Summary

Nicholas Hall Writes: CBD gives our industry its best growth opportunity and fills a gap that has been left by the diminution of Rx-to-OTC switches in recent years. Under the Best Case scenario, most countries will agree a regulatory framework for CBD supplements, topical products and vapes, sold with simple claims or possibly no claims in the most conservative markets. Some countries will approve OTC switches of Rx medical cannabis, but that depends on the major manufacturers commissioning new clinical research and building a strong public health case. Perhaps New Zealand will be a switch pioneer in this as in so many therapeutic areas, and Canada won't be far behind. Driving everything will be insatiable consumer demand for effective and safe new treatme sleep; stress, mood and anxiety; and many more indications. Wi simist. For me, the answer is "Why not!" and millions of consumers see

Regulatory dilemmas / Future pathways

• Significant pressure on authorities to clarify regulations on CBD soonest; CBD has potential to be available as Rx medicine, approved OTC and supplement at same time

CBD market value 2018 US\$930mn (+62%)

- US FDA may be guided by current bill presented to house to treat CBD as dietary supplement or may create new category for CBD; outcome will be result of time-consuming, painstaking research of a complex ingredient
- EU countries and UK opted to classify CBD as novel food, with application process setting a high bar for safety standards, but regulatory enforcement varies significantly by country and uncertainty remains
- If regulatory hurdles can be overcome, CBD's future growth will rely on innovative delivery systems, science and quality of formulation, and new combinations that enhance benefits; more positive data on CBD's use would allay concerns around efficacy and safety

ents for medical conditions with huge unmet needs: severe pain and mobilit
ill this happen? That depends on whether you are a natural optimist or pess
em to be asking the same question.

Demand drivers for CBD

- Consumer need for alternative self-care options for sleep, stress, mood & pain relief
- CBD "hot" ingredient, top of consumers' minds
- Profusion of products pushing CBD into new health areas, plus delivery format innovation

Global CBD forecast sales 2023 & 2028 (MSP, \$mn)											
Best case			Base case			Worst case					
2023	CAGR 23/18	2028	CAGR 28/23	2023	CAGR 23/18	2028	CAGR 28/23	2023	CAGR 23/18	2028	CAGR 28/23
5,989	+45%	10,697	+12%	3,117	+27%	5,150	+11%	2,278	+20%	3,216	+7%

3. What are the health benefits of CBD and how strong is the evidence?

Citation	Compound	Study details					
Nausea / vomiting							
Duran et al. (2010)	Spray medication containing THC and CBD	double-blind, placebo-controlled phase II (RCT)					
Finding: More patients in intervention group experienced complete relief from vomiting and nausea.							
Obesity							
Tudge et al. (2015)	Natural cannabinoid tetrahydrocannabivarin (THCV)	controlled, within-subject, double-blind design					
Finding: Altered nerve response to pleasant and unpleasant food stimuli. Could be used to fight obesity in conjunction with other steps.							
Sleep disorders							
Portenoy et al. (2012) Sativex (cannabis-based extract) oral mucosal		RCT (no double-blind)					
Finding: Sleep disruption decreased on low dose.							

Table 2 provides a selection of completed clinical studies for mental health symptoms.

Table 2: Completed studies assessing the effectiveness of CBD for mental health problems

Citation	Compound	Study details				
Addiction						
Hindocha, C et al. (2018)	CBD oral	UK double-blind cross-over study (RCT)				
Finding: Reduced salience and pleasantness of cigarette cues, compared with placebo, after overnight cigarette abstinence in dependent smokers.						

continued overleaf



9. Who is using CBD?

Conclusion

Around the world, although CBD awareness is high, there is still a great amount of confusion between THC and CBD among consumers. Overcoming social stigma associated with CBD will be crucial to accelerating the process of normalising CBD use in society.

American consumers' perception of CBD differs greatly depending on the areas they live in; while Europeans are generally more liberal. Despite this, the majority of consumers across markets agree it should be made available for medical use.

CBD is generally accepted by consumers as useful in pain relief, anxiety and insomnia; a solid proportion of American consumers also use it for overall wellness. First-time CBD purchases are mostly planned, and consumers generally research CBD online and/or ask friends and family (although surprisingly rarely healthcare professionals) before purchasing.



Price is an important factor influencing CBD purchase; this is especially true for American consumers as 26% of respondents said they would not try CBD as it is too expensive. Similarly, for European consumers, price is also a primary factor when purchasing CBD, although quality of product is equally important.

In terms of brand awareness and loyalty, Europeans exhibit a fairly high degree of brand awareness and loyalty, as 67% of respondents commented that they always or usually purchase the same brands, although 20% reported that they are open to trying new brands.

One stark difference between European and American consumers is higher curiosity among the former, with more Europeans signaling they want to know more about CBD. Given their overall positive attitudes and liberal view of CBD, European consumers are much more likely be encouraged to try CBD, representing an untapped market opportunity for CBD products.



13. How are CBD's delivery formats diversifying?

EDIBLES

- Fastest growing delivery format, includes gummies, confectionery, chewing gum, lozenges, tea, coffee – CBD is now available in wide array of foods and beverages
- "CBD gummies" third most-searched food term in 2018 according to Google's annual search data report
- Popular for flavour and convenience, but absorption is slow and variable, as must be metabolised first

VAPORISERS & INHALERS

- CBD vaporisers (and e-cigarettes) work by heating CBD oils, creating an inhalable vapour; available in range of flavours
- Potentially fastest delivery format peak bloodstream levels occur approximately 10 minutes after intake
- CBD inhalers are similar to inhalers used to treat asthma; devices create a fine aerosol spray mist of water-soluble hemp oil, with benefit of measured precise dose

OTHERS

- Suppositories Generally positioned for localised treatment of menstrual pain, suppositories allow for direct absorption of CBD
- **Toothpaste** Amid claims that anti-inflammatory properties of CBD may benefit oral health, Colgate announced a new line of CBD-containing toothpastes, mouthwashes and lip balms in February 2020
- Bath products CBD bath bombs, bath salts and more are generally positioned for relaxation
- Sports nutrition CBD is increasingly being added to whey protein, sports shakes and other sports nutrition products
- Pillows First pillow embedded with CBD microcapsules entered USA in early 2020, claimed to deliver slow-release CBD through the night















18. How do marketers develop trust in an under-regulated market?

Accreditation:

"Official" accreditation of purity and quality, such as the US Dept of Agriculture's organic seal, is coveted by food and supplement marketers. Organic status might be a "good to have" stamp for certain CBD products and consumer groups, while similar stamps of approval from industry bodies may also help reinforce key attributes.



Trademarked, validated ingredients:

Probiotics stand out as one of the key consumer healthcare successes of the past decade, mainly as supplements. Arguably, a factor in that success has been the use of named strains from leading developers, backed by research and trials to identify measurable benefits in specific conditions; in some cases they are backed by trademarks or even patents. In-licensing and inclusion of such strains is invariably promoted on-pack and in A+P, enhancing reputation and offering the potential for higher pricing. Could the emergence of well-researched trademarked CBD strains from leading developers and growers do the same? (see below)

Industry standards:

Among many organisations worldwide, the UK's Association for the Cannabinoid Industry is a good example of a body working to achieve both a standardised framework for a legal, safe and regulated cannabinoid industry and reassurance to consumers. An initiative led by the Centre for Medicinal Cannabis, ACI has created a Quality Charter for its members and plans to introduce a kitemark to display on CBD products to reassure consumers that their purchase meets relevant regulations: "Shoppers should feel confident about the quality of the CBD products on offer in retail ... and ... that they are 'getting what they pay for'."



However, the same marks and charters should be utilised comprehensively; competing systems from different bodies will cause confusion.

