Then and Now...

DIRECT-TO-CONSUMER ADVERTISING

While direct-to-consumer advertising of prescription drugs has been around in some form for some time — the earliest DTC ads urged patients to see their doctors about a condition — pharma companies increased their use after the FDA released a draft guidance on broadcast advertisements in 1997. This guidance eased some of the restrictions on DTC advertising.

In the first issue of PharmaVOICE in July 2001, we reported that DTC advertising grew from $200 million in 1995 to $1.5 billion in 1999. Since then, spending on consumer advertising has soared. Drugmakers now spend $4.5 billion per year on magazine and television commercials promoting their drugs, according to Kantar Media.

But not everyone sees DTC as a positive move. In fact, the American Medical Association in November called for a ban on such advertising to make drugs more affordable. The AMA cited concerns that the ads are driving demand for expensive treatments despite the clinical effectiveness of less costly alternatives.

This comes in the wake of increased scrutiny of the industry over pricing issues. Last fall, the Kaiser Family Foundation released a report saying that the high cost of prescription drugs remains the public's top healthcare priority. In the past few years, prices on generic and brand-name prescription drugs have steadily risen and experienced a 4.7% spike in 2015, according to the Altarum Institute Center for Sustainable Health Spending.

Industry at Large

ASTELLAS PARTNERS WITH ASPIRITECH TO ADVANCE OPPORTUNITIES FOR ADULTS WITH AUTISM

Aspiritech's employees — people with high-functioning autism — have played an integral role at Astellas, advancing several key IT projects focused on database cleanup and validation, as well as log file analysis.

By harnessing the strengths of adults with high-functioning autism — attention to detail, precision, an affinity for repetitive tasks, and outstanding technology skills — Aspiritech is providing software testing and other quality assurance services to Astellas in a wide range of tech capacities.

Aspiritech is a nonprofit organization that offers employment for high-functioning individuals on the autism spectrum.

The collaboration began in the spring of 2015, when the Astellas People Living and Astellas' IT department began working with Aspiritech's test engineers, who operate at the organization's headquarters in Illinois.

Comic Relief and GSK PARTNER TO FIGHT MALARIA

A five-year partnership to fight malaria and improve health in five countries that are the worst affected by the disease has been launched by Comic Relief and GSK. The two organizations are teaming up in support of global efforts to strengthen health systems' capabilities to fight malaria, a disease that still claims almost half a million lives every year, mostly in children under five in sub-Saharan Africa.

A new fund — created through a £17 million donation from GSK and £5m from Comic Relief — will provide targeted grants to organizations on the frontline, tackling malaria and improving health.

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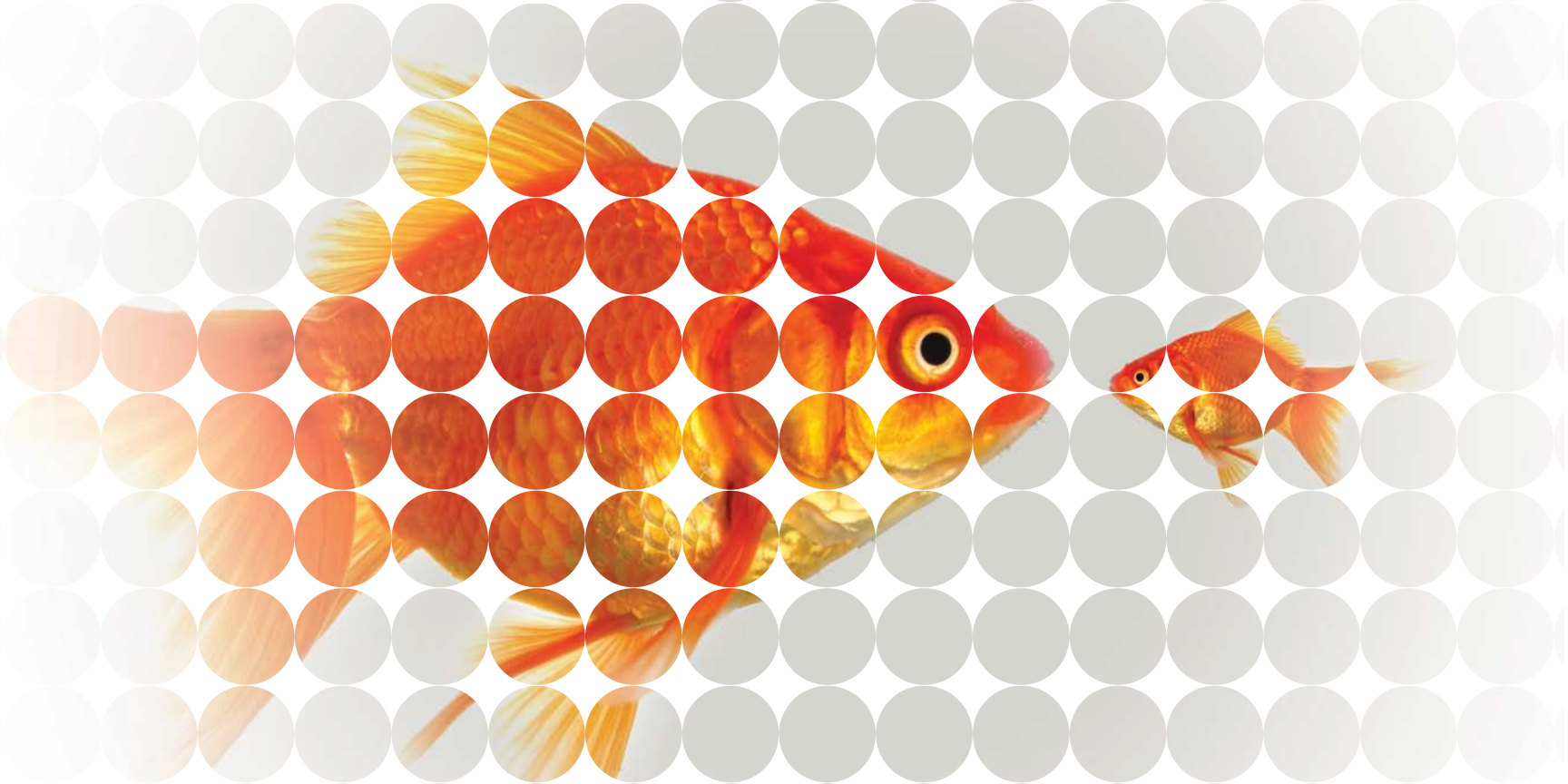

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Top Predictions FOR 2016

1 Drug pricing and biosimilars in light of the upcoming presidential election. Drug pricing is expected to be a huge topic with candidates sharing proposals to address this issue. This will also likely bring continued attention to biosimilars.

2 The revenge of the DTC ad. As it becomes more and more important to prove a drug's worth, pharmaceutical companies are increasingly pouring money into direct-to-consumer ads. But this type of investment may bring on controversy in 2016.

3 Business models will continue to change. Deal making M&A will stay at a high level in 2016 thanks, in some part, to inversion. Acquisitions of biotechs will also be an interesting space to watch in 2016, especially in terms of valuations.

4 Pharma companies will look to unlock the potential of gene editing. But the question of how businesses can take advantage will be at the forefront, specifically as it progresses from being a research/screening tool to one that promises important applications in drug development, cell therapy, and bioprocessing.

5 Precision medicine momentum will continue. Thanks to a $215 million investment in the President's 2016 budget, which raises hopes of providing drug developers with greater insights into the biological, environmental, and behavioral influences on diseases.

Source: Trinity Partners

Life-Sciences Top 10 Market Trends for 2016

1. Risk-based monitoring will shift from monitoring to action.
2. Mobile will lead a new paradigm in clinical trials.
3. Operationalizing analytics will drive business process optimization.
4. Adoption of IoT in the life sciences will begin in earnest.
5. Big data will fade into transparency in 2016.
6. Comprehensive operational excellence as a service will arrive in 2016.
7. The 3rd Platform will evolve into digital transformation in the life sciences.
8. Comprehensive item-level serialization will be the norm by 2017.
9. Formulary access will drive new pricing strategies.
10. International reference pricing will shift control from region to brand.

Source: IDC Health Insights

Innovation Corner

PURDUE UNIVERSITY INVESTING IN LIFE SCIENCES

Purdue University is investing more than $250 million in the life sciences over the next five years to advance research that both improves lives and supports Indiana's critical life-sciences business sector.

The funding includes Purdue's recently announced Pillars of Excellence in the Life Sciences Initiative, with a $60 million investment as part of Purdue's $2 billion Ever True capital campaign. The initiative established the Integrative Neuroscience Center and Institute for Inflammation,

Immunology and Infectious Disease, which complement the Purdue Moves' Drug Discovery and Plant Sciences initiatives.

Purdue President Mitch Daniels says, "A first-stage review concluded that the life sciences was the sector where Purdue has the greatest unexploited research potential. A second-level inquiry chose the two areas for major investments."

PharmaVOICE @INDUSTRY EVENTS

PharmaVOICE attended this year's **JP Morgan Healthcare Conference** in San Francisco and had the opportunity to meet with several company executives, including William King, founder and executive chair of Zephyr Health and Greg Critchfield, CEO of Sera Prognostics.

PharmaVOICE also attended the second annual HBA Reception at the JP Morgan Healthcare Conference, which drew hundreds of senior executives in the business of healthcare.

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CONTRIBUTED ARTICLE

» **Ten Ways to Derail a Clinical Trial**
Provided by: Fisher Clinical Services

EBOOK

» **Using Smarter Testing Strategies to Optimize Clinical Protocol Development**
Provided by: ACM Global Central Laboratory

PODCAST

» **Endpoint Based Protocol Development: An Outcomes Based Approach to Clinical Trial Testing**
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» **The Digital Health Debate**
Provided by: Cello Health Insight

SPEAK Out

Provided by: Worldwide Clinical Trials

Promises to Keep: *Informing Healthcare Decisions through Cardiovascular Outcome Studies*

Michael F Murphy M.D. PhD[1], Paola Antonini, M.D., Ph.D.[2]
[1]Chief Medical and Scientific Officer
[2]Senior Vice-President, Scientific Affairs
Worldwide Clinical Trials

FEBRUARY IS NATIONAL HEART MONTH

Despite the global burden of cardiovascular disease, investment in cardiovascular drug development has stagnated over the past two decades, with relative underinvestment compared to other therapeutic areas. There are multiple reasons for this trend, but of primary concern is the high cost of conducting cardiovascular outcomes trials (CVOT) in the current regulatory and commercial environment that demands assessment of risks and benefits, using clinically evident cardiovascular endpoints against a background of established therapies. Frequently, the absolute treatment difference over existing therapies in these large, logistically complex trials, has unclear implications regarding the value that should be ascribed to innovative therapy. Because of their scale and international footprint, standard of care variations across the entire sample make results interpretation contingent on examination of subgroups, sequence of treatment prior to randomization, or regional standards of care which can modify treatment effects.

Risk Stratification Analyses
To permit identification of patients most likely to benefit from therapy

Nested Studies
To capture all healthcare utilization during an episode of care

Administrative Claims Analysis
Based upon the population randomized

Concurrent Longitudinal Cohort Study
From patients who screened failed

Pharmaceutical companies are therefore pursuing innovative strategies in cardiovascular R&D to reduce the risk and cost of cardiovascular drug programs and assure market receptivity once product authorization has been achieved.

Implications from Landmark Heart Failure Trials

Two drugs have been approved recently for use in heart failure — ivabradine and sacubitril-valsartan — the first drugs to be approved for the treatment of heart failure since eplerenone. Both drugs' CVOT are methodologically rigorous and highlight challenges informing transitions in treatment. For example, the *Systolic Heart failure treatment with the I_f inhibitor ivabradine Trial* (SHIFT) is the first study to specifically test the effect of heart-rate reduction on outcomes in a population with heart failure. In patients treated with ivabradine, relative risk of the primary endpoint (cardiovascular death or hospital admission for worsening heart failure) fell by 18% compared with placebo treatment.

However, the authors of the SHIFT article commenting on the limitation of the study recognize weaknesses that may represent hurdles in the translation of the study results into clinical practice guidelines and healthcare decisions. First, study patient selection (patients in sinus rhythm with high baseline heart rate (≥70 bpm)) of necessity restricted study implication to a subset of overall population with chronic heart failure. In addition, results from the study were achieved alongside background treatment including a β blocker; thus, no inferences are possible about the relative effects of ivabradine in absence of β blockers background therapy. And, despite repeated encouragement to the investigators to comply with conventional guidelines regarding treatment of heart failure, recommended target doses of background treatments were often not reached during the study. Eventually, results from this *classic* CVOT must be interpreted within the context of the population of patients with heart failure, contingent on specific subgroups of patients and patient management characteristics.

Enabling Value in Heart Failure Studies

Approximately 77% of medical costs following diagnosis of heart failure (HF) accrue during hospitalizations, and these expenditures are accentuated by the presence of concurrent morbidities. In the United States data requirements for formulary placement and reimbursement strategies are likely to vary based upon insurance coverage.

Therefore a companion initiative is recommended as a component of late phase HF investigations which could enable each of the following to support formulary placement and reimbursement mechanisms: *"risk stratification"* analyses using demographic and disease-related information within protocols prognostically important to the outcome; *"nested studies"* within practice microenvironments to capture all resources associated with patient care in an "episode of care;" facilitation of a retrospective data extraction process for an *"administrative claims analysis"* in study subjects by obtaining permission for that analysis as part of the eligibility criteria for the original protocol; inclusion of non-randomized patients (screen failure subjects) into a *"concurrent longitudinal cohort study"* providing an independent verification of healthcare utilization by those patients that approximate the clinical characteristics and care as included in the randomized trial.

Promises to Keep

All history of CVOT in heart failure considered, CVOT designs can be exploited to accommodate diverse objectives, including commercialization efforts predicated on demonstrating value during the course of clinical development. These activities can either modify the design or method of executing these studies without jeopardizing the primary hypotheses or append companion retrospective and prospective observational studies to examine complementary hypotheses that can inform healthcare decisions.

WORLDWIDE CLINICAL TRIALS
SCIENTIFICALLY MINDED · MEDICALLY DRIVEN

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