Social Media Update
The 4th Asia Pacific Pharmaceutical compliance conference

PwC China Discussion

Advisory
Strictly Private and Confidential
2014

www.pwccn.com
Emerging trends are changing the nature of “information driven” business opportunities

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<th>Business Opportunities</th>
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<td><strong>Picking Up the Signals</strong></td>
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<td>• Advances in sensing &amp; monitoring people, entities, events and objects</td>
<td><strong>Change Growth Trajectory</strong></td>
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<td><strong>Information Synthesis</strong></td>
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<td>• Emerging methods to collect, organize, structure and search massive amounts of data</td>
<td><strong>Increase Margin Potential</strong></td>
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<td><strong>Analytics &amp; Decision Making</strong></td>
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<td>• Alternative modeling techniques to gain new insights</td>
<td><strong>Differentiate Customer Experience</strong></td>
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<td>• Improving usability through advances in visualization and simplification techniques</td>
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<td><strong>Build a Learning Organization</strong></td>
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China is one of the most mobile centric and digitally engaged populations in the world...

Mobile is the primary source for internet access...

73% of all internet users describe it as their primary source for accessing the web

..and Digital – especially social – has a bigger impact on Chinese consumers than any other nation in world

95% of Chinese consumers trust brands who have a microblog

87% of Chinese social media users have friended or followed brands

68% of Chinese consumers write reviews about the product they buy online
Digital channels are growing rapidly in China and creating new opportunities for businesses to engage with consumers and apply analytics to optimize its commercial activities

81% of internet access over mobile, making it the primary channel to connect with the internet

By 2020 China’s digital universe will be 9,000 Exabytes, but <30% will be useful for business decision making

477m M2M modules 2017, making smart devices out of currently “dumb” objects

416m smartphone users in 2013, more than the entire population of the US

600m+ social media users – proactively engaging with brands

Internet of things

Big data

mPayments

mCommerce

Mobile internet

Mobile marketing

eCommerce

Social media

Privacy

¥167bn 2013 worth of products and services sold on mobile in 2013, growing at 60% CAGR

¥1.3tn in mPayments in 2013, fiercely competitive market disrupting the antiquated mainland banking model

¥26bn mobile advertising market forecast in 2017, the fastest growing segment in all advertising

¥9.9tn GMV) in 2013 with China set to overtake the US as the largest eCommerce market with 12 months

¥1.3tn

China set to overtake the US as the largest eCommerce market with 12 months
With 9,000+ exabytes of useful data available in China by 2020 it is tempting to believe that insight will scale at the same rate ...

...but they won't

there is a finite amount of insight and by definition this can’t scale at the same rate as data growth

The key to uncovering genuine insight is therefore to separate the “signal” – causation, from the “noise” – correlation

Smart Data not “Big Data” will underpin profitable growth in the digital age in China
Big Decisions NOT just Big Data
The next evolution of analytics will leverage complexity science and behavioral economics

**Traditional Analytics**
A top down approach that leverages past data to predict the future

**Complexity Science**
A bottoms up approach that models the behaviors of a population of individuals

**IMPLICATION**
Modeling individual behavior against macro-economic drivers will lead to better decisions, products and profitability – From Descriptive to Predictive Analytics
Social insights into pharmaceutical industry
Frequently used words and phrases

Content on social media is dominated by comments about key players in the industry while wrongdoing-related terms are also brought to light

Original Chinese character word cloud

English translation

NovoNordisk associations doctor appointment associations donation treatment investigation medication

rep grants illegal ethics crime arrested sponsorship reputation prescription discipline monitoring ethics corruption treatment administration

black-market hospital monitoring monitoring clinical monitoring

Pharma

Pharmaceutical
Wrongdoing-related volume of posts

The peaks and fluctuations in the volume mirror the Chinese netizens’ concern and engagement of breaking news about pharmaceutical industry.....

Volume trends of wrongdoing-related content on social media sites by China/HK residents
Time period: 1 June 2012 – 5 September 2014
Sentiment analysis for pharmaceutical industry

Social media comments on pharmaceutical are generally negative
Sentiment key: 3 Strongly positive, 1.5 Positive, 0 Neutral, -1.5 Negative, -3 Strongly negative

Average sentiment score: -0.2815

*Colour Spectrum measures collective sentiments; Red represents 'Negative', Green represents 'Positive' and Grey represents 'Neutral'; the darker the colour, the stronger the sentiments concerned.
What do netizens talk about in the social media space?

Key comments: Original Chinese posts

转发微博@健康界网站：【外媒：别让医生为制药公司工作】[公司A]决定停止付费让医生向其他医生推荐其药品，并不再将销售代表的奖金与医生开药数量挂钩。此举是业内首次打击丑闻，并为其他药企整改销售手段树立了榜样。”

“公司B在药品进口前通过转移定价，增高药品报关价，在中国以高于国外几倍的价格销售，获巨额利润支持贿赂资金，然后以贿赂开道，提高药品销量。”

“但我想说的是：不管娃娃有无基础疾病，这些症状都可高度怀疑与[药品B]有关，同时这个事情触犯法律，即便0损害也必须追责到底。”

Key comments: English translations

“Reposted by @HEALTHCARE:[FINANCIALNEWS:] [Company A] *will stop paying doctors for promoting its drugs and scrap prescription targets for its marketing staff - a first for an industry battling scandals over its sales practices, and a challenge for its peers to follow suit.”

“To increase the customs value of the drugs, [Company B] changed the original drug prices before imported them into China. Consequently, the price of these drugs sold to China is several times higher than that in other countries. Through this sales practices, the company gained enormous profits that were used for bribery to further increase the sales volume.”

“This is hardly the first time that [Medicine A] was exposed to having safety problems. Actually they should have avoided it with all that tested prescription drugs, but they still screwed it up by wrong proportions in drug formula.”

“But what I want to say is that [Medicine B] is a highly suspect cause of these infants’ syndromes no matter whether they have underlying diseases or not, and that this breaks the law so the company has to be responsible for it.”

* Company name and medicine name are not disclose due to privacy purpose
Detailed findings from social listening
Comparative listening cross brands

Our social listening analysis identified emerging risks, understand customer experience, and gain competitive intelligence.

GSK, J&J and Pfizer draw most attention in Chinese social media

# Number of compliance-related mentions over the last 24 months
Top brand temperature check

Our analysis revealed that GSK received most comments while J&J and Pfizer enjoy a comparatively positive reputation.

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<th>GSK sentiment analysis</th>
<th>J&amp;J sentiment analysis</th>
<th>Pfizer sentiment analysis</th>
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<tbody>
<tr>
<td>Positive</td>
<td>8%</td>
<td>28%</td>
<td>27%</td>
</tr>
<tr>
<td>Neutral</td>
<td>27%</td>
<td>33%</td>
<td>43%</td>
</tr>
<tr>
<td>Negative</td>
<td>55%</td>
<td>33%</td>
<td>22%</td>
</tr>
<tr>
<td>Strongly Negative</td>
<td>9%</td>
<td>8%</td>
<td>8%</td>
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GSK average sentiment score: -1.188
J&J average sentiment score: -0.08155
Pfizer average sentiment score: -0.1964
How this works
Our approach to social insight combines proprietary models and analytics with sector specific context, taxonomies and metrics

1st ITERATION

**Define Structure**
Understand the business requirement and define the categories to be studied

2nd ITERATION

**Select “Keywords”**
For each topic, choose the keywords that can capture the desired posts

3rd ITERATION

**Filter Noise**

- Full range of social insight: from broad scope to specific detail
- Comprehensive geographical coverage: area specific targeting
- Flexible time frame selection
- Multiple language support
- Wide range of social media platforms: Weibo, Twitter, Facebook and select forums

**Sentiment Analysis**
Identify sentiments that consumers use to describe how they feel about the defined categories

**Select “Not Words”**
Identify words that can generate irrelevant results

Generate Reports
We use complexity science to generate insights from social listening to make business impact across the entire organisation

**Customer service**
- Social outreach
- Better customer support and response rate
- Track sentiment and issues

**Sales**
- Identify influences
- Work directly with them
- Understand hot topics

**Marketing**
- Improve sentiment
- Understand needs of existing customers
- Improve awareness
- Improve brand health
- Refine public perception of a brand or product
- Discover social landscape
- Identify common terminology

**M&A**
- Reach and understand
- Incorporate feedback into products
- Improve product development lifecycle

**R&D**
- Improve products
- Address issues to minimise negative affects
- Understand sentiment of announcements

**Public relations**
- Mitigate risks
- Understand sentiment of announcements
Thank you.

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