

Medical Waste Management Market Set to Reach US\$ 11.8 Billion by 2031 Amid Sustainability Push

Growing healthcare infrastructure, stricter regulations, and eco-friendly innovations drive the medical waste management market forward.

AUSTIN, TX, UNITED STATES, October 13, 2025 /EINPresswire.com/ -- The medical waste management market globally reached a value of US\$ 8.9 billion in 2022 and is projected to touch US\$ 11.8 billion by 2031, growing at a compound annual growth rate (CAGR) of 5.3% during 2024-2031 according to DataM Intelligence. This surge stems from a rising number of



healthcare facilities, increasing usage of single-use medical devices, greater awareness of environmental and health hazards posed by improper waste disposal, and stricter government regulations across major economies.

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As healthcare expands, so does the responsibility to manage waste sustainably. Smart technologies and policy-driven innovations are reshaping medical waste management into a cleaner, safer industry."

DataM Intelligence

Medical waste encompasses a broad range of refuse, including infectious material, pharmaceutical residues, sharps, and general healthcare detritus. Effective management is essential to keeping healthcare environments safe, reducing ecological harm, and meeting regulatory compliance requirements. With North America leading market share and onsite treatment segments

dominating globally, industry focus is shifting towards advanced waste handling, recycling, and

sustainable practices.

Key Highlights from the Report

- ☐ The global medical waste management market is forecast to reach US\$ 11.8 billion by 2031 at a CAGR of 5.3%.
- ☐ The onsite treatment segment leads the industry and accounts for about 37.8% of total market share.
- ☐ North America is expected to maintain dominance, holding approximately 38.3% market share by 2030.
- ☐ Hospitals in the US generate up to 6 million tons of medical waste annually, emphasizing the magnitude of regional demand.
- ☐ Leading market players include Stericycle Inc., Sharp Compliance Inc., Waste Management Inc., and Republic Services Inc..
- ☐ The Russia-Ukraine conflict and COVID-19 have both moderately impacted market growth, supply chains, and healthcare infrastructure in affected regions.

Market Segmentation

Medical waste management is widely segmented by service type, treatment, type of waste, treatment site, and geographic region. Key service types involve disposal, recycling, collection, transportation, storage, and more. Disposal remains essential for critical hazardous materials, while recycling and recovery are increasingly prioritized in sustainability-oriented healthcare systems.

Treatment approaches include chemical treatment, incineration, autoclaving, biological treatment, and hybrid solutions. Chemical treatment and incineration remain prominent, especially for infectious and hazardous waste. However, innovative onsite techniques such as autoclaving and biological processes are gaining share, supported by new product launches like Envetec's GENERATIONS technology.

Types of medical waste include non-hazardous, hazardous, infectious/pathological, pharmaceutical, sharps, and several other subcategories. Infectious and pathological wastes require more complex handling and treatment due to risks associated with contagious diseases.

Treatment sites are classified as onsite or offsite, with onsite treatment holding the largest share. The trend towards onsite processing is driven by safety, regulatory mandates, efficiency, and the advent of advanced cleantech systems that allow for immediate neutralization of risks at the point of generation.

End-users span hospitals, clinics, research institutions, pharmaceutical companies, diagnostic labs, and more. Larger hospitals and research centers remain primary generators and clients

due to the massive daily volumes produced.

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Regional Insights

Globally, North America is anticipated to retain leadership, accounting for 38.3% of market share by 2030 according to DataM Intelligence. High rates of medical waste generation, stringent regulatory enforcement, and early adoption of advanced processing technologies are driving factors. The American Medical Association estimates that US hospitals alone generate 6 million tons annually, highlighting the massive scale of demand.

Europe follows as a significant market, driven by strong healthcare systems, environmental regulations, and rising adoption of eco-friendly solutions. The Asia-Pacific region is emerging swiftly owing to increasing healthcare investment, expanding hospital networks, and supportive government initiatives such as China's Global Development backing in the Philippines, which provided cutting-edge autoclave equipment for medical waste management.

South America and the Middle East & Africa, though early-stage markets, are experiencing a surge in infrastructure development, with international support from organizations like the Inter-American Development Bank in Brazil to modernize waste management through advanced mapping and analytics.

Market Dynamics

Market Drivers

Increasing healthcare expenditure globally is fuelling market growth, notably in emerging economies. India's public healthcare spending has risen from 1.3% of GDP in 2019–2020 to 2.1% in 2021–2022. Similarly, South Korea, Singapore, and several Asian nations have significantly increased their healthcare budgets, bringing more facilities and higher waste volumes online.

Stringent government regulations regarding safe disposal and handling of medical waste are forcing the adoption of specialized equipment and protocols. Regulatory agencies worldwide are establishing rigorous standards for separation, transportation, and destruction of hazardous healthcare refuse.

Accelerating innovation and rising adoption of cleantech and eco-friendly waste treatment solutions, such as onsite shredders, hybrid autoclaves, and advanced biological systems, are enabling healthcare providers to meet regulatory and sustainability requirements more efficiently.

Market Restraints

Despite growth, high capital requirements for medical waste management infrastructure present

a notable restraint, especially for smaller clinics and emerging economies. For example, a midrange hybrid autoclave capable of treating over 100 kg per hour can cost between US\$ 250,000 to US\$ 650,000, whereas large-scale incinerators cost several million dollars with ongoing maintenance and regulatory compliance costs. Limited awareness and compliance in rural or resource-scarce settings continue to hamper overall market penetration, resulting in environmental and public health risks.

Market Opportunities

Reasons to Buy the Report

Growing government support and partnerships with international development agencies offer robust opportunities for market expansion. Notable recent initiatives have provided technologically advanced equipment and capacity-building support in developing countries. Corporate investments and mergers/acquisitions are shaping the competitive landscape, creating cross-selling possibilities and enabling businesses to broaden service offerings. Advanced digital mapping, analytics, and real-time surveillance, such as wastewater virus detection technologies, pave the way for new growth segments in medical waste management.

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☐ Comprehensive segmentation and growth analysis across all major market categories.☐ Access to Excel sheets with detailed industry data points, figures, and tables for in-depth
market evaluation.
 Identification of commercial opportunities based on emerging trends and co-development strategies.
☐ Market mapping with key products and players for competitive benchmarking.
☐ Insights from exhaustive interviews and primary data collection, enriching qualitative
analysis.
Frequently Asked Questions (FAQs)
☐ How Big is the Global Medical Waste Management Market?
☐ Who are the Key Players in the Medical Waste Management Market?
□ What is the Projected Market Growth Rate through 2031?
☐ What is the Market Forecast for North America Medical Waste Management?
☐ Which Region is Estimated to Lead the Medical Waste Industry during the Forecast Period?

Company Insights

- Stericycle Inc.
- Sharp Compliance Inc.
- Waste Management Inc.

- Clean Harbors Inc.
- Suez Environnement S.A.
- Republic Services Inc.
- Daniels Sharpsmart Inc.
- Veolia Environment
- BioMedical Waste Solutions LLC
- Remondis Medison GmbH

Recent Developments:

- -In September 2025, Stericycle launched an Al-driven medical waste tracking system to enhance compliance, optimize disposal routes, and improve sustainability. The system reduces environmental impact while ensuring regulatory adherence.
- -In August 2025, Waste Management, Inc. expanded its healthcare services with new on-site medical waste treatment facilities, improving operational efficiency and safety. The expansion supports hospitals and clinics nationwide.
- -In July 2025, Daniels Health introduced automated sharps disposal units with real-time monitoring, reducing exposure risk for healthcare staff. The solution enhances safety and streamlines waste management processes.

Conclusion

The medical waste management market is entering a dynamic phase, propelled by robust healthcare growth, government backing, and cross-sector innovation. North America sets the benchmark in both scale and regulatory enforcement, while regions in Asia-Pacific and South America are rapidly climbing the trajectory supported by policy shifts and international collaborations. While capital investment remains a challenge, evolving treatment technologies and rising awareness promise ample opportunities for market growth and sustainable healthcare infrastructure. Stakeholders across the value chain—from manufacturers to investors and researchers stand to benefit from deepened market intelligence and future-facing strategies rooted in comprehensive reports like those from DataM Intelligence

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