

# State Policies and Facility Practices of IV Hydration Spas in the US

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**IMPORTANCE** While the number of intravenous (IV) hydration spas has grown over the past decade, information regarding their regulation and practices remains sparse, despite concerns about oversight and safety.

**OBJECTIVE** To review state-level policies related to IV hydration spa oversight and regulation, and examine US facility practices, including product offerings, product claims, and staffing.

**DESIGN, SETTING, AND PARTICIPANTS** In June 2024, a cross-sectional content analysis of state-issued, public-facing regulatory laws and statements was conducted for all 50 US states and the District of Columbia (DC). In July and August 2024, the websites of 5 IV hydration spas in each state and DC were reviewed. Finally, from August through October 2024, a secret shopper study was conducted of 2 randomly selected IV hydration spas in each state and DC from the website review.

**MAIN OUTCOMES AND MEASURES** The policy analysis determined whether states explicitly addressed 4 aspects of IV hydration spa oversight: governance, prescriber credentials, dispensing practices, and compounding practices. Website review ascertained product offerings, product claims, and staffing at each site. The secret shopper script included questions on the availability of licensed health professionals, product offerings, pricing, and potential risks or waiver requirements as well as insurance coverage.

**RESULTS** Although 32 states have issued some form of IV hydration spa-related guidance, policies varied widely and only 4 state policies addressed governance, prescriber credentials, dispensing practices, and compounding practices. Review of 255 facility websites found spa practices also varied with respect to product offerings, product claims, and staffing. All offered IV hydration therapy, most commonly combined with magnesium (n = 146 [57.3%]) and glutathione (n = 137 [53.7%]) and vitamin injections (n = 162 [63.5%]) were also commonly offered. All websites also included claims for beneficial uses, although only 2 (0.8%) cited sources for these beneficial health claims. The secret shopper study of 87 randomly selected facilities corroborated the website review: 24 (27.6%) required consultation with a licensed medical professional before treatment, 75 (86.2%) recommended specific therapies for proffered headache and cold symptoms, and 21 (24.4%) described potential risks.

**CONCLUSIONS AND RELEVANCE** This mixed-methods study found that state-level policies governing IV hydration spas and facility practices vary widely, suggesting more stringent oversight may be necessary to protect public health.

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Intravenous (IV) hydration spas are defined as any commercial facility that offers IV infusion therapies to the public, including hydration solutions alone or combined with electrolytes; vitamins; compounded pharmaceutical products, such as glucagon-like peptide-1 (GLP-1) agonists and ketorolac; and other supplemental minerals and amino acids. Hydration spas market themselves as facilities offering treatments for a wide variety of conditions, including fatigue, hangovers, and wellness maintenance.<sup>1</sup> There is limited evidence that these therapies benefit consumers<sup>2</sup> but rising concerns about their safety, with reports of infections and contaminated products.<sup>3</sup> The larger medical spa industry earned \$15 billion in revenue in 2022,<sup>4</sup> with approximately 10% derived from IV hydration spas, and continued growth is expected,<sup>5,6</sup> as the number of medical spas has risen from 5431 in 2018 to 8841 in 2022.<sup>4</sup> However, estimates are uncertain and regulation remains inconsistent, in part because IV hydration spas fall under the broader umbrella of medical spas, which offer services outside of standardized medical care. Although IV fluids are subject to US Food and Drug Administration (FDA) regulation as Class II medical devices, many IV fluids used in IV hydration spas are compounded mixtures of FDA-approved products with other components.

For this reason, IV hydration spa facilities are typically considered independent compounding pharmacies. Under Section 503A of the Federal Food, Drug, and Cosmetic Act, such facilities are exempt from premarket approval and current good manufacturing and labeling requirements typically associated with pharmaceutical regulation. However, these therapies must be compounded by a licensed pharmacist in a state-licensed pharmacy or federal facility or by a licensed physician on the basis of a valid, patient-specific prescription. Compounded drugs may still be considered adulterated if they have been prepared, packed, or held under insanitary conditions.

In 2013, in response to a prominent public health crisis wherein a Massachusetts compounding pharmacy distributed contaminated steroids that led to more than 750 cases of fungal infection and more than 60 deaths, Congress passed the Drug Quality and Security Act, which provided FDA oversight of voluntarily registered outsourcing facilities that compounded medications for large-scale, non-patient-specific use.<sup>7</sup> The legislation was an attempt to balance patient safety and access to these compounded products, but concerns have since been raised about the adequacy of the agency's oversight authorities, and, to the study investigators' knowledge, IV hydration spas do not register as outsourcing facilities, leaving much of their regulation to state authorities.<sup>7</sup>

Despite the lack of clear federal oversight, adverse events involving IV hydration spas continue to receive FDA attention. For instance, in 2021, following a report of septic shock after a patient received IV infusion therapy from a medical clinic providing compounding services, the FDA and the National Association of Boards of Pharmacy shared information regarding safety concerns and the need for regulation of these facilities.<sup>8,9</sup> The FDA issued a warning to states that described examples of compounding pharmacies, including IV hydration spas, that may have failed to meet federal and state requirements related to sanitary packaging, preparation and

## Key Points

**Question** Do US states and intravenous (IV) hydration spa sites vary in policy, regulation, and practice?

**Findings** In this mixed-methods study examining state policies and site practices across all 50 US states and the District of Columbia, it was found that state-level policies governing IV hydration spas vary widely, with only 4 states comprehensively addressing all facets of regulation; facility practices also varied with regard to product offerings, product claims, and staffing. A secret shopper study showed that 86.2% of sites recommended specific therapies for proffered headache and cold symptoms.

**Meaning** More stringent oversight of IV hydration spas may be necessary to protect public health.

storage conditions, and on-site requirements for licensed professionals.<sup>8</sup> During the IV fluid shortage that began in 2024, physicians voiced concern that infusion facilities were diverting fluids from critical areas where fluids were needed acutely.<sup>10</sup>

Although there have been repeated episodes that have raised concerns about oversight and safety, there has been limited scrutiny of the IV hydration spa industry, raising important questions regarding public health protections. These questions are magnified because these spas operate adjacent to the health care system; few health insurance plans cover their services and patients pay out of pocket. In fact, most individuals who use these facilities solicit care without professional referral or often the awareness of their physicians.<sup>11</sup> Accordingly, the objective was to conduct a mixed-methods study that began with a comprehensive review of state-level policies related to IV hydration spa oversight and regulation, followed by an examination of IV hydration spa practices across the US, including product offerings, product claims, and staffing. The study investigators expect the results will offer insights into the current and potential future policy approaches to regulating IV hydration spas.

## Methods

### Study Overview

This mixed-methods study had 3 phases. First, we reviewed state-level regulatory policies that currently govern IV hydration spas. Then, to better understand standards and practices across the US, we examined current facilities in 2 ways—first, by reviewing a national sample of IV hydration spa websites, followed by a secret shopper study of selected IV hydration spas. This study was exempt from full institutional review board review because it was based on publicly available information, in accordance with 45 CFR §46. Informed consent was not needed because no patient data were used. A more detailed description of the methods is available in the eMethods in Supplement 1.

### Phase 1: State-Level IV Hydration Spa Policy Review

In June 2024, we conducted internet searches for IV hydration and medical spa regulations and policies for all 50 US

states and the District of Columbia (DC). Regulations on IV hydration spas were collected, if available, as well as policies, position statements, guidelines, and meeting minutes from relevant boards and associations. State policies regulating cosmetic medical procedures other than IV therapies or regulating medical spas not explicitly providing IV hydration therapy were excluded. We conducted a content analysis of these state policies to determine whether policies explicitly addressed any of the following 4 aspects of IV hydration spa oversight: governance (referring to regulation of administration/ownership), prescriber credentials, dispensing practices, and compounding practices. Descriptive statistics were used to summarize all findings.

### Phase 2: IV Hydration Spa Website Review

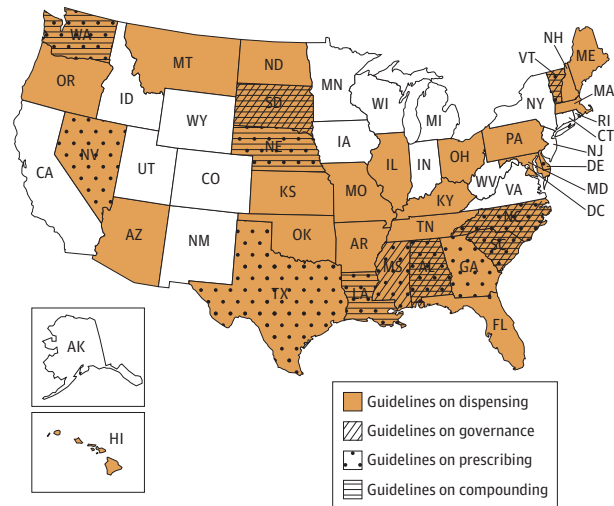
In July and August 2024, we conducted internet searches using the term *IV hydration spa* [STATE] for all 50 US states and DC; all searches were conducted by a research assistant with oversight by a study investigator (A.S.) using web searches. The first 5 IV hydration spa websites from each state's search results were reviewed, totaling 255 sites. We conducted a content analysis of each website to ascertain product offerings, product claims, and staffing. Product offering information included which IV and non-IV therapies were available for purchase. Product claims included described uses of IV hydration therapies and cited references, if provided. These claims were also entered into an artificial intelligence (AI) platform in March 2025 (Claude 3.7 Sonnet model [Perplexity AI]) to assess for commonalities and frequencies of claims, as used in prior studies (see the eMethods in Supplement 1 for details on the AI platform analysis).<sup>12</sup> Staffing information included owner credentials, medical director credentials, health professional qualifications and requirements for their presence on-site, and emergency protocols, if available. Data were aggregated across all 255 sites and descriptive statistics were used to summarize all findings.

### Phase 3: IV Hydration Spa Secret Shopper Study

From August through October 2024, we conducted a secret shopper study of 2 randomly selected IV hydration spas from among the 5 reviewed in the second phase of the study for each of the 50 US states and DC (see eMethods in Supplement 1 for additional details on site selection). Phone numbers from the website were used to call facilities directly. All sites were called by a single investigator (I.W.) using a standardized script (eAppendix 1 in Supplement 1) in which the secret shopper posed as an interested consumer asking for information about IV hydration therapy services in the context of proffered headache and cold symptoms.

The secret shopper script included questions on the availability of licensed health professionals for questions or care, product offerings, pricing, and insurance coverage-related issues. The secret shopper also asked about potential risks or waiver requirements. Sites that could not answer any of the questions were excluded without replacement with alternate facilities. Descriptive statistics were used to summarize all findings.

**Figure. State-Level Intravenous Hydration Spa Policies and Regulations for All 50 US States and the District of Columbia<sup>a</sup>**



<sup>a</sup>Coded based on the number of oversight categories addressed: governance, prescriber credentials, dispensing practices, and compounding practices, as of June 2024. States represented in white did not have any of the 4 guidelines in place.

## Results

### Phase 1: State-Level IV Hydration Spa Policy Review

As of June 2024, no US state or DC had enacted legislation specifically to regulate IV hydration spas. However, 32 states (62.7%) had issued policies and statements that explicitly addressed at least 1 of the 4 aspects of IV hydration spa oversight we examined: governance, prescriber credentials, dispensing practices, and compounding practices (Figure) (see eTable 1 in Supplement 1 for state-level details for each of the 4 aspects of IV hydration spa oversight).

Six states (11.8%) had issued position statements regarding IV hydration spa governance, most commonly permitting the practice of medicine (which included IV therapy) if a physician, Advanced Practice Registered Nurse (APRN), or certified physician assistant (PA-C) had exclusive authority over medical decision-making. Although other states, such as California, have extensive corporate practice of medicine (CPOM) and scope of practice policies, they had not issued position statements explicitly addressing IV hydration spas.

Twelve states (23.5%) had issued prescribing practice guidelines, typically requiring a licensed medical professional to prescribe IV therapy. Thirty-two states (62.7%) had issued guidance on dispensing, 17 (33.3%) of which had regulations that defined nursing scope of practice, most commonly whether licensed practical nurses can independently dispense IV fluids, with variation in scope of practice for different nursing certifications. Similarly, 10 states (19.6%) had issued statements on standing orders, also with variation regarding how these can be utilized (most prohibited the use of standing orders and required individualized prescriptions for

each patient). Finally, there were 8 states (15.7%) that had issued guidance on general compounding practices. These guidelines generally required that a licensed physician or health professional personally compound medications, with variation in who can compound in each state (for instance, Certified Registered Nurse Practitioners are permitted to compound in Alabama<sup>11</sup> but in Louisiana<sup>13</sup> and Vermont,<sup>14</sup> APRNs cannot). Interestingly, in South Carolina, if a practice is 100% practitioner-owned (MD [Doctor of Medicine], DO [Doctor of Osteopathic Medicine], APRN, PA-C), then “a pharmacy permit is not required.”<sup>15</sup>

Four states (7.8%)—Alabama, North Carolina, South Carolina, and Vermont—had issued policies or statements that addressed all 4 oversight categories, offering some variation of the following: (1) provision of IV therapy is a practice of medicine and as a result, a licensed health professional (typically a physician, PA-C, or nurse practitioner) must provide an individualized prescription for IV therapy; (2) compounding must generally be done in a facility that is permitted as a pharmacy by the state; and (3) dispensing of IV therapy can be performed by registered nurses and other licensees with medication administration in their scope of practice.<sup>11,14-17</sup> Other questions regarding permitted indications for use, advertising, and on-site requirement of health professionals either varied or were absent in these states.

### Phase 2: IV Hydration Spa Website Review

The 255 unique IV hydration spa websites reviewed included 5 from every US state and DC. All offered IV hydration therapy, most commonly combined with magnesium (n = 146 [57.3%]), glutathione (n = 137 [53.7%]), and nicotinamide adenine dinucleotide (n = 130 [51.0%]). Active pharmaceuticals, such as ketorolac (n = 65 [25.5%]) and ondansetron (n = 67 [26.3%]) were offered less frequently (Table 1). The most commonly offered non-IV hydration therapy products were vitamin injections (n = 162 [63.5%]) and GLP-1 agonists (n = 70 [27.4%]) for weight loss.

Although all IV hydration spa websites included claims for beneficial uses of IV hydration therapy, only 2 sites (0.8%) in 2 different states cited sources for these beneficial health claims, and only 1 of those sites (0.4%) provided a reference for the use of IV therapy; the remaining 253 sites (99.2%) provided no cited references for claims related to product efficacy or health impact. In total, there were 1774 unique claims made about IV hydration therapy across all 255 sites, the most frequent of which were immune support (n = 312) and hydration and replenishment (n = 265); other notable categories of claims included beauty and skin health (n = 211), detoxification (n = 178), and metabolism and weight loss (n = 134), although many claims were attributed to multiple categories (eAppendix 2 in Supplement 1).

Information regarding who owned or governed the IV hydration spa was provided by 54 sites (21.2%). Credentials for medical directors were provided by 132 sites (51.8%), often including multiple health care professionals ranging from MDs (n = 75) or DOs (n = 15) to APRNs (n = 27), PA-Cs (n = 8), and registered nurses (n = 34). A total of 167 sites (65.5%) provided credentials or broad statements regarding having li-

**Table 1. Product Offerings, Product Claims, and Staffing Information Provided on Intravenous (IV) Hydration Spa Websites for Randomly Selected Facilities in All 50 US States and the District of Columbia (N = 255)**

	No. (%)
<b>Product offering</b>	
IV therapy	255 (100.0)
Magnesium	146 (57.3)
NAD	130 (51.0)
Glutathione	137 (53.7)
Ketorolac	65 (25.5)
Ondansetron	67 (26.3)
(Non-IV) vitamin injections	162 (63.5)
(Non-IV) medical weight loss management via GLP-1 agonists	70 (27.5)
<b>Product claim</b>	
Made claims regarding impact of IV therapy/additives on health	255 (100.0)
Provided references for claims on website	2 (0.8)
<b>Staffing information</b>	
Provided information regarding administration/ownership	54 (21.2)
Medical director credentials	132 (51.8)
Staff credentials or statements	167 (65.5)
Emergency protocols listed on site	0

Abbreviations: GLP-1, glucagon-like peptide-1; NAD, nicotinamide adenine dinucleotide.

censed health professionals on staff who were responsible for dispensing the therapies. No IV hydration spas detailed emergency protocols on their website.

### Phase 3: IV Hydration Spa Secret Shopper Study

Among 102 IV hydration spa facilities contacted for the secret shopper study, contacts at 15 (14.7%) were not able to answer any of the questions posed and were excluded. Eighty-five of the remaining 87 facilities were able to answer all questions posed in our standardized script, including at least 1 facility from every state and DC with the exception of Ohio, Rhode Island, and Wisconsin (Table 2) (see eTable 2 in Supplement 1 for state-level details). The secret shopper spoke to an administrator or operator at all sites initially and was subsequently connected to a registered nurse during 45 calls (51.7%) or a licensed health professional (MD, DO, APRN, or PA-C) during 7 calls (8.0%).

Twenty-four IV hydration spas (27.6%) explained that a consultation with a licensed medical professional, either in person or via telehealth, was required prior to the provision of therapy, whereas 81 (94.2%) explained that certain paperwork needed to be completed prior to treatment, with 52 (59.8%) specifically describing that a waiver or consent form was necessary prior to provision of therapy. During the calls, 52 facilities (59.8%) asked about medical history or described required medical history intake forms.

When the secret shopper proffered specific, standardized headache and cold symptoms for which they were seeking care, 75 facilities (86.2%) recommended specific therapies to combat these symptoms and 33 (38.4%) claimed that

**Table 2. Key Responses Elicited During Secret Shopper Calls to Randomly Selected Intravenous (IV) Hydration Spa Facilities in All 50 US States and the District of Columbia**

	No. (%)
Connected with nurse on phone (n = 87)	45 (51.7)
Connected with medical professional (MD/DO, APRN, or PA-C) on phone (n = 87)	7 (8.0)
Noted during call that consultation with medical professional (MD/DO, APRN, or PA-C) required before therapy (n = 87)	24 (27.6)
Any instance of specific therapy recommendation by unlicensed medical professional (n = 87)	75 (86.2)
Required paperwork prior to treatment? (n = 86)	81 (94.2)
Waiver/consent form? (n = 87)	52 (59.8)
Made claims suggesting treatment can help with symptoms (n = 86)	33 (38.4)
When asked about risks, shared general potential adverse effects/risks to IV fluids (n = 86)	21 (24.4)
Questions regarding past medical history (either asked over phone or in paperwork, if provided) (n = 87)	52 (59.8)
Insurance coverage? (n = 86)	0
HSA/FSA mentioned? (n = 85)	30 (35.3)

Abbreviations: APRN, Advanced Practice Registered Nurse; HSA, health savings account; FSA, flexible spending account; MD/DO, Doctor of Medicine/Doctor of Osteopathic Medicine; PA-C, certified physician assistant.

the products offered would help with the described symptoms. When the secret shopper asked about general adverse effects or associated risks of IV therapy, 21 facilities (24.4%) described potential risks, most commonly bruising (n = 12), infection (n = 6), or bleeding (n = 2) at the site.

None of the facilities accepted health insurance coverage for the services provided, although 30 facilities (35.3%) accepted payment using health savings accounts. When asked, 81 facilities (93.1%) provided typical payment amounts, with a median (IQR) of \$179 (\$136.25-\$216.89) for a single treatment.

## Discussion

In this mixed-methods study of state-level policies governing IV hydration spas, followed by facility website reviews and secret shopper calls to better understand facility practices in each state and DC, it was found that state policies varied widely across the country. Only 4 states have released guidance that addresses all 4 IV hydration spa oversight categories: governance, prescriber credentials, dispensing practices, and compounding practices. Additionally, from facility website reviews and secret shopper calls, it was found that spa practices also varied widely with respect to product offerings, product claims, and staffing. Claims most often suggested immune system support while providing minimal evidence. Such widespread variation in state-level policies and IV hydration spa facility practices, particularly for an industry where the FDA typically defers to the states, suggests that more stringent oversight may be necessary to protect public health, including standards for facility registration and reporting of product information, benefits, and risks.

Although state-level policies governing IV hydration spas varied widely, the nearly 12% of states that provided the clear-

est guidance have classified IV hydration spas as performing the practice of medicine, which means they are subject to laws regarding CPOM in their state. Such laws ensure that physicians have independent authority to make clinical decisions that would not be impacted by corporate owners.<sup>18</sup> Some states, like California, have strict CPOM laws but it is unclear whether IV hydration spas are covered. The extent to which other states invoke CPOM doctrines for IV hydration spas is similarly ambiguous. Establishing more consistent regulatory standards across all states or developing an overarching federal standard may help ensure public safety. Study data also suggested the presence of chains that operated across state lines, and market research appears to suggest the presence of mobile IV hydration therapies, further suggesting that federal standards may be of benefit. Obtaining input from all stakeholders would be necessary to ensure well-crafted legislation.

Less than 20% of state policies addressed compounding practices at IV hydration spas, and those that did generally emphasized sterile facilities and compliance with FDA guidance. States could establish explicit requirements for a valid prescription for IV hydration therapy and clarity on the credentials required to prescribe these therapies as well as provide more explicit guidance on who can compound and on facility requirements for compounding. This might include some or all of the components of Section 503A of the Federal Food, Drug, and Cosmetic Act, such as current good manufacturing practices and labeling. The FDA may consider offering additional opportunities for federal oversight, such as adverse event reporting requirements and working with states to ensure that laws require facility registration with the FDA on a federal level.

From facility website reviews and secret shopper calls, the study found that IV hydration spa practices also varied widely with respect to product offerings, product claims, and staffing. Nearly all sites made claims about their services, most commonly related to boosting energy, supporting the immune system, and antiaging, yet very few provided evidence to support these claims. According to the Federal Trade Commission, “claims in advertisements must be truthful, cannot be deceptive or unfair, and must be evidence-based.” For health-related claims, this standard is particularly critical and failure to meet this standard can result in civil monetary penalties.<sup>19</sup> A 2025 study found that websites that sell compounded GLP-1 agonists often partially informed and sometimes misinformed potential consumers.<sup>20</sup> Given the apparent growing popularity of IV hydration facilities and the limitations in state and FDA oversight, enhanced regulatory guidance and oversight are needed from the Federal Trade Commission to clarify criteria for “truthful, non-misleading, and accurate” advertising for IV hydration spas.

The products offered across IV hydration facilities were focused on a limited array of products. Beyond basic IV infusions themselves (100% of facilities), approximately half provided mineral supplements as additives and at least one-quarter offered compounded pharmaceutical products, such as GLP-1 agonists, ketorolac, diphenhydramine, and ondansetron. More importantly, facilities rarely cited references for claims related to product efficacy or health impacts, raising critical questions as to whether IV hydra-

tion therapy itself, as opposed to compounded pharmaceutical products, offers any benefit for individual consumers. Relatedly, many facility sites minimized or omitted discussions of risks with potential clients during secret shopper phone calls and less than one-third referenced required consultations with medical professionals. There is currently a lack of any evidence that IV hydration spas improve health.<sup>2</sup> The high cost and lack of insurance coverage suggest that many consumers are choosing to pay out of pocket for these treatments. Of note, findings should be considered in the context of the ongoing IV fluid shortage in 2024, which suggests that consumers were not only subjecting themselves to potential risks and incurring costs for unclear benefit, but they were also likely diverting IV fluids from hospital systems, resulting in worsening disruptions to health care systems broadly.<sup>10</sup> To protect patients from exposing themselves to potential harms and financial costs without assurance of benefit, studies are needed to better evaluate the effectiveness, risks, and safety of IV hydration therapies.

### Limitations

This study has limitations. First, the study focused on publicly available state-level policy guidance but could not determine day-to-day enforcement of these regulations. Second, only a limited number of IV hydration spa websites were examined and even fewer were contacted for the secret shopper study, such that the results may overrepresent spas with more prominent placement on web searches and may not be generalizable to all IV hydration spas. Third, the information

collected in the secret shopper study was obtained through phone calls, without verification of the accuracy of the information regarding spa practices, and potentially subject to social desirability bias or errors in reporting by staff members. The secret shopper questions were also limited to those that would be considered by a potential client, so information on compounding and prescriber practices could not be collected. Additionally, the study was conducted in the summer and fall of 2024 and cannot offer insight into state policy, individual facility, or industry-wide practice changes since then. For instance, Rhode Island updated its state guidance in July 2024, after the study's state-level policy review. Fourth, during the course of the study, there was a national shortage of GLP-1 agonist drugs, which may have affected product offerings by IV hydration spas.

### Conclusions

State policies governing IV hydration spas varied widely across the country and only 4 states have released guidance that specifically addresses IV hydration spa governance, prescribing, dispensing, and compounding practices. Additionally, from facility website reviews and secret shopper calls, we found that spa practices also varied widely with respect to product offerings, product claims, and staffing. More stringent oversight may be necessary to protect public health, including standards for facility registration and reporting of product information, benefits, and risks.

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**Concept and design:** Sivakumar, Forman, Ross.  
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