ODINTEXT

Turning staff feedback into action: OdinText artificial intelligence platform reveals what drives employee satisfaction at Kettering Health Network's Greene Memorial Hospital and Soin Medical Center!

How OdinText Enables Top Hospitals to Optimize Staff Engagement and Improve Satisfaction

"The magnitude and detail is amazing! This pinpoints exactly areas that we can really work on. Other vendors just give us material and we have to hunt and peck. For not knowing anything about our industry, this software is amazing! You know atmosphere, what's changing and what's not… This blows me away."

JEFFREY JONES,
DIRECTOR OF HUMAN RESOURCES,
GREENE MEMORIAL HOSPITAL
AND SOIN MEDICAL CENTER

GREENE/SOIN Hospitals
KETTERING HEALTH NETWORK

OVERVIEW

Kettering Health Network's award-winning Greene Memorial Hospital (GMH) and its new Soin Medical Center (SMC) turned to OdinText's artificial intelligence platform to identify and transform staff feedback into key performance indicators that are best predictors of employee engagement and satisfaction.

The hospitals leveraged the new technology to analyze mixed data—unstructured text and other structured data — from staff comments and feedback spanning two years.

Conventional analytics tools don't provide sufficient depth, clarity and insight into stakeholder feedback. In the case of state of the art health care facilities such as GMH and SMC, incorporating natural language/text feedback means optimizing the concerns and advice offered by the highly educated, highly trained doctors, nurses and other expert personnel that impact patient care.

Using machine learning and artificial intelligence, OdinText helps these hospitals better understand and model satisfaction, extract significant themes from the remarks, and predict their impact on important key measures including employee satisfaction.

Among the findings so far, 10 KPIs with the greatest impact on job satisfaction—positive and negative— coupled with emotional analysis provide a practical roadmap for maximizing employee engagement in order to create the best patient care environment possible.

BACKGROUND: THE PROBLEM

At GMH and SMC, part of the Kettering Health Network, understanding and managing employee satisfaction is a mission-critical challenge To that end, the facilities have traditionally relied on conventional quantitative survey research instruments that, while directionally useful, generally fall short of providing actionable insights.

One problem—endemic to ratings-based quantitative surveys, in general—is that these instruments tend not to be particularly reliable predictors of actual attitudes and behavior. There are a variety of reasons for this, but one of the primary liabilities of the quantitative survey tool stems from the fact that it is inherently and deliberately limited: the tool restricts responses to a finite set of options pre-determined by the survey's designer.

In the case of employee surveys, this shortcoming is compounded by an issue germane to HR studies, particularly when the questions involve supervisors or other potentially sensitive topics: personnel can give inflated positives out of fear that their confidentiality may be compromised and, consequentially, that they may suffer retribution.

In contrast, research has shown repeatedly that allowing respondents to provide feedback unaided and in their own words can yield data that are more predictive of actual attitudes and behavior. Moreover, allowing employees to respond in their own words can provide an effective solution to the problem with HR surveys outlined above, too, because it is significantly more difficult to conceal one's feelings in an open-ended comment; the "hidden truth" in these remarks can be uncovered.

THE DATA & ANALYSIS

GMH and SMC set out to re-assess employee feedback across two years of employee comment data at each facility, respectively. While the surveys' quantitative component provided a surface-level read on satisfaction, the practical utility of the results was limited. Happily, employee feedback includes opportunities for open-ended comments, as well. OdinText was thus able to tease out the key drivers of satisfaction (and dissatisfaction) among employees in order to address them.

Objectives using OdinText:

- Identify those topics* that are most prevalent in staff comments;

- Single out which of these topics are significant drivers of satisfaction; and

- Determine how GMH and SMC can best leverage this intelligence to optimize satisfaction.

   *Topics are verbatim concepts comprising multiple terms that appear in customer comments. For example, "affordable" is a topic consisting of terms such as "cheap," "inexpensive," "affordable," "bargain," "low price," "low cost," "price was low," etc

One of the analyses conducted using OdinText focused on targeting a key performance indicator (KPI)—Predicted Satisfaction—and responses to eight different open-ended comments, which were merged and assessed together. That is to say, rather than relying solely on rating scales and other employee-provided ratings data, Odin-Text's AI algorithms are also able to calculate and compare sentiment and predicted satisfaction based on how millions of stakeholders at other organizations commonly talk about their organizations.

A second step involves using OdinText's built in predictive analytics to identify, in this case, 21 topics that are significant predictors of satisfaction (9 topics are significant for the GMH and 15 for SMC, respectively).

Across the two facilities, among 21 statistically significant drivers of satisfaction, the most impactful topics—those with the largest positive and largest negative effects— appear in descending order below:

Topics as Significant Predictors of Satisfaction (all respondents)
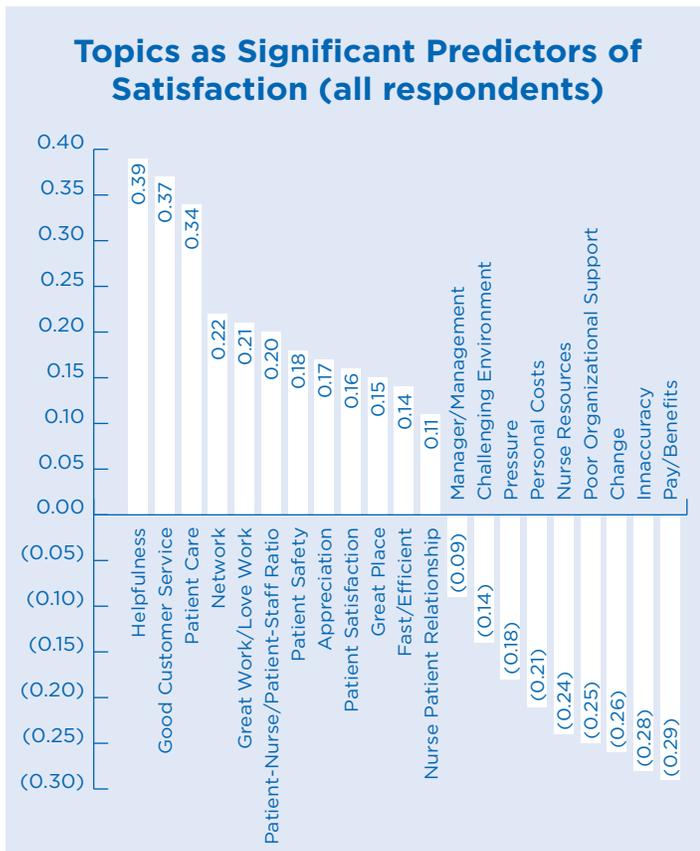
Topics: Positive Drivers	Topics: Negative Drivers
Helpfulness	Pay/Benefits
Good Customer Service	Inaccuracy
Patient Care	Change
Network	Poor Organizational Support
Great Work/Love Work	Nurse Resources

EMOTIONAL ANALYSIS

OdinText tracks what are largely considered the primary eight emotions* expressed in comments and that fundamentally drive human behavior: joy, trust, fear, surprise, sadness, disgust, anger and anticipation. These primary emotions tend to have a positive and negative valence (e.g., joy is opposed to sadness, trust to disgust) and can vary in intensity.

Adapted from Robert Plutchik (1991), "The Emotions. Revised Edition". Lanham: University Press of America.

This emotional analysis was conducted both on a segment basis (SMC vs GMH) as well as for the aggregate year-over-year:

By Segment
SMC employees express stronger feelings than their GMH counterparts across all emotional topics (except Surprise) possibly because the former is a growing facility—an environment likely to be more emotionally charged than in a more staid or established facility. Happily, the predominant emotion present in the comments at both facilities was Joy, followed by Trust. Both GMH and SMC staff expressed a substantial amount of Fear/Anxiety, which was linked to a variety of concerns. Some of this may be the inevitable result of a profession where the work output can mean life or death for the patient, and similarly for Anticipation. Sadness and Anger were also present in some comments.

By Year
The prevalence of emotion in staff comments increased across the board between 2016 and 2017. This may be related to change, at the facilities themselves or more generally across the industry. While both positive and negative feelings were more prominent in 2017, negative emotions climbed proportionally more, indicating that the level of stress on staff grew. Indeed, the prevalence of Fear/Anxiety and Anger more than doubled from 2016 to 2017. Determining the source of these emotions and addressing it is obviously a crucial next step.

CONCLUSION

By leveraging responses to open-ended comment questions together with OdinText's AI bases Predicted Satisfaction from two years of employee comment data, the OdinText analysis provides much deeper and more actionable insights than are obtainable with conventional analytics. In contrast to typical tracking studies, which are limited to just measuring satisfaction levels, OdinText yields not only intelligence about the actual factors driving satisfaction (the "Why's"), but also quantifies the extent to which each factor actually influences satisfaction.

The analytical findings prove that helpful attitudes have the greatest positive impact on staff satisfaction at both Greene Memorial Hospital and Soin Medical Center. Staff care and support and patient care also positively influence satisfaction, as does the fact that the hospitals belong to an extensive corporate-wide network of facilities.

The leading factor depressing satisfaction is pay, which includes benefits such as paid time off, followed closely by inaccuracies (such as mistakes and faulty information), and change, which apply to developments affecting staff in a variety of ways.

Taken together, the most powerful drivers of satisfaction—both positive and negative—among hospital staff are linked to comprehensive factors that influence the overall work environment: how staff interact and treat each other, lines of communication, training and quality control. Implicitly, then, efforts to address any one driver will likely have a broad impact.

While one might expect that it would require a series of new, custom studies to reach these same conclusions, in fact these results are achieved using employee survey data GMH and SMC already collect via conventional means as a course of doing business but have not been able to exploit in a meaningful way. OdinText's unique ability to analyze mixed data—unstructured (text/comments) and other structured data—together provide a tangible foundation and roadmap for addressing root issues and improving employee satisfaction at both facilities.

Predict What Matters!

OdinText is the first mixed data AI platform that allows you to take the data you already have and to easily understand what drives key metrics like satisfaction, loyalty and revenue

Contact us today for information on how you can leverage our patented award winning approach.

OdinText intuitive user interface allows you to begin immediately

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