines, testing materials, laboratory supplies, cleaning, sanitizing, disinfecting or sterilization supplies, and tissue and paper towel products.
- Public health / community health workers, including those who compile, model, analyze and communicate public health information.
- Blood and plasma donors and the employees of the organizations that operate and manage related activities.
- Workers who manage health plans, billing, and health information, who cannot practically work remotely.
- Workers who conduct community-based public health functions, conducting epidemiologic surveillance, compiling, analyzing and communicating public health information, who cannot practically work remotely.
- Workers performing information technology and cybersecurity functions at healthcare and public health facilities, who cannot practically work remotely.
- Workers performing security, incident management, and emergency operations functions at or on behalf of healthcare entities including healthcare coalitions, who cannot practically work remotely.
- Pharmacy employees necessary to maintain uninterrupted prescription filling.
- Workers performing mortuary funeral, cremation, burial, cemetery, and related services, including funeral homes, crematoriums, cemetery workers, and coffin makers.
- Workers who coordinate with other organizations to ensure the proper recovery, handling, identification, transportation, tracking, storage, and disposal of human remains and personal effects; certify cause of death; and facilitate access to mental/behavioral health services to the family members, responders, and survivors of an incident.

Communications

- Maintenance of communications infrastructure- including privately owned and maintained communication systems-supported by technicians, operators, call -centers, wireline and wireless providers, cable service providers, satellite operations, Internet Exchange Points, Points of Presence, Network Access Points, back haul and front haul facilities, and manufacturers and distributors of communications equipment.
- Government and private sector employees (including government contractors) with work related to undersea cable infrastructure and support facilities, including cable landing sites, beach manhole vaults and covers, submarine cable depots and submarine cable ship facilities.
- Government and private sector employees (including government contractors) supporting Department of Defense internet and communications facilities.

- Workers who support radio, television, and media service, including, but not limited to front-line news reporters, studio, and technicians for newsgathering, and reporting, and publishing news.
- Network Operations staff, engineers and/or technicians to include IT managers and staff, HVAC & electrical engineers, security personnel, software and hardware engineers, and database administrators that manage the network or operate facilities.
- Engineers, technicians and associated personnel responsible for infrastructure construction and restoration, including contractors for construction and engineering of fiber optic cables, buried conduit, small cells, other wireless facilities, and other communications sector-related infrastructure. This includes construction of new facilities and deployment of new technology as these are required to address congestion or customer usage due to unprecedented use of remote services.
- Installation, maintenance and repair technicians that establish, support or repair service as needed.
- Central office personnel to maintain and operate central office, data centers, and other network office facilities, critical support personnel assisting front line employees.
- Customer service and support staff, including managed and professional services as well as remote providers of support to transitioning employees to set up and maintain home offices, who interface with customers to manage or support service environments and security issues, including payroll, billing, fraud, logistics, and troubleshooting.
- Workers providing electronic security, fire, monitoring and life safety services, and to ensure physical security, cleanliness and safety of facilities and personnel, including temporary licensing waivers for security personnel to work in other States of Municipalities.
- Dispatchers involved with service repair and restoration.
- Retail customer service personnel at critical service center locations for onboarding customers, distributing and repairing equipment and addressing customer issues in order to support individuals' remote emergency communications needs, supply chain and logistics personnel to ensure goods and products are on-boarded to provision these front-line employees.
- External Affairs personnel to assist in coordinating with local, state and federal officials to address communications needs supporting COVID-19 response, public safety, and national security.

Information Technology

- Workers who support command centers, including, but not limited to Network Operations Command Centers, Broadcast Operations Control Centers and Security Operations Command Centers.
- Data center operators, including system administrators, HVAC & electrical engineers, security personnel, IT managers and purchasers, data transfer solutions engineers, software and hardware engineers, and database administrators, for all industries (including financial services).
- Workers who support client service centers, field engineers, and other technicians and workers supporting critical infrastructure, as well as manufacturers and supply chain vendors that provide hardware and software, support services, research and development, and information technology equipment (to include microelectronics and semiconductors), and HVAC and electrical equipment for critical infrastructure, and test labs and certification agencies that qualify such equipment (to include microelectronics, optoelectronics, and semiconductors) for critical infrastructure, including data centers.
- Workers needed to preempt and respond to cyber incidents involving critical infrastructure, including medical facilities, SLTT governments and federal facilities, energy and utilities, and banks and financial institutions, securities/other exchanges, other entities that support the functioning of capital markets, public works, critical manufacturing, food & agricultural production, transportation, and other critical infrastructure categories and personnel, in addition to all cyber defense workers (who can't perform their duties remotely).
- Suppliers, designers, transporters and other workers supporting the manufacture, distribution and provision and construction of essential global, national and local infrastructure for computing services (including cloud computing services and telework capabilities), business infrastructure, financial transactions/services, web-based services, and critical manufacturing.
- Workers supporting communications systems and information technology- and work from home solutions- used by law enforcement, public safety, medical, energy, public works, critical manufacturing, food & agricultural production, financial services, education, and other critical industries and businesses.
- Employees required in person to support Software as a Service businesses that enable remote working, performance of business operations, distance learning, media services, and digital health offerings, or required for technical support crucial for business continuity and connectivity.

Residential / Shelter Facilities and Services

- Workers in dependent care services, in support of workers in other essential products and services.
- Workers who support food, shelter, and social services, and other necessities of life for needy groups and individuals, including in-need populations and COVID-19 responders (including travelling medical staff).
- Workers in animal shelters.
- Workers responsible for the leasing of residential properties to provide individuals and families with ready access to available housing.
- Workers responsible for handling property management, maintenance, and related service calls who can coordinate the response to emergency “at-home” situations requiring immediate attention, as well as facilitate the reception of deliveries, mail, and other necessary services.
- Workers performing housing construction related activities to ensure additional units can be made available to combat the nation’s existing housing supply shortage.
- Workers performing services in support of the elderly and disabled populations who coordinate a variety of services, including health care appointments and activities of daily living.
- Workers supporting the construction of housing, including those supporting government functions related to the building and development process, such as inspections, permitting and plan review services that can be modified to protect the public health, but fundamentally should continue and serve the construction of housing (e.g., allow qualified private third-party inspections in case of government shutdown).

¹ BSA | The Software Alliance (www.bsa.org) is the leading advocate for the global software industry before governments and in the international marketplace. BSA’s members include: Adobe, Atlassian, Autodesk, Bentley Systems, Box, Cadence, CNC/Mastercam, IBM, Informatica, Intel, MathWorks, Microsoft, Okta, Oracle, PTC, Salesforce, ServiceNow, Siemens Industry Software Inc., Sitecore, Slack, Splunk, Trend Micro, Trimble Solutions Corporation, Twilio, and Workday. BSA members are addressing the COVID-19 crisis in a number of ways, including: providing free access to their services; advice and help regarding remote work; extension of contract terms and subscriptions; helping track and disseminate information on the spread of the virus; supporting medical research efforts; preventing the spread of malicious campaigns including email spam, malware, and ransomware; requiring employees to work from home and continuing to pay hourly workers who cannot do their jobs remotely; donating to emergency funds; and partnering with governments to keep people safe. See <https://www.bsa.org/news-events/news/bsa-member-covid-19-resources>.

² US International Trade Commission, *COVID-19 Related Goods: U.S. Imports and Tariffs*, Notice of Institution of Investigation, Inv. No. 332-TA-576 (April 13, 2020), at: https://usitc.gov/secretary/fed_reg_notices/332/332_576_notice_04132020sgl.pdf.

³ BSA shares the widely held view that broad-based, cross-sectoral tariff relief is important to the US economy, and that trade tensions and the cycle of retaliatory tariffs is likely to slow the US economic recovery. See e.g., Congressional Budget Office, *An Update to the Budget and Economic Outlook: 2019 to 2029*, August 2019, https://www.cbo.gov/system/files/2019-08/55551-CBO-outlook-update_0.pdf; Dario Caldarà, Matteo Iacoviello, Patrick Molligo, Andrea Prestipino, and Andrea Raffo, *FEDS Notes: Does Trade Policy Uncertainty Affect Global Economic Activity?* <https://www.federalreserve.gov/econres/notes/feds-notes/does-trade-policy-uncertainty-affect-global-economic-activity-20190904.htm>. (estimating loss of just over 1 percent of GDP from “trade tensions”).

⁴ OECD, *Flattening the Covid-19 Peak: Containment and mitigation policies*, COVID-19 Issue Brief (March 24, 2020) (describing containment and mitigation measures to flatten the peak of COVID-19 and decrease its strain on healthcare systems), available at: https://read.oecd-ilibrary.org/view/?ref=124_124999-yt5ggxirhc&Title=Flattening%20the%20COVID-19%20peak:.Containment%20and%20mitigation%20policies

⁵ See e.g., OECD, *Flattening the Covid-19 Peak*, *infra*.

⁶ <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/social-distancing.html>

⁷ https://www.whitehouse.gov/wp-content/uploads/2020/03/03.16.20_coronavirus-guidance_8.5x11_315PM.pdf

⁸ <https://www.cisa.gov/publication/guidance-essential-critical-infrastructure-workforce#download>

⁹ See, e.g., <https://www.selecthub.com/medical-software/top-health-it-security-trends/>
<https://www.grandviewresearch.com/press-release/global-iot-in-healthcare-market>

¹⁰ <https://www.cisa.gov/publication/guidance-essential-critical-infrastructure-workforce#download>

¹¹ Food & Drug Administration, Technology Modernization Action Plan (2019), available at <https://www.fda.gov/media/130883/download> (underscoring the importance to FDA of predictable and reliable supply of ICT equipment. FDA states that, “[f]ortifying FDA’s technical foundation is the top priority of FDA’s Technology Modernization Plan. This includes making sure we have a robust infrastructure... FTA’s technology infrastructure provides the backbone for ongoing improvements.... This book of work includes traditional information technology (IT) operational capabilities, like computer, storage, and networking... However, without modernized technical capabilities, FDA will not be able to help close the gap between the promise of these new technologies and policies, and the patients who stand to benefit from them.”);

¹² FDA Guidance on Conduct of Clinical Trials of Medical Products during COVID-19 Public Health Emergency (April 16, 2020), available at: <https://www.fda.gov/media/136238/download>

¹³ NIH Center for Information Technology webpage, available at: <https://www.nih.gov/about-nih/what-we-do/nih-almanac/center-information-technology-cit>

¹⁴ US Centers for Disease Control and Prevention, Information Technology Strategic Plan FY 2017–2021, available at: <https://www.cdc.gov/od/ocio/docs/CDC-IT-StrategicPlan2017-2021.pdf#x2019;s%20I%20Strategic%20Plan%20for%202012-2016%3C/a%3E%20> (underscoring the importance to US public health of a predictable and reliable supply of ICT products. CDC’s IT Strategic Plan contains, for example, a goal entitled, “Timely Public Health Data and Information for Health Monitoring and Protection,” which explains that, “IT is a key tool” to “detect emerging health threats, trends, disease outbreaks, and other health risks.” CDC notes that it aims to use IT products to “enhance health threat detection,” and “enhance infrastructure and security to adapt to emerging trends and threats.” Likewise, CDC’s goals include using “IT Tools to Detect and Respond to Health Security Threats,” and CDC explains how it intends to analyze “the array of health data collected through health monitoring, laboratory testing, research and other avenues is how CDC determines new or changing health risks and what actions should be taken or recommended to prevent or reduce the risk from such threats. IT plays a critical role in data management, computational analytics, visualization, and other detection approaches.”)

¹⁵ See e.g., North Carolina Department of Public Health, Policy and Procedure Template for Telehealth Services COVID-19 (April 2020), available at: <https://publichealth.nc.gov/lhd/docs/TelehealthPolicyTemplate-FINAL-WM4-3-2020.pdf>

¹⁶ <https://www.hhs.gov/sites/default/files/hhs-it-strategic-plan-final-fy2017-2020.pdf>

¹⁷ This includes – for example – funding to the VHA to “promote long-distance clinical health care, patient and professional health-related education, public health, and health administration through videoconferencing, the internet, streaming media, and terrestrial and wireless communications”. See *Coronavirus Aid, Relief, and Economic Security Act (CARES Act)*, available at: <https://www.congress.gov/116/bills/hr748/BILLS-116hr748enr.pdf>

¹⁸ <https://www.cisa.gov/sites/default/files/publications/CISA-TIC-TIC%203.0%20Interim%20Telework%20Guidance-2020.04.08.pdf>

¹⁹ See e.g., <https://news.bloomberglaw.com/daily-labor-report/4-reasons-states-are-slow-to-pay-covid-19-unemployment-benefits>.

²⁰ The products identified in Appendix I are directly or indirectly deployed in hospital and other healthcare provider settings, as well as by the general population to comply with social distancing mandates. See e.g.: https://cdw-prod.adobeccqms.net/content/dam/cdw/on-domain-cdwg/industries/healthcare/healthcare-capabilities-brochure.pdf?cm_ven=acquirgy&cm_cat=bing&cm_pla=SGMT+Healthcare&cm_it=Healthcare+Technology+B&s_kwid=AL!4223!10!74217246458214!74217115518476&ef_id=WygXagAAB-oWRRME:20200424163136:s;https://www.cisco.com/c/m/en_us/solutions/industries/portfolio-explorer/portfolio-explorer-for-healthcare.html?s=explore-the-use-cases&u=temporary-field-hospital&o=business-overview.

²¹ Telehealth and telemedicine services, which depend on the subject products, are critical to reducing the spread of COVID-19; relieving shortages and pressures at healthcare providers; and safely providing medical treatment to the general population. See generally, Hashiguchi, *An Overview of the Use of Telemedicine in OECD Countries*, OECD Health Working Paper No. 116 (Jan 17, 2020), available at: <https://www.oecd-ilibrary.org/docserver/8e56ede7-en.pdf?expires=1587916179&id=id&accname=guest&checksum=4701022EDE29B49835D092FB5BCFB985>

The OECD’s *Guide to Measuring ICTs in the Health Sector* defines telehealth as encompassing, a “broad set of technologies that support care between patients and providers, or among providers, who are not co-located. Telemedicine is often defined as synchronous video-mediated consultations between physicians and patients. However, it may also include applications such as remote home monitoring of patients, tele-ICUs, and teleradiology.” See <http://www.oecd.org/health/health-systems/Draft-oecd-guide-to-measuring-icts-in-the-health-sector.pdf>; The Centers for Medicare and Medicaid Services (CMS) define telehealth as encompassing, “two-way, real-time interactive communication between a patient and a physician or practitioner at a distant site through telecommunications equipment that includes, at a minimum, audio and visual equipment.” See <https://www.medicare.gov/Medicare-CHIP-Program-Information/By-Topics/Delivery-Systems/Telemedicine.html>

The Health Resources and Services Administration (HRSA) defines telemedicine as, “electronic information and telecommunications technologies to support and promote long-distance clinical health care, patient and professional health-

related education, and public health and health administration. Technologies include videoconferencing, the internet, store-and-forward imaging, streaming media, and landline and wireless communications." See <https://www.hhs.gov/hipaa/for-professionals/faq/3015/what-is-telehealth/index.html>

²² See American Academy of Pediatrics, Telehealth Webpage, available at: <https://www.aap.org/en-us/professional-resources/practice-transformation/telehealth/Pages/What-is-Telehealth.aspx>

²³ See e.g., <https://www.cms.gov/newsroom/press-releases/cms-announces-new-measures-protect-nursing-home-residents-covid-19>; https://www.cdc.gov/coronavirus/2019-ncov/hcp/long-term-care.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fcoronavirus%2F2019-ncov%2Fhealthcare-facilities%2Fprevent-spread-in-long-term-care-facilities.html; <https://www.ncsl.org/research/health/state-quarantine-and-isolation-statutes.aspx>

²⁴ Access to the ICT equipment identified in this submission, and to related software solutions, may be relevant in the following illustrative contexts: Diagnostic ICT-enabled software tools for patients exhibiting symptoms; the state- and nation-wide review, compilation, and analysis and of COVID-19 testing results; the tracking and tracing of COVID-19 incidence (e.g., contact tracing via ICT devices); HHS and CDC dissemination of public health data and guidance to the general population; the identification, testing and clinical trial analysis of promising drug and vaccine candidates; and so forth.

²⁵ American Association of Family Practitioners, *Using Telehealth to Care for Patients During the COVID-19 Pandemic* (March 2020), available at: <https://www.aafp.org/patient-care/emergency/2019-coronavirus/telehealth.html>

²⁶ Kushner, *Patients With Serious Medical Needs Afraid To Seek Treatment Due To Risk Of Contracting Coronavirus*, Doctor Says, Baltimore CBS Local News (April 20, 2020) ("Doctors are shifting to using telemedicine to treat minor medical needs and to refill prescriptions."), available at: <https://baltimore.cbslocal.com/2020/04/20/coronavirus-medical-issues-treatment/>

²⁷ Medicare Telemedicine Health Care Provider Fact Sheet (March 2020) (emphasis added), available at: <https://www.cms.gov/newsroom/fact-sheets/medicare-telemedicine-health-care-provider-fact-sheet> (explaining that, "the Centers for Medicare & Medicaid Services (CMS) has broadened access to Medicare telehealth services so that beneficiaries can receive a wider range of services from their doctors without having to travel to a healthcare facility. These policy changes build on the regulatory flexibilities granted under the President's emergency declaration. CMS is expanding this benefit on a temporary and emergency basis under the 1135 waiver authority and Coronavirus Preparedness and Response Supplemental Appropriations Act.")

²⁸ See generally, Alliance for Connected Care, *Medicare Telehealth Guidance Documents During the COVID-19 Pandemic* (April 2020), available at: <http://connectwithcare.org/telehealth-guidance-documents-during-the-covid-19-pandemic/>; Alliance for Connected Care, *Other Telehealth Guidance Documents* (April 2020), available at: <http://connectwithcare.org/other-telehealth-guidance-documents/>; HHS Office of Civil Rights, Notification of Enforcement Discretion for Telehealth Remote Communications During the COVID-19 Nationwide Public Health Emergency (March 2020), available at: <https://www.hhs.gov/hipaa/for-professionals/special-topics/emergency-preparedness/notification-enforcement-discretion-telehealth/index.html>; HHS FAQs on Telehealth During COVID-19 Crisis, available at: <https://www.hhs.gov/sites/default/files/telehealth-faqs-508.pdf>

²⁹ See e.g., Alliance for Connected Care, *State Telehealth and Licensure Expansion COVID-19 Dashboard* (April 2020), available at: <http://connectwithcare.org/wp-content/uploads/2020/04/Alliance-for-Connected-Care-State-Telehealth-Expansion-by-Governors-Orders-4-21-20.pdf>; North Carolina Department of Public Health, Policy and Procedure Template for Telehealth Services COVID-19 (April 2020), available at: <https://publichealth.nc.gov/lhd/docs/TelehealthPolicyTemplate-FINAL-WM4-3-2020.pdf>

³⁰ See <https://www.hhs.gov/hipaa/for-professionals/faq/3015/what-is-telehealth/index.html>

³¹ See e.g., Centers for Medicare and Medicaid Services, *General Medicine Toolkit* (March 2020) <https://www.cms.gov/files/document/general-telemedicine-toolkit.pdf> (providing links and identifying technical ICT requirements for telemedicine and telehealth service providers); American Medical Association, *AMA Quick Guide to Telemedicine in Practice* (April 2020), available at: <https://www.ama-assn.org/practice-management/digital/ama-quick-guide-telemedicine-practice> (describing need for ICT equipment including "real-time, audio-video communication tools (telehealth) that connect physicians and patients in different locations; store-and-forward technologies that collect images and data to be transmitted and interpreted later; remote patient-monitoring tools such as blood pressure monitors, Bluetooth-enabled digital scales and other wearable devices that can communicate biometric data for review; verbal/audio-only and virtual check-ins patient portals, messaging technologies, etc." implemented through network equipment, cloud computing infrastructure, and general purpose computers); American Medical Association, *Telehealth Implementation Playbook* (2020), available at: <https://www.ama-assn.org/system/files/2020-04/ama-telehealth-playbook.pdf> (identifying relevant ICT equipment needed for provision of telemedicine services).

³² See OECD, *Flattening the Covid-19 Peak*, *infra*.

³³ <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/social-distancing.html>

³⁴ https://www.whitehouse.gov/wp-content/uploads/2020/03/03.16.20_coronavirus-guidance_8.5x11_315PM.pdf

³⁵ <https://www.cisa.gov/publication/guidance-essential-critical-infrastructure-workforce#download>

³⁶ <https://faq.coronavirus.gov/spread/how-does-the-virus-spread/>

³⁷ US Customs and Border Protection, LightSpeed QX/i CT System, components and miscellaneous printed circuit assemblies, [HQ 964813](https://rulings.cbp.gov/ruling/964813) (April 30, 2002) (classifying hard drive used in connection with Computed Tomography (“CT”), Magnetic Resonance Imaging (“MRI”), Ultrasound and Positron Emission Tomography (“PET”) systems.), available at: <https://rulings.cbp.gov/ruling/964813>

³⁸ See e.g., US Customs & Border Protection, Tariff Classification of a Power Supply from China, [N305510](https://rulings.cbp.gov/ruling/N305510), Aug. 12, 2019 (e.g., power supply units used for hospital beds), available at: <https://rulings.cbp.gov/ruling/N305510>

³⁹ US Customs and Border Protection, The tariff classification of a medical power supply system, [N055934](https://rulings.cbp.gov/ruling/N055934) (Apr 3, 2009), available at: <https://rulings.cbp.gov/ruling/N055934> (“The merchandise subject to this ruling is a medical power supply system. ... The MPS-4007 will be used to supply power to a mobile clinical workstation used in health care facilities. The MPS-4007 (Universal Power Electronics) is a CSA/IEC/EN 60601-1 compliant fully automatic power supply and charger for mobile clinical work stations in hospital environments. It is capable of discharging and charging Li-Fe batteries. The MPS-4007 connects to a Windows compatible computer via USB and provides up to the minute status information about the charge status of the battery and remaining run-time, as well as battery alarms, hibernation and shut down features.”).

⁴⁰ See e.g., US Customs & Border Protection, Tariff Classification of Power Supply Unit and “Smart Charger” Base Station, [N289886](https://rulings.cbp.gov/ruling/N289886) (Sept. 28, 2017) (Subject article is a “wireless remote monitoring system intended for use by researchers and healthcare professionals for continuous collection of physiological data in home and healthcare settings. The collected data is intended to be used by researchers and healthcare professionals for research applications or as an aid to diagnosis and treatment. [T]he system offers a wide variety of applications for physicians and researchers, from allowing them to monitor a patient’s vital signs after hospital discharge to providing data on a patient’s ability to follow through with assigned physical therapy exercises. The primary market for the system will be facilities like hospitals and clinics. ...The “Smart Charger” is a base unit that is used to charge the “Sensor Patches” and a smartphone as well as facilitate the transfer of data from the patches to the smartphone. ... The “Sensor Patches” transmit data to the “Smart Charger” base rather than directly to the smartphone because the Bluetooth hardware and software implementations in most phones are too slow for large data transfer and can sometimes be unreliable.”), available at: <https://rulings.cbp.gov/ruling/N289886>

⁴¹ See e.g., US Customs & Border Protection, Tariff Classification of CA50 Voice and Data Device, [N019509](https://rulings.cbp.gov/ruling/N019509) (Dec. 7, 2007) (“The CA 50 voice and data device features voice and data in a single device. ... In a hospital setting, requests for everything from patient transport and janitorial service to medical equipment maintenance can be quickly and easily sent to the right staff member.”), available at: <https://rulings.cbp.gov/ruling/N019509>

⁴² See e.g., US Customs & Border Protection, Tariff Classification of Printed Circuit Board Assembly from China, [N308579](https://rulings.cbp.gov/ruling/N308579) Jan. 15, 2020 (e.g., keypads used to electrically control ventilators, such as start/stop functions and alarm silencing functions when switches are pressed.), available at: <https://rulings.cbp.gov/ruling/N308579>

⁴³ See e.g., US Customs & Border Protection, Tariff Classification of Cables from China, [N308578](https://rulings.cbp.gov/ruling/N308578)

Jan 8, 2020 (e.g., cable that connects with the PCB connector within a ventilator; cable that connects with external DC power source cable in a ventilator; cable that connects ventilator to a custom CO2 sensor in order to expand the capability of the breathing apparatus), available at: <https://rulings.cbp.gov/ruling/N308579>

⁴⁴ US Customs & Border Protection, Tariff Classification of a Corridor Light and a Call Cord, [NY816259](https://rulings.cbp.gov/ruling/NY816259) (Nov. 21, 1995) , available at <https://rulings.cbp.gov/ruling/816259> (The light “is mounted above the door to a hospital room and becomes illuminated when a patient summons assistance. The patient calls for help by depressing a button attached to a call cord. This cord is a vinyl covered electrical cord with the call button at one end and a right angle plug molded to the other end. The plug is inserted into a wall outlet near the patient’s bed. ... The applicable subheading for the call cord will be [8544.51.8000](https://www.ecfr.gov/current/title-19/chapter-I/subchapter-E/section-1912.51.8000), HTS.”)