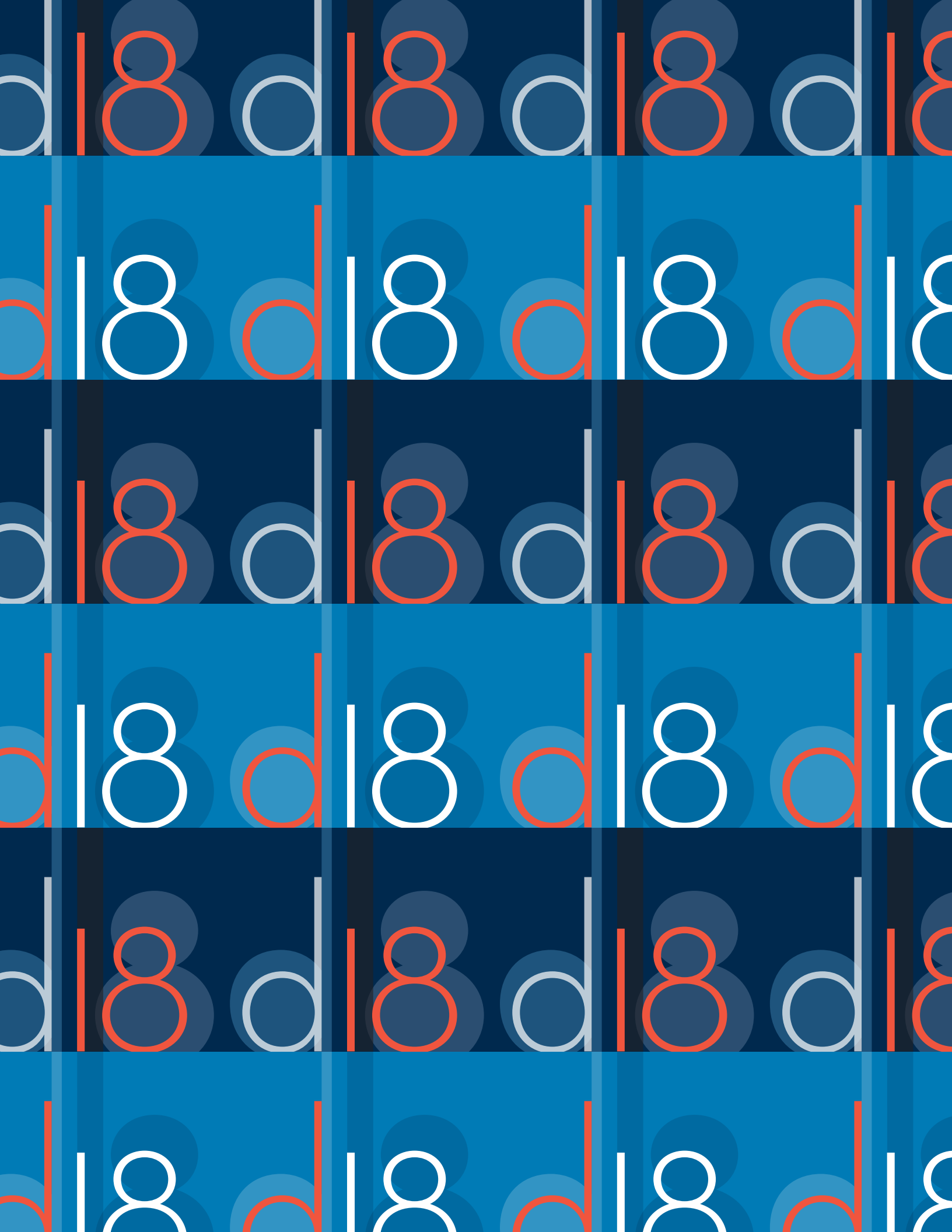




EXECUTIVE INNOVATION LAB IN
DIABETES AND PREDIABETES

EXECUTIVE SUMMARY
& HIGHLIGHTS



d18 EXECUTIVE INNOVATION LAB IN DIABETES AND PREDIABETES: SUMMARY & HIGHLIGHTS

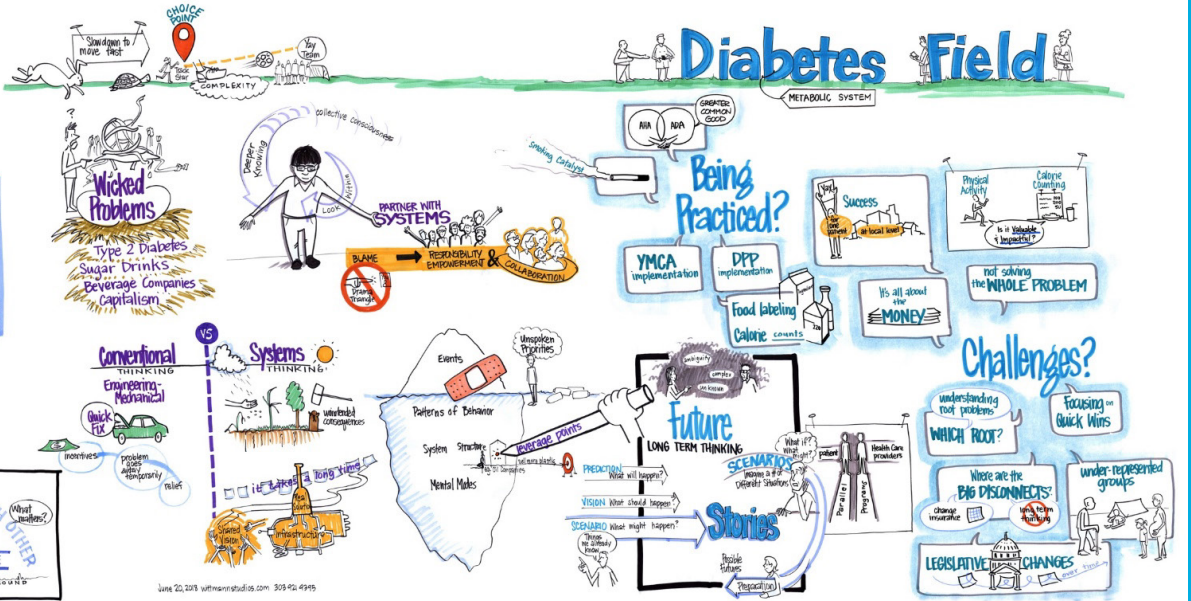
D18 SUMMARY	3
TUESDAY, JUNE 19	7
Honoring Robin Smith.....	7
Systems Mapping.....	7
WEDNESDAY, JUNE 20	9
Welcome and Introductions.....	9
Systems Leadership Crash Course and Practice Session.....	9
The Future of Diabetes in the US: Scenario Planning Workshop.....	10
Dr. Alan Moses on “Resetting the Diabetes Epidemic: Focus on Obesity”.....	10
Creating the Future We Want: Exploring Leverage Points in Diabetes.....	12
Group Reflections on Emergent Themes.....	17
Anthology of Bright Spots Launch Celebration.....	17
THURSDAY, JUNE 21	18
Welcome and Morning Reflections.....	18
Strategic Actions Labs: Zooming in on High Leverage Opportunities.....	18
Sugar-Sweetened Beverages.....	18
What Does Healthy Really Mean? A Nutrition Trial.....	19
Healthcare Provider Resources.....	20
Scaling the Diabetes Prevention Program.....	21
dSeries.....	22
Addressing Stigma Through Media.....	23
Next Steps and Closing Reflections.....	24
APPENDIX	24
TED Talks.....	24
Kelly Close.....	24
Benjamin Pallant—Letting Bright Spots Light the Way.....	27
Dr. Laura Schmidt—The Airtight Case for Diabetes Prevention.....	29
Dr. Faith Foreman—Cities Changing Diabetes—Houston.....	31
Adam Brown—Our Greatest Challenge (& Opportunity).....	33
Thank You to Our Sponsors.....	39



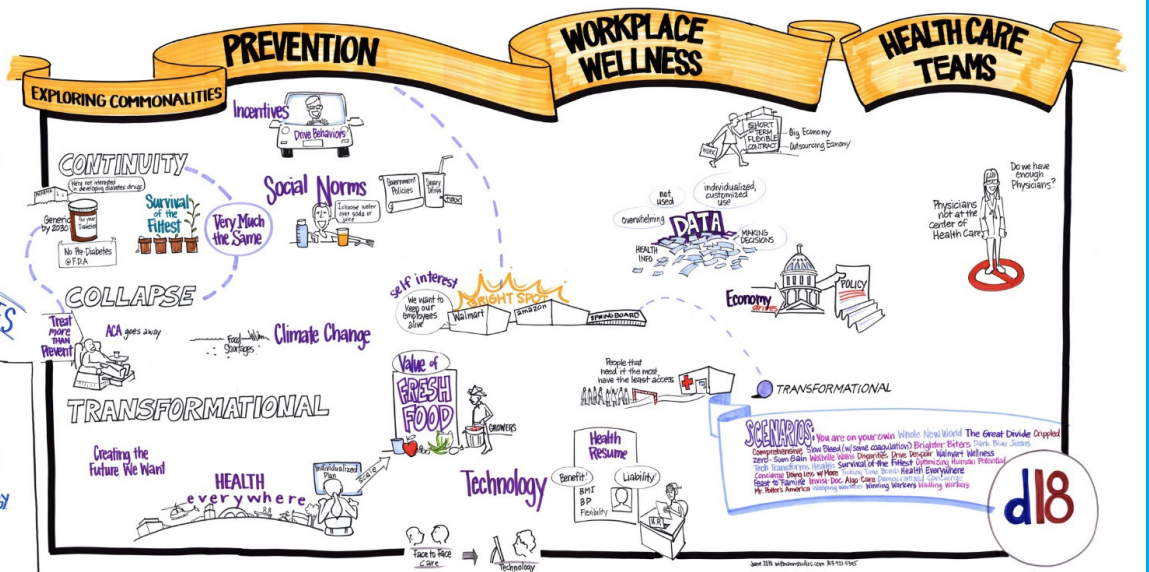
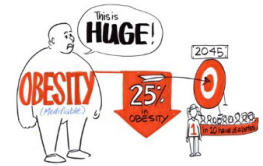
SYSTEMS LEADERSHIP

Diabetes Field

Kelly Close



SCENARIO PLANNING *The Future of Diabetes*



d18 SUMMARY

In June 2018, more than 40 leaders, representing diabetes stakeholders in healthcare, technology, industry, business, media, and policy, gathered in Aspen, Colorado, for d18. Using scenario planning tools, participants built upon innovative solutions developed at d16 and d17, deepened their understanding of the forces affecting the future of diabetes in the US, and developed an understanding of systems-level approaches for the field. In keeping with the theme of collective learning and action, The diaTribe Foundation formally launched *The Anthology of Bright Spots*, a collection of “what’s working” in diabetes that was raised as an idea during the inaugural d16 and executed over the next two years. Read below for a summary of the challenges and solutions discussed at d18.

Systems Leadership Crash Course

To kick off d18, **systems leadership expert Brooking Gatewood of the Emergence Collective led participants in a crash course on how to think more collectively and deliberately to lead the diabetes “system.”** Sharing examples from urban homelessness to energy emissions in the Midwest to global plastic pollution, Ms. Gatewood demonstrated how systems leaders need to slow down to understand the underlying structures, patterns, and mental models at play. By taking a step back, the field can avoid unintended consequences and minimize unnecessary effort. Following work on prevention and behavior change/behavior design during d16 and d17, the idea of a more theoretical approach came up in an effort to determine how strides could be made possible on these areas.

Scenario Planning Workshop

Training d18 participants to act more creatively and strategically, Scenario Insight’s Jonathan Star engaged the room in an afternoon of scenario planning. In addition to asking what *will* happen and what *should* happen in diabetes,

Star urged people to think: What *might* happen? Groups focusing on Prevention, Workplace Wellness, and Healthcare Teams of the Future more specifically developed stories of continuity, collapse, and transformation in diabetes between 2018 and 2030. Groups discovered troubling similarities between the continuity and collapse scenarios, realizing that current trends of increasing inequality in healthcare delivery and the siloed approach of stakeholders are troubling. How should the ecosystem prepare for the possibility of an economic downturn exacerbating this fragmentation? In brainstorming positive futures, the groups envisioned changes in social norms, such as stigma reduction, and underlying mental models that prioritize a culture of health and well-being.

Creating the Future We Want: Exploring Leverage Points in Diabetes

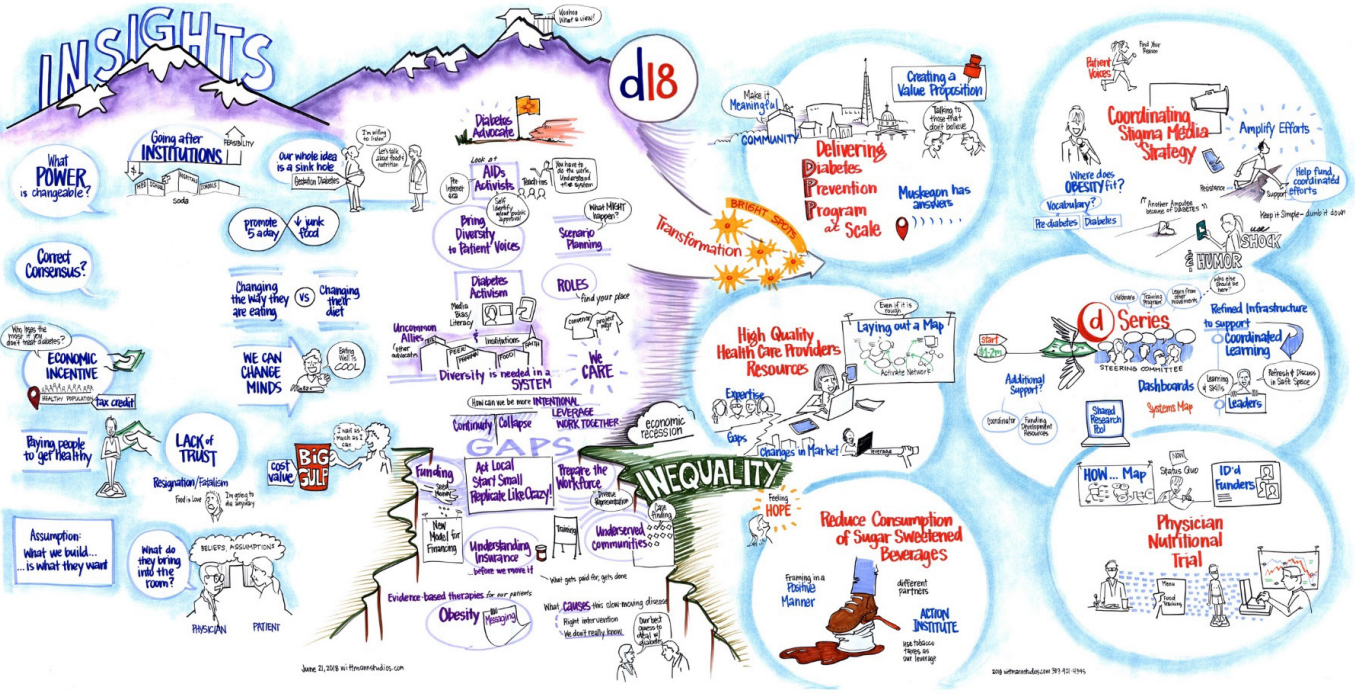
To bring the group into an action mindset, Groupaya’s Dave Huffman shared the ways that systems often become stuck in maladaptive patterns. Participants learned that delays in taking action—resulting from fear of failure, the inability to see results quickly, and other factors—can cause players to revert to suboptimal solutions. Mr. Huffman explained how exposing underlying assumptions and taking advantage of high-impact, high-feasibility leverage points within the system allow groups to act more intentionally.

Key Takeaways from Breakout Groups

Diabetes Resources for Healthcare Providers:

- Consider where on the spectrum from literature to point-of-care a resource like a diaTribe for HCPs would fall. Funders are excited about point-of-care, but this is potentially a trickier, longer-term effort to get right.
- A great tool is likely to do more than just make





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2018 wharton@duke.edu 914-101-0195

clinicians smarter and more up-to-date about diabetes care; it should aid in personalization of care in a way that makes HCPs' work easier, not harder.

- For point-of-care, there is value in creating something that is “pushed” to clinicians rather than something that they have to seek out.
- Create something for the disruptors, the people already interested, rather than targeting all HCPs and health systems.

dSeries:

- A key mission of the dSeries should be related to boundary expansion: spreading insights, elevating best practices, dispersing solutions, and monitoring growth in the system.
- In order to continue successfully bringing cross-sector participants together to solve core problems, goal alignment across the dSeries participants is critical, as is building a five to ten-year plan for the evolution of the dSeries.
- Tactical items that could potentially emerge from d18 include: a steering committee to guide the evolution of the dSeries, multiple webinars each year to discuss programs, a continuously updated dashboard, a shared research portal, and a full-time membership and community coordinator.

What “Healthy” Really Means:

- Thinking about a problem in the context of systems can help create the appropriate approach. In this case, we want to be able to prevent and manage diabetes as well as begin to develop a toolkit to develop a nutrition trial that would provide key insights to a controversial area.
- Individuals are placed on diets with little evidence or a consensus about what works.

- Over time, with dietary guidelines, there has been a positive shift toward understanding what not to eat (processed foods, sugar, trans fats) and what to eat (fresh vegetables, fruits, lean meats).
- To establish causality, or plausible causality, trial methodologies must be extremely robust and the ability to generalize is usually compromised.

Sugar-Sweetened Beverages:

- The marketing and narrative around soda taxes should be positive, as fear tactics aren't usually effective for behavior change.
- Collaboration and unity among organizations are critical to creating long-term momentum around healthy beverage consumption.

Scaling Prevention Programs:

- Scaling prevention programs will require employers to feel invested in their communities and the health of their citizens.
- A major challenge is accessing users through healthcare providers, since not everyone sees an HCP regularly. Potential solutions are accessing the Diabetes Prevention Program through insurers and spreading the word via “peer evangelists.”
- We need ways of communicating the long-term value of prevention programs to employers and payers.

The Media’s Role in Social Movements:

- The media need to get on board with addressing the prediabetes, diabetes, and obesity epidemic. Their reach allows them to advocate for health and dismantle the diabetes and obesity stigma.
- Big food and drink giants like Starbucks and McDonald’s can lead the charge by recognizing that healthy foods can be profitable.

Participants shared insights during the following talks at d18—these are summarized below and included in their entirety in the appendix, but we urge you to watch them first.

- ***Resetting the Diabetes Epidemic: Focus on Obesity*** by Dr. Alan Moses
- ***Letting Bright Spots Light the Way*** by Benjamin Pallant
- ***The Airtight Case for Diabetes Prevention*** by Dr. Laura Schmidt
- ***Cities Changing Diabetes—Houston*** by Dr. Faith Foreman
- ***Our Greatest Challenge (& Opportunity)*** by Adam Brown



In the U.S. alone, diabetes affects **30 MILLION** people and costs **\$327 BILLION** per year.

Traditional thinking says that type 2 diabetes epidemic should be easy to solve.



BUT...

Diabetes can't be fixed through traditional approaches. It's multi-dimensional, constantly evolving, and has multiple stakeholders, causes, symptoms, and solutions.

d18 asked, how can we take a **SYSTEMS APPROACH** to type 2 diabetes and prediabetes?



REDUCE consumption of sugar-sweetened beverages



ILLUMINATE what "healthy" really means



EMPOWER healthcare providers to help people change their behavior



SCALE diabetes prevention efforts that are working



ADDRESS diabetes stigma through the media



GROW dSeries momentum

TUESDAY, JUNE 19

Honoring Robin Smith

Welcoming the participants to Aspen at the Bad Harriet speakeasy's inaugural event,

Kelly Close noted the importance of working together as a multi-stakeholder group over the following days. She also recognized a healthcare leader at the forefront of bringing together diverse groups: the highly-respected Dr. Robin Smith, who established the Cura Foundation with plans to facilitate the eradication of global health-care epidemics through regenerative medicine. Ms. Close emphasized that the Foundation is an extremely valuable model for how to generate change in diabetes and prediabetes. Dr. Smith in turn acknowledged the great strides made by the dSeries and the way that the patient is kept at the center of the conversation

Click to read remarks by [Robin Smith](#) and [Kelly Close](#).

[Click here](#) to see a short video detailing Dr. Robin Smith's work, which is driven by the mission of improving human health and increasing quality of life globally.

Systems Mapping

Throughout the evening, d18 facilitators Brooking Gatewood and Dave Huffman led participants through the beginning of a systems mapping activity. To generate insight into the underlying forces of the type 2 diabetes epidemic, they asked, "What are the biggest barriers to effective prevention and treatment?" and "What is really helping drive positive change?"

What are the biggest barriers to effective prevention and treatment?

Participants identified:

- Mistrust of medical organizations
- Lack of/diminished coordination of care
- Food/sugar marketing
- Access to care in the US
- Obesity epidemic
- Trusting lifestyle choices to bring change

- Lack of attention to root causes in how we approach treatment
- Targeting treatments to populations without realistic understanding of their needs
- Legal hurdles to give money to good ideas (bring us specific asks!)
- Payments for prevention
- Real lives interfere with advice (kids, jobs)
- I can't do all I want to do on my own—need collaborators
- ACES leads to vulnerability and food for comfort
- Good science on population-wide approaches
- Sense that people are "bringing it upon themselves"
- People don't have enough time—stress is high
- Employers don't think about obesity as their problem
- Equity
- Lack of full potential participation in full range of supporting healthy behaviors
- Lack of insurance
- Society may not be able to pay for it today
- Lack of collaboration among systems and the need for case management.
- No money to be made in health without sickness
- Not lifestyle driven—not well woven into everyday life. We are not inspiring and motivating behavior change; it should be (but is not) an easy experience to change behavior. Care is not delivered on patients' terms—system doesn't support
- Lack of recognition of seriousness of problem! And hard to compose what is "news"
- No consensus on diet and nutrition best standards
- Costs and coverage
- Lack of open mindedness on new ways to look at diet
- The relentless push of T2 into the young
- Vulnerable people in unhealthy neighborhoods

What is really helping drive positive change? Participants noted:

- It's becoming less cool to drink sodas and SSB's



WEDNESDAY, JUNE 20

Welcome & Introductions

Peter Waanders, Director of the Aspen Institute's Society of Fellows, kicked off the day with a "local's welcome." Characterizing ways in which the Aspen Institute was created to bring people with disparate ideas together, he said, "If you find someone you disagree with—that's who you need to get a drink with tonight or go on a walk up the mountain with." It was terrific to have this early conversation before Spotlight Health began. Highlights from the event included:

- A focus on prevention and social determinants of health—thinking beyond the doctor's office.
- Fascinating conversation about increasing care upstream to create more continuity between health and wellness.
- diaTribe's own panel, "Breakthroughs in Treating Chronic Disease," featuring Cityblock Health's Dr. Toyin Ajayi, Initium Health's James Corbett, Brigham and Women's Lisa Rotenstein, and Deloitte's Margaret Anderson.

See our sister organization Close Concern's full report on this incredible gathering [here](#).

Kelly Close, expanding on the theme of bringing together differing ideas, acknowledged that everyone in the field knows that they *should* work together. d18, she explained, will focus on learning *how* to work together. Acknowledging the challenges therein, she shared a paradox: "As we get smarter in medicine, science, public health, and more, we become progressively more overwhelmed by the understanding of just how massive and complex this challenge really is." Diabetes costs our world \$1.3 trillion annually and reveals staggering health inequities as well.

Are we prepared for this challenge to get worse? We owe it to ourselves to think about the future of diabetes so that we can leverage our resources and expertise to better position ourselves down the road. Today, we spend 18% of our GDP on healthcare—a rate that was previously labeled "unsustainable."

d18 will not result in an entire, comprehensive action plan, Kelly noted. But the field will gain a stronger set of skills for how to assemble the broader solutions that go beyond individuals, organizations, services, and products to reach a systems level.

To round out introductions, participants shared two words capturing what brought them to d18. The complete list is included along with similar such participant-generated lists in the appendix. In general, the responses fell into a few major categories. Many emphasized how they were curious and intrigued to learn more about systems thinking and how it could help them collaborate toward a common goal. The scope of the challenge and the solutions required to make a difference also featured frequently in the responses. Connected with this was the idea of working to discover new approaches to old problems. The shared responses set an overall tone of learning, collaboration, and innovation.

Systems Leadership Crash Course and Practice Session

Process designer and facilitator Brooking Gatewood began this skill-building by leading a presentation on "systems leadership," which she defined as "a way of understanding reality that emphasizes the relationship between a system's parts, rather than the parts themselves." Thematically, Ms. Gatewood reiterated throughout the session that we must slow down if we want to move fast. Slowing down allows us to recognize that diabetes is a social systems problem. It is multi-dimensional and dramatically affected by systems of capitalism, food access, affordable healthcare, poverty, racism—the list can go on, as can the economic and societal burdens and implications.

How do we address the overwhelming nature of the problem(s)? A systems mindset, we learned, requires a paradigm shift. Instead of looking at the current landscape of events, we must look beneath the surface to explore



the underlying system structures, patterns, and mental models at play. Ms. Gatewood explained, “When we are confronted with complexity, our human instinct is to pretend that things are simpler than they are. But we should step into complexity. It is a developmental process and takes a committed practice.” Traditional problem solving is like a game of whack-a-mole, leading to unintended consequences and an inability to truly solve from the ground up. Ms. Gatewood taught our d18 participants three key principles of a systems level mindset:

- **Systems thinking**—understanding a reality that emphasizes relationships as opposed to parts.
- **Systems change**—actions that address root causes of systemic problems.
- **Systems leadership**—the ability to understand interconnections to achieve a purpose.

She posed a metaphor: “**You are all Olympic track stars, but we need you to be an Olympic soccer team.** You have skills, but we need to do something different with them...Let’s discover new ways of thinking that has a deeper wisdom that we need to address these problems.”

The Future of Diabetes in the US: Scenario Planning Workshop

To build upon Brooking’s introduction, scenario planning expert Jonathan Star engaged participants in a scenario thinking exercise. One under-appreciated aspect of systems leadership is the ability to think coherently about the long-term future. Because diabetes is a “wicked” problem, and many solutions will take time to pay off, it is critical that leaders approach problems with a futures mindset.

Participants asked the question: What might happen? By asking this question in a structured and creative way, scenario thinking can help groups identify new opportunities and challenges and begin to find a path toward a better future.

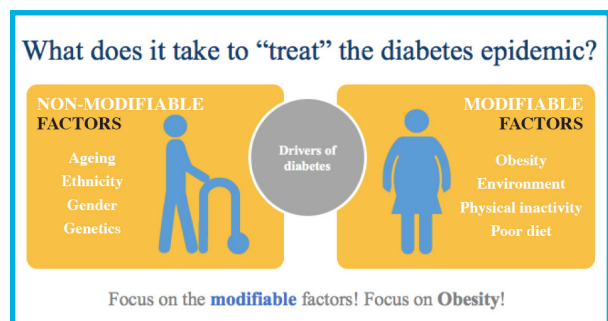
Providing background on predictive work already done by Cities Changing Diabetes (CCD), Dr. Alan Moses gave a presentation:

“Resetting the Diabetes Epidemic: Focus on Obesity.”

He explained precisely why the diabetes epidemic must be reframed in terms of communities and not individuals. Advances in drugs and tech mean that the state of diabetes management can always look promising enough for any one person, but the overall picture is that of a steadily climbing prevalence rate. Arresting this increase is essential to stopping another 100 million people developing diabetes over the next 25 years, with all the complications and costs that come with that figure. He framed the issue in terms of what must be done and then—just as importantly—what actually can be done to deal with these imperatives. His separation of modifiable and nonmodifiable factors and his consideration of what cities and other smaller polities can do to make a systems-level difference encapsulated exactly the kind of thinking at the crux of d18.

Dr. Moses set the stage by acknowledging that, with new drugs and technologies, the field is doing pretty well for individuals with diabetes. However, he noted, we’re not doing as well on a population basis. Diabetes is rising at alarming rates around world. In 2045, 1 in 9 people will have diabetes, totaling 736 million. It costs us \$1.3 trillion annually.

It is estimated that 44% of the total diabetes burden (not just type 2 diabetes) is caused by overweight and obesity. That’s significant, and yet we don’t talk about obesity in the same way we talk about diabetes. If obesity prevalence decreases by 25% by 2045, we can cap diabetes prevalence at 10%. While 10% prevalence may not seem like an aggressive goal, the decrease in obesity required to achieve this is huge.



To meet this goal, Dr. Moses explained that cities should:

- Define a city goal.
- Create an action plan.
- Establish new and innovative partnerships.
- Build health into every aspect of urban strategy.
- Contribute insights to the global effort.

The biggest insight so far in the CCD approach, he noted, has been the diversity of influences that increase risk of developing diabetes, and how one has to tailor approaches.

Returning to the scenario planning exercise, participants were asked to look specifically at one of three different dimensions of diabetes and diabetes care: Prevention, Workplace Wellness or Healthcare Teams of the Future. Each team was asked to create three different stories about how its dimension unfolds between now and 2030:

- **A continuity story** where things progress in a fairly predictable fashion along lines that we can already envision.
- **A collapse story** where existing efforts suffer due to external developments or because current efforts prove inadequate.
- **A transformation story** where circumstances change in ways that lead to a substantially different path for diabetes.

We also gave the teams a set of suggested drivers—events and developments that have the potential to shape diabetes and prediabetes between now and 2030. We identified eight categories of drivers:

- Medical advances
- Technology developments
- Food systems and nutrition science
- Social norms
- Economic conditions
- Policy and regulation
- New players in healthcare
- The world of work

The continuity scenarios focused on the challenges of fragmentation. They envisioned widening inequality, siloed approaches to addressing the epidemic, and disparities in care between rich and poor. They described potential

tensions between the power held by large corporations and individual physicians, and between young and old. It was clear that the groups saw inequality as a primary issue facing those who work in diabetes today, and that any solution to improve the situation must address these fundamental challenges.

The collapse scenarios identified a large range of possible reasons for a severe decline in the quality and effectiveness of future diabetes care. These included a push-back on expertise and science, climate change leading to reduced food availability, corporate dominance, algorithms that drive treatment plans, and genetic risk-based discrimination. The precipitating event in nearly all of the collapse scenarios, however, was a downturn in economic conditions. Given that it is likely there will be some form of recession in the US over the next 2–3 years, it is important for those working in diabetes to prepare for a world of lower economic growth. How will this affect current plans?

The transformation scenarios identified a wide range of factors that could lead to a more successful future. These included policy incentives leading to prioritization of prevention efforts, changes in social norms that drive changes in the food industry, greater innovation from and collaboration within communities, and more effective use of data.

In terms of healthcare teams, the main future concerns focused on the dangers of burnout for healthcare professionals. There were also worries about a future where science and research were no longer trusted by most. Teams outlined the potential risks of a future of algorithm-driven care, leading to a collapse in interpersonal relationships. However, the world of rich data also offers tremendous opportunities for better communication and more personalized care.

For those looking at workplace wellness, most stories focused around the disparities in care between young and old, rich and poor, employed and unemployed. There was particular concern about the quality of care available to those who operate in short-term



contracts and outsourced work. Workplace wellness schemes can be valuable ways to reach those suffering from diabetes and prediabetes, but they seldom reach many of the most vulnerable in the population. Most groups saw promise in new players emerging, using data and technology to offer better care.

For prevention, the most troubling scenarios describe a world where most people find it too difficult to make healthy choices and changes due to a lack of incentives, stigma, or mistrust of technology. There were concerns about the continued power of the “toxic” food system and worries about how data could result in risk-based discrimination. The more positive scenarios outlined how policy changes could make it easier for local communities to promote and take charge of their own health.

We additionally asked each group to outline one to two issues that they felt particularly strongly about and wanted to share with the room. Most of these took the form of “what if?” questions, outlining notable possible future developments that the diabetes community should anticipate and prepare for. These included:

- What if a health résumé becomes part of everyone’s assets or liabilities?
- What if face-to-face health care becomes the exception?
- What if healthcare teams become less MD-centric?
- What if diabetes drugs go generic by 2030? Will people give less attention to prevention because treatment is cheap?
- What if we have a major crisis of innovation around type 2 drugs?
- What if the gig economy produces innovation outside the conventional corporate environment?
- What if food shortages exponentialize many other negative dynamics?
- What if the continuity and collapse scenarios are actually the same?

Creating the Future We Want: Exploring Leverage Points in Diabetes

Transitioning from the scenario generation to thinking about tools for collective action, Dave Huffman spoke about the importance of collaboration in systemic thinking. Wisdom and perspective must be pooled to have a cohesive understanding of the system. Mr. Huffman emphasized that a crucial first step is getting the right stakeholders in the room and then, among these stakeholders, establishing shared objectives with powerful analytical tools to support them (like design thinking, behavioral modeling, scenario thinking, and systems mapping). Ultimately, this process triggers the initiation of powerful projects.

Establishing a foundation for systems thinking, Mr. Huffman shared an overview of systems maps, of which he noted a few varieties:

- **“Trend maps” and “mind maps”** are tools to help organize and visualize key domains, categories, relationships, influences, and interdependencies within complex systems.
- **Driving and restraining forces** are based on a defined challenge and a broad consideration of the forces that encourage and prevent the solutions. A key question stemming from these maps is how a field might strengthen drivers and weaken restraining forces.
- **Actor and social network maps** share how stakeholders are related and offer insight into key connections to build and strengthen.
- What people *traditionally* think of as a systems map involves **causal loops or feedback diagrams**, which elucidate dynamic relationships. These systems maps lead you to realize why a given idea may not work or have unintended consequences due to the interconnectedness of multiple domains.

Mr. Huffman explained how causal loops allow us to see how certain dynamics become “stuck.” Simple systems can be solved with linear thinking (“my tire is flat therefore need to change the tire”), but complex systems have loops. Loops can establish virtuous or vicious

cycles, bring the system back into balance, or keep the system from changing.

Mr. Huffman also noted that big delays in systems cause people to divert to less optimal solutions; the bigger the delay, the bigger the effect. For example, **key delays in behavior change around wellness and prevention are:**

- Fear of failure
- Not seeing immediate results or ROI from preventive efforts
- Trying to motivate healthy behaviors using fear of long-term complications
- Social norms take a long time to change
- Healthcare providers don't have enough time to address the root causes of diabetes

Further analyzing the forces underlying the diabetes epidemic, Mr. Huffman noted that every person he spoke with came from a different place in response to the question, "From your vantage point, what's driving positive change in type 2 diabetes and what are some of the barriers?"

In terms of how these forces can be useful, Mr. Huffman turned to leverage points, or places within a complex system where one small shift can produce big changes overall. **There are different ways to approach leverage points:**

- Change the formal rules of the system.
- Provide people with the power to evolve and self-organize.
- Shift mindsets and values.

Which leverage point should we choose?

There are low impact and high impact things we can do at the level of physical, informational, social/structural, and consciousness/mindset. Mr. Huffman encouraged participants to rank forces on impact and feasibility axes to determine which solutions are high-leverage. A valuable leverage point is high impact, highly feasible, sustainable, systemically viable, and has benefits that outweigh the costs.

Creating the Futures We Want: Diving In

d18 participants then worked together to identify leverage points contributing to a single, specific goal within the diabetes system. Groups considered the events, patterns of behavior, systems structures, and mental models that are impacting pursuit of the goal, mapping driving and restraining forces according to impact and feasibility. Low feasibility/low impact forces were labeled "Sink Holes," low feasibility/high impact forces were labeled "When the Stars Align," high feasibility/low impact forces were labeled "Catalyst...or Distraction?" and high feasibility/high impact forces were labeled "Low-Hanging Fruit."

GROUP 1 Reducing consumption of sugar-sweetened beverages

Sink Holes

- Soda addiction.
- Concerns about the safety of sugar substitutes.

When the Stars Align

- Access to soda is high.
- Assumption that large size + low cost = value.
- Industry profits on sale of soda.
- USDA and SNAP policy influences consumption.
- Policy affects advertising of sugar-sweetened beverages.

Low-Hanging Fruit

- Decreasing consumption in high-income populations.
- Regulation and control of sugar-sweetened beverages in schools.
- Lack of data showing the specific level of consumption that impacts health.

*Thank you to the following individuals who contributed to this breakout session:
Nichola Davis, Laura Martin Feinberg, Anders Hvelplund, Sophie Koontz, Klaus Madsen, and Robert Ratner.*



GROUP 2

Scaling and spreading the healthy beverage initiative toolkit to reduce consumption of sugar-sweetened beverages

Sink Holes

- Not enough champions of the healthy beverage initiative.
- Perception of freedom of choice around food.
- Consumer pushback related to taxes and/or decreasing availability.

When the Stars Align

- Companies profit from selling soda.

Catalyst...or distraction?

- Sugar-sweetened beverages are a clear target.

Low-Hanging Fruit

- Sugar-sweetened beverages taste good.
- Institutions that sell sugar-sweetened beverages have power/control.
- Circumstantial wants and needs (stress, preference) often override long term wants and needs.
- The American Beverage Association has significant power.
- The is simple messaging around why sugar-sweetened beverages are unhealthy.
- The anti-sugar movement is already happening.

Thank you to the following individuals who contributed to this breakout session: Bruce Braughton, Colleen Chelini, Kelly Close, Susan Roberts, and Deana Zabaldo.

GROUP 3

Reduce sugar consumption

Catalyst...or distraction?

- Peer education is a powerful tool in changing behavior.
- Health foods are less accessible in food deserts.
- It's more expensive to buy low-carb foods since they spoil.
- High effort and expense are associated with finding and cooking healthy foods.

Low-Hanging Fruit

- There is significant marketing of unhealthy food.
- Portion sizes are too large.
- People are introduced to sugar as infants.
- Sugar is often disguised within foods.

Thank you to the following individuals who contributed to this breakout session: Stephanie Edwards, Jennifer Nadelson, Brendan O'Connor, Austin Sabattis, Alex Slater, and Carolyn Walsh.

GROUP 4

Integrating cues for healthy behavior into technology

Sink Holes

- There is less of a technology culture outside of Silicon Valley.

When the Stars Align

- Exercise is often intimidating.
- Social norms can act as positive behavior cues.
- Digital health programs need to have very high engagement/screen time for advertising purposes.

Low-Hanging Fruit

- Ease and popularity of sleep tracking.
- Smartphone and app penetration.
- Many health tools are interoperable.
- Young people already communicate through texting.
- We can give rewards through technology—but the type of reward needs to be individualized.
- There is a lack of understanding from technology companies that they could be part of the solution.

Thank you to the following individuals who contributed to this breakout session: Adam Brown, Rashad Jaeger, Lorraine Stiehl, and Kristen Williams.

GROUP 5

“300 Small Healthy Behaviors”— a toolkit for HCP’s

Sink Holes

- Providers can be paid to create or distribute the toolkit.
- There is little time for interaction between patients and providers.

When the Stars Align

- Shared decision-making could be supported by a tool.

Low-Hanging Fruit

- Creating a support system for patients through the internet.
- Providers aren’t trained enough in cross-cultural interaction.
- Many people are not informed about reversing type 2 diabetes.
- Belief of “professionals” that patients are stupid or incapable.
- Current volume-based models don’t allow for deeper interactions between patients and providers.
- Pre-appointment education for patients is possible.

Thank you to the following individuals who contributed to this breakout session: Christine Ferguson, Marcia Kadanoff, Ed Liebowitz, and Matthew John Rice.

GROUP 6

Define what healthy nutrition means in the context of diabetes, prediabetes, and prevention

When the Stars Align

- Food not positioned enough as a way of managing health.
- Fast food is cheap and easy.

Catalyst...or distraction?

- People don’t want to give up food as comfort.
- Payment models are moving towards prevention.

Low-Hanging Fruit

- Conventional thinking sees diet and disease

as less linked than they should be.

- Increasing awareness of the diabetes and obesity epidemic.
- Diabetes and obesity are being linked to other conditions.
- Providers understand the role of nutrition and lifestyle in disease management.

Thank you to the following individuals who contributed to this breakout session: Margaret Anderson, Conrod Kelly, Marjorie Sennett, Gary Taubes, and Virginia Valentine.

GROUP 7

More fruits and vegetables in low income communities, especially for kids

Sink Holes

- There are financial incentives to sell unhealthy foods.

When the Stars Align

- Fast food propaganda is on TV.
- Schools make money from selling soda.
- Supermarket checkout lines contain junk food.
- Food corporations are consolidating.
- Structural racism.
- There are increasing numbers of farmers’ markets.
- Food can be an addictive substance.
- High palatability and significant marketing of junk foods.
- Politicians are dependent on private campaign financing.
- Evolving norms around local food and farm to table.

Catalyst...or distraction?

- Vegetables and fruits are being marketed as the new luxury or “new desirable.”
- Food advocacy is taking shape (e.g. Food Justice Now).

Low-Hanging Fruit

- Perception that fruits and vegetables are “bougie food.”
- The Brighter Bites model.
- School lunch is at the heart of political discourse.
- Health system interest is shifting from



fee-for-service to fee-for-value.

- We are starting to ask the community what would make them change their behavior.
- Pregnant women and new moms are very engaged with their health and the health of their children.

Thank you to the following individuals who contributed to this breakout session: Daniela Connelly, James Corbett, Stefanie Cousins, Tim Garvey, Jed Miller, and Laura Schmidt.

GROUP 8

Improving prospects for children with type 2 diabetes

Sink Holes

- “Policy by proxy”—many groups are spoken for at the policy level.
- Growing interest in healthcare policy changes.
- Some people have limited access to technology, especially smartphones.
- Cultural traditions encourage eating unhealthy foods.
- Personal activity trackers are becoming more popular.
- Social stigma around obesity, and normalization of obesity.

When the Stars Align

- Feeling of sacrifice when giving up unhealthy foods.
- Lack of education, literacy, comfort, and trust.
- Pervasiveness of short-term thinking and uncertainty about the future.
- Unhealthy food tastes good and fills an emotional void.
- Unhealthy food tends to cost less than healthy food.
- Healthcare system is resigned to the status quo.
- There are corporate incentives for selling unhealthy foods.

Low-Hanging Fruit

- We have the research and information to generate awareness of the problem.
- There is greater awareness of the long-term costs.
- People are influenced by their peers.
- Prenatal and postnatal care is a good time

to train mothers around healthy habits.

- It is difficult to reach underserved populations.
- There are latent resources in schools, churches, Y’s, etc.
- Sport and activity culture.

Thank you to the following individuals who contributed to this breakout session: Esther Dyson, David Lee Strasberg, and Richard Wood.

GROUP 9

Investing in the health of people, companies, and cities

Sink Holes

- Unwillingness to invest in high cost of prevention and testing.
- Lack of data sharing and presence of interoperability.
- Inability to act when the opportunity presents itself (policy change).
- System inability and capacity to accommodate increasing patient loads.

When the Stars Align

- Political leadership, timing of new program coverage, and vision of the health workforce can catalyze change.
- Public and private partnerships with big data have the capacity to be influential.
- People and systems are both ready for change.

Catalyst...or distraction?

- Competing priorities and values among employers, people, and cities.
- Convener and advocates are leading initiatives.

Low-Hanging Fruit

- Employers want to reduce healthcare costs.
- Social impact investing is increasing.
- Increased interest in community-based services.
- National trend to neutralize urban centers.
- Beneficial to attract and motivate employees.

Thank you to the following individuals



*who contributed to this breakout session:
John Dee Fair, Faith Foreman, Ed Gregg,
Angela Moskow, and Wizdom Powell.*

Group Reflections on Emergent Themes

Following the force mapping exercise, d18 participants reflected on themes and insights that had emerged. One major thread was the pervasiveness of short-term thinking, as Esther Dyson noted. Health and prevention are long-term goals, and short-term considerations like the comfort of unhealthy food and the need to spend money on more pressing needs often override them. Lack of faith in achieving positive, longer-term outcomes is also the result of mistrust. Wizdom Powell pointed out that many groups have plenty of evidence that they should mistrust healthcare systems, and we need to better understand what's driving this in order to get more people to use the healthcare tools we build.

To drive this progress, James Corbett added that we need to tap into forces that we haven't previously exercised, since many movements originate outside of industry.

How can we harness the power of consumers, for example? Laura Schmidt said that we need to be thinking about both sides of the same coin in this shift, like increasing consumption of fruits and vegetables as we work to reduce the prevalence of unhealthy foods.

Anthology of Bright Spots Launch Celebration

That evening, d18 participants gathered at the top of Aspen Mountain to further pivotal conversations and celebrate the online launch of *The Anthology of Bright Spots*, a collection of successes in the prevention and treatment of type 2 diabetes. The following individuals presented insights and developments from the field:

Letting Bright Spots Light the Way

by Benjamin Pallant

Mr. Pallant highlighted how focusing on what's working in diabetes—as opposed to fixating on

what ails the field—can generate greater investment and change.

The Airtight Case for Diabetes Prevention

by Dr. Laura Schmidt

Dr. Schmidt vivified the impact of prevention, sharing the progression of soda taxes and key barriers and needs for continued growth of the movement.

Cities Changing Diabetes—Houston

by Dr. Faith Foreman

Dr. Foreman shared how Houston's partnership with Cities Changing Diabetes, collaboration and adaption of successful models, and a non-linear, community-centric approach led to stronger solutions.

Our Greatest Challenge (& Opportunity)

by Adam Brown

Mr. Brown vividly framed the enormous scale of the prediabetes epidemic—84 million people in the US—and the comparatively small number of people that current effective programs are addressing. He proposed that our greatest challenge is not inventing new stuff, but tackling The Last Mile: getting what already works into more people's hands.

See the **appendix** for the full content from each talk.



THURSDAY, JUNE 21

Welcome and Overnight Insights

The group convened on Thursday morning, diving headfirst into the final half-day of discussion and idea generation. Participants shared insights that had emerged since the previous afternoon. A theme many reflected on was work: Whatever large-scale changes one might hope to effect, it's first necessary to show up and do the work at the local level. "Local" meant different things to different people. One participant shared her decision to write a letter to New Mexico's governor-elect, while another talked about earning the trust of individual patient communities. Implicit in this is the challenge of formulating system-wide approaches while remaining attentive to the diversity of those living with diabetes and the various problems they face. Scaling up local solutions could prove one way to bridge this gap. Learning lessons from previous public health tipping points around mental health, the opioid crisis, smoking, and other issues ought to guide such strategies. Others reflected on key priorities for the future, such as ensuring people have the tools and access to be diagnosed with diabetes as early as possible and educating the health workforce to better support the patient community.

Strategic Action Labs: Zooming in on High-Leverage Opportunities

The participants then coalesced into groups to dig into the most compelling ideas from the previous days, placing driving and restraining forces according to **the "iceberg" model** of understanding the patterns of systems behavior, systems structures, and mental models underlying an event.

Sugar-Sweetened Beverages
As part of the Sugar-Sweetened Beverages (SSB's) group, participants discussed creating the Healthy Beverage Initiative Center, which would coordinate advocacy efforts, support nutritional research, disseminate a playbook, and

document the movement. This center could also disseminate resources on filing lawsuits against companies and generate information for advocates, researchers, and journalists.

Discussing this center, the group considered driving and restraining forces related to the consumption of SSB's, concurring that for progress to occur, mental models and underlying structures must change. Driving forces promoting decreased consumption of SSB's include increased traction of soda taxes, a 25% decrease in consumption of SSBs in recent years, a large (yet disorganized) advocacy community, growing trends in healthy eating, strong evidence related to the health risks of drinking SSB's, as well as possession of a "playbook" of sorts from prior successful public health movements, like tobacco. Restraining forces include the fact that diabetes and obesity are chronic diseases without immediate complications leading to a delay in diagnosis and action, lobbying by the beverage industry, strategic marketing and advertising, and—quite simply—the fact that "[soda] just tastes good."

Potential leverage points include:

- Even if a proposed SSB tax doesn't pass in a city or county, consumption drops regardless because of the debate and awareness. Through the discussion itself, SSB consumption becomes de-normalized.
- The Healthy Beverage Initiative needs resources to map out the various movements that are taking place.
- A strong media campaign could combat entrenched mental models like addiction and free choice.
- Focusing on children would be massively powerful from a marketing perspective.

The group considered the economic impact of SSB removal. At UCSF, for instance, vendor revenue took a dip but later evened out. In addition, the long-term economic benefits could be particularly compelling to convince partners like large employers and health plans that ultimately pay for diabetes and related complications of their employees and beneficiaries, respectively.

Dr. Schmidt noted that strong evidence is needed to shoot down counter-arguments, mentioning upcoming data tracking fasting blood glucose levels before and after the UCSF SSB sale ban that demonstrated beneficial changes in weight and insulin resistance after only ten months.

The group acknowledged, however, that unintended consequences of the SSB movement might include worsening inequities by negatively affecting laborers, including truckers, store-workers, and factory employees. David Lee Strasberg considered whether SSB taxes could lead to even healthier beverage substitutions. On the other hand, taxation would contribute to diabetes prevention funds.

The group considered potential allies for the movement, including water municipalities, school boards, parents, environmental groups, providers, universities, pre-medical and dental students, and even traditional anti-tobacco organizations that have broadened their missions to include SSB consumption. The group zoomed in on cavity awareness in the media, noting that the beverage industry doesn't disagree with the impact of sugar on cavities and, in fact, funded a cavity vaccine project.

The participants considered which behaviors or mindsets are hindering progress.

Deana Zabaldo noted that the food and beverage industries have cunningly paired soda consumption with positive childhood experiences, creating emotional attachment and feeling related to nostalgia with soda. A huge amount of research goes into specific marketing strategies that target children; perhaps, then, collectively fighting this targeted advertising could make a big impact on the consumption of SSB's. This type of initiative would necessitate strong coordination among allies, with unity among organizations like the ADA, healthcare providers, and advocacy groups. The group considered the benefits of changing the frame from "soda tax" to a different, more attractive term like "truth in food" or "the real choice in food."

Participants tossed around other ideas related to the creation of the healthy

beverage initiative center, including approaching the NIH for funding and organizing a national meeting of mayors to discuss coordinated initiatives across the state and local level.

Key Takeaways

- The marketing and narrative around soda taxes should be positive, as fear tactics usually don't change behavior.
- Collaboration and unity among organizations are critical to creating long-term momentum around healthy beverages.

Thank you to the group's participants: Sophie Koontz, Laura Schmidt, Alex Slater, David Lee Strasberg, Virginia Valentine, and Deana Zabaldo.

What Does Healthy Really Mean? A Nutrition Trial

This group sought to create a clinical trial that could help us move the needle on our understanding of what constitutes healthy food.

This trial would answer questions that pervade nutrition science. We know that sugar, for example, has no nutrition benefit. But should we go low-fat or try the Mediterranean diet to optimize our health? At diaTribe, we try to answer this question as it relates to individuals with diabetes since diet is critical to living with the condition. Though there is a good amount of variability even among people with diabetes, **diaTribe acknowledges** that lower-carb diets have a stabilizing influence on blood glucose levels. Nevertheless, even within diabetes, the debates are both constant and critical as we seek to uncover what keeps people healthy.

Participants first considered the state of affairs in nutrition. The nutrition landscape includes "a lot of opinions, not very convincing data, and lots of noise," Adam Brown opined. We find many anecdotes of variability among individuals—certain food frameworks may work for some and not for others.

The media play a huge role in communicating nutrition science to the average person. Finally, there is a significant lack of adherence to diets in clinical trials, making it hard to land on any robust findings.

The group then explored the systems structures that affect our understanding



of nutrition. Gary Taubes provided an example of how food systems might support a nutrition shift—“When we told people to eat more low-fat diets, the CDC released low-fat perspective statement, from which food industries grabbed the *low-fat* label rapid-fire. If there is a demand, they will follow.” That being said, systems of food availability and scarcity, as well as the demanding cost of healthier foods, must be addressed.

Since proper nutrition is often rooted in behavior change, mental models were a big focus for our participants. Mr. Brown said, “One way to think about diets is what you eat, your glucose response, and how much goes into fat versus muscle. But we can also imagine an operating system where your diet focuses on what you buy and do not buy. And when you sit at a table, what you eat and do not eat. What if we prescribe eating behaviors instead of a list of foods?” When we think about these mental models, social media and peer to peer support can also play a powerful role in engagement.

Lastly, our participants dove into clinical trial development, thinking critically about how to design a robust trial with all of the aforementioned categories—current state of affairs, systems structures, and mental models—in mind. This trial would change the way society thinks about food. Anders Hvelplund ended our roundtable by excitedly saying, “Our ideal future in 2030 is a transformation where we do not disagree about our approach to eating. We gain clarity.”

Key Takeaways

- Thinking about a problem area in the context of systems can help create the appropriate approach. In this case, we want to be able to prevent and manage diabetes by beginning to develop a nutrition trial that would provide insight into a controversial area.
- Individuals are placed on diets with scant evidence; there is little consensus about what works.
- With dietary guidelines over time, there has been a positive shift toward understanding what not to eat (processed foods, sugar, trans fats) and what to eat (fresh vegetables, fruits, lean meats).

- To establish causality, or plausible causality, trial methodologies must be extremely robust, or generalizations will likely be compromised.

*Thank you to the group's participants:
Adam Brown, John Dee Fair, Anders Hvelplund,
Marjorie Sennett, and Gary Taubes.*

Healthcare Provider Resources

This breakout group focused on the idea of improved diabetes resources for healthcare providers (HCP's) and The diaTribe Foundation's current work considering the desirability and feasibility of creating this resource. Mallory Erickson provided some background on the grant diaTribe has received, including market research on HCP's who care for people diabetes, and decision-makers at organizations that employ them.

Participants dug deeper on whether diaTribe was focusing on the possibility of a point-of-care diabetes resource or a more general resource. Though diaTribe is currently exploring both, participants encouraged diaTribe to not look at these options as purely binary, with the caveat that there is likely particular interest from funders in the point-of-care version.

Participants pointed to a variety of challenges that relate to an HCP resource,

addressing in particular to the need for personalization, effective delivery (Epic/EMR embed? Push notifications?), and supporting both patient knowledge *and* patient ability to act. This led the conversation to how to use algorithms to personalize information at the point of care. For example, might an algorithm be useful in producing a set of suggested questions an HCP could discuss with each patient? Participants noted that this would demand a good deal of understanding of patient backgrounds and caution regarding the introduction or reinforcement of bias.

Much conversation addressed ensuring that “diaTribe HCP” would not lead to a physician-centered approach.

It needs to be built around the patient and to consider the fact that physicians typically spend far less time with any given patient than nurses, case managers, and a



wide variety of allied health professionals. This led to the point that a project of this scope would need involve partners well beyond diaTribe.

From a distribution and scaling standpoint, participants encouraged the diaTribe team to focus on the people who are already interested in a new resource. Rather than trying to create something that is designed for universal uptake, the group suggested finding out what would be of use to players that are already pushing toward disruption like Amazon/Berkshire/JPM or states receiving CMS Innovation funding and consider them as the early adopter. Others will follow once success becomes more apparent.

Key Takeaways

- Consider where on the spectrum from a general resource to a point-of-care resource like a diaTribe HCP would fall. Funders are excited about point-of-care, but this is potentially a trickier, longer-term effort to get right.
- A great tool should do more than just make clinicians smarter and more up-to-date on diabetes care. It should aid in personalization of care in a way that makes HCP's work easier.
- For point-of-care, there is value in creating something that is "pushed" to clinicians rather than something that they have to seek out.
- It may prove more fruitful to create something for the people already interested, rather than targeting all HCP's and health systems.

Thank you to the group's participants: Margaret Anderson, Mallory Erickson, Jennifer Nadelson, Wisdom Powell, and Matthew John Rice.

Scaling the Diabetes Prevention Program

This group explored how an existing successful diabetes prevention effort, the Diabetes Prevention Program (DPP), can be more widely implemented. Esther Dyson and Melissa Wikman began by explaining how Way to Wellville—and the Muskegon YCMA specifically—scaled the DPP. Way to Wellville includes six health systems covering 180,000 people. Five of those systems employ Way to Wellville's own

clinicians, and the sixth is in partnership with the Muskegon YMCA. The YMCA is allowed to deploy Way to Wellville's funding in whatever way it sees fit, as long as it is delivering on evidence-based programs. The question is how to accomplish this in a way that is scalable. Each community is asked to scale programs that it already has working well, so the DPP is not implemented the same way in every community.

Following this background, the group turned to the issue of employers within each community feeling invested in the health of their citizens. For many large, national employers, it is not easy to connect employee health to benefits for the larger organization, but the Muskegon YMCA has actually been receiving a large number of referrals from Walmart. Supporting referrals and continuity of referrals is a key issue for the YMCA.

The group concurred that having diversified sources of funding for these programs is critical. A major challenge is communicating the value of the DPP to the different stakeholders. In fact, the YMCA did a study looking at distribution of value, finding that the programs are not as financially sustainable as it had previously thought.

Community employers should be involved in distributing the DPP. They often refer people to the YMCA rather than directly distribute the DPP themselves, failing to cover the full cost. One bright spot is the success of sending periodic letters that document progress to the HCP's seeing patients in the program. A key question is how to translate these value assessments to employers. Right now, the YMCA is communicating this through continuing medical education presentations.

The group then presented another challenge: How should programs access users, given that many people don't go to a healthcare provider regularly? The group posited that accessing users via insurers may be a better bet than via providers, though not everyone has insurance. One path to sustainability could be to find ways to demonstrate the true costs of diabetes and value of the DPP to Medicaid. Brendan O'Connor mentioned Solera, an organization that fills the gap between the network and



the providers so that the plan never has to worry if a given program is compliant—and Solera doesn't get paid unless it has the outcomes. He suggested that the national YMCA might be a partner to help the national plans “say yes.”

Finally, the group touched on finding ways to reach different segments of the population. Klaus Madsen recounted Denmark's efforts to bring together middle-aged men with prediabetes; Mr. O'Connor noted the need for “peer evangelists.” In this case, scaling would require the development of programs that not only bring people in but gain their trust.

Key Takeaways

- Scaling prevention programs will require employers to feel invested in the health of their communities.
- A major challenge is accessing users through healthcare providers, since not everyone sees an HCP regularly. Potential solutions are connecting with the DPP through insurers and spreading the word via “peer evangelists.”
- We need ways of communicating the long-term value of prevention programs to employers and payers.

Thank you to the group's participants: Esther Dyson, Ed Liebowitz, Klaus Madsen, Brendan O'Connor, Jonathan Star, and Melissa Wikman.

dSeries

The dSeries breakout group discussed the primary objectives of the Executive Innovation Labs and The diaTribe Foundation's role in sustaining a movement toward reducing the societal burden of diabetes and prediabetes. The participants identified key goals and characteristics of the dSeries network and gatherings, including hosting an annual meeting, creating a dashboard on which participants can collaborate, organizing three webinars over the course of the year, highlighting unheard voices in diabetes, supporting a diverse portfolio of solutions, and building systems leadership capacity.

The group discussed some of the greatest barriers to the dSeries in achieving its goal of bringing the field together, including stigma, competing priorities, and a social mindset that the problem has already been solved. Stigma in particular affects the ability to garner funding and attention. Whether pursuing advocacy work, awareness, or education, the group concurred that diaTribe has the strength to focus on reducing these barriers by keeping patients at the forefront of its efforts. Participants highlighted the uniqueness of the dSeries model, including the ability to pull diverse stakeholders together to build solutions.

What would expanding this dSeries co-creation look like? The group agreed that three webinars per year would provide an opportunity for participants to discuss progress, also recommending efforts like a continuously updated dashboard, a shared research portal, and hiring more internal staff members to work on development and community-building. The group concluded that the dSeries is much more than one annual meeting. It is a year-long effort that would need to be staffed by a program manager, a communication/content creator, and a membership facilitator. Membership and community coordination, in particular, would be critical in maintaining year-long collaboration among dSeries participants.

To build out the infrastructure to coordinate across multiple groups in diabetes, the group concluded that it would need to raise at least one to two million dollars. With this investment in the dSeries, diaTribe could focus on growing its infrastructure so that it can create a shared collaboration platform for the dSeries community.

Key Takeaways

- A mission of the dSeries should be related to boundary expansion: spreading insights, elevating best practices, dispersing solutions, and monitoring growth in the system.
- In order to continue successfully bringing cross-sector participants together to solve core problems, goal alignment across dSeries participants is critical, as is building a five- to ten-year plan for the evolution of the dSeries.



- Tactical items that could potentially emerge from d18 include: a steering committee to guide the evolution of the dSeries, multiple webinars each year to discuss programs, a continuously-updated dashboard, a shared research portal, and a full-time membership and community coordinator.

Thank you to the group's participants:

Brooking Gatewood, Kelly Close, Christine Ferguson, Angela Moskow, Michelle Carnahan, Marcia Kadanoff, James Corbett, and Jed Miller.

Addressing Stigma through Media

This group focused on leveraging media to combat stigma against prediabetes, diabetes, and obesity. First, participants took a deep dive into the current state of obesity. The “blame game” was a hot topic, ranging from the defeatist attitudes of HCP’s to the degrading context that society places on bigger bodies. Participants mentioned that obesity was renamed adiposity-based chronic disease (ABCD), which could perhaps spur more HCP’s to diagnose and treat rather than put all the pressure on the patient alone to manage. Thinking about successful media movements, participants dove into the LGBTQ+ movement, where advocacy organizations worked alongside the news media to cover stories about LGBTQ+ individuals, the power of “coming out,” and the need to reduce discrimination.

Participants chose to focus on a coordinated media strategy around diabetes.

Within this strategy, the table loved the idea of a prevention angle with young people as the main target. Educating the public on prediabetes would lead to more effective treatment. Simultaneously, having a strategy that relies on humor may help battle the stigma—Conrod Kelly gave the example of “Stupid things people say to people with diabetes” memes. Key players in this strategy would include journalists, industry, patient advocacy organizations, major television network shows, politicians, and youth. Resistors would likely include food companies with an interest in selling unhealthy foods, certain retailers (grocery stores), and perhaps the media again.

Within this strategy, participants thought about some potential unintended consequences. Perhaps the output leads to a normalization of obesity, which would be counterproductive, or that more people come out and say that they have diabetes; but there is still disagreement about what to do about it. On the other hand, a positive unintended consequence might be promotion of healthy eating.

To amplify these efforts, participants had many suggestions:

- Professional sporting leagues like the NBA and NFL address child obesity.
- Restaurants improve nutrition labeling.
- Medical training evolves to help HCP’s address diabetes.
- Technology companies like Google, Twitter, and Instagram use their platforms to help.
- Sporting apparel companies advertise for this social cause to their own benefit.
- Starbucks does away with unhealthy drinks.
- Companies that we know are highly motivated, like Walmart and Target, lend a hand.

Participants noted a few of the biggest barriers to this media strategy, including funding, cost incentives to big companies like McDonald’s, and a lack of understanding of what constitutes a healthy diet. In order to achieve these larger systems goals, we need the entire diabetes community involved, companies and businesses like Starbucks and McDonald’s to give up the idea that healthy is not profitable, and to alter public systems to make healthy food accessible and affordable.

Key Takeaways

- The media need to get on board with addressing the prediabetes, diabetes, and obesity epidemic. Their power and proximity to the younger generation make them a valuable tool to advocate for health and to break down the diabetes and obesity stigma.
- Big food and drink giants like Starbucks and McDonald’s can lead the charge by recognizing that healthy foods can be profitable.

Thank you to the group's participants: Daniela Connelly, Faith Foreman, Tim Garvey, Rashad Jaeger, Austin Sabattis, and Lorraine Stiehl.



Closing Reflections

To close the gathering, participants reflected on what they learned.

There was overwhelming support for the importance and value of systems thinking as a way to reframe the biggest questions around diabetes. The outstanding question is one of execution. Collective action is necessary to realize the ideas outlined at d18 and its predecessor meetings, with one participant noting a small army is required. In the near term, people spoke of their excitement to get home and back to work, energized by the ideas discussed here. This conference offered an opportunity to step back and take the longer view, while the return to day-to-day life is a chance to start putting those ideas into practice on the ground. How best to serve the most vulnerable patient populations was a repeated focus—those with the greatest insight into the challenges of living with diabetes are also often those most excluded by the political process. More than most, the diabetes community is one formed by the stories of its community. An overarching goal of d18 was recognizing the universal aspects of those stories and how this might translate to systems-level change, all while honoring patients' individual lived experiences.



APPENDIX

TED Talks

Introduction—Kelly Close

I'm going off script to start, just to say, I mean how Colorado is this? First of all, I'm so lucky to know what my blood sugar is. There are so many people in the world who have diabetes who have no idea what their blood sugar is. Much less I get to know what it is this second, and I get to know that it is low, and I get to be in this amazing place—and Marjorie is going to tell me to keep drinking my Coke so I'm going to keep doing that—and I get to be in this amazing town and place going to a bar outside where I say, "Do you know anyone with diabetes?" And the answer is "no," because there's not that many people with diabetes. Angel is amazing he gave me Coca-Cola anyway, and then he asked, "Do you need an EpiPen?" Like you guys—we have so much to play for and so much to win. And gosh, Angel, thank you, but I mean how kind of crazy is it?

Everybody in society should be trying to reduce prediabetes, reduce diabetes, try to make us all better. I kind of love it that that is what he thinks because, wow. And now I'm a little nervous that is meant to be dismissive, meant to be glorifying. This is what Colorado is like, and this is what Aspen is like, and this is actually how all of our world should be. Just to be even more off script, I have some props—I guess I'm going to show you the props at the end.

But I'll start by saying the evening is all about bright spots. And I want to take a few seconds to ask each of you to silently consider a bright spot in your life and work. A person, or a group of people, that's really served as a role model of success in impact, in mission. So, what we just created, right here in that minute, is something of a mini Anthology of Bright Spots. Right here, in this room, and throughout the evening, I really hope that you'll come up to me and you'll tell me who you were thinking of. And I hope you'll tell others in this room who you were thinking of, who came to mind for you. And I urge you to learn from each other tonight as each person here is

involved in big bright spots of their own. I know almost every single person in this room well. I'm so lucky.

And the number of bright spots that you're involved in is huge. We wanted to limit the formal part of the evening so you have enough time to interact with people. Some of you know each other incredibly well, and some of you have just met, and some of you have just met and feel like you know each other incredibly well and feel like you've been working together and being together a long time. I just want everybody to know that everybody in this room is involved in work that deserves a talk of its own. The sheer density of brightness in this room is so big, the density of goodness.

And that's been kind of further intensified because we were joined in the last hour by a number of Spotlight Health VIP attendees. They're in Aspen ahead of Spotlight Health, which begins tomorrow, a program of the Aspen Institute. This is the beginning of the lecture which is unscripted. This is an agenda of what is happening in Aspen over the next 10 days, and you guys, this is profound. The quality of the conversation, what it is going to be like for the next 10 days in Aspen. What Ruth Katz and Peggy Clark have created through Spotlight Health in particular is astounding. It used to be the ideas festival was 7 days and then it turned out there were so many discussions about healthcare that they made Spotlight Health the first 3 days. It is incredible what they have put together. I know not everybody gets to stay. I'm really so grateful to our team, some of our team at Close Concerns is staying. Many of us are leaving to go to a big scientific conference, unfortunately overlaps with Spotlight Health this year. But 3 people from Close Concerns are going to stay here and be taking notes. What Aspen Institute invests in by having many of them on video, and our team will be writing them up, and if you don't get to stay for any or all of it, know that you'll be able to get it through us.



But just again to say thank you to all of the VIP attendees who flew in early. You came up to spend time with The diaTribe Foundation—I can't even imagine this, probably even at the beginning of our dSeries which started in Palo Alto in 2016 and continued in San Francisco in 2017, and so to be here with this amazing group of people today has been absolutely incredible. I hope that if I haven't met you yet I get to meet you this evening.

Our talks tonight are all connected to the *Anthology of Bright Spots*. This is my second prop. This is incredible. I'm so proud of it. It is one of the best things that we've ever done at our Foundation, and I know everybody from d18 has already seen it, but I still hope you'll pass it around and that you'll see some of the density of goodness again that's in this. [Diatribe.org/Anthology](https://diatribe.org/Anthology) (isn't that a good URL?)—it is amazing! Even though we've spent so much time today saying your phones aren't important, I hope by end of the night I hope you go to that URL.

And again, we have been so elevated with the work of our team. Could everybody in the room raise your hand if you work with The diaTribe Foundation or as a volunteer from Close Concerns? Wow! Look at everyone in this room. Some of our advisors are here, including Jed Miller who runs 3 Bridges. He is so smart, as a digital strategist, and what he took from what we started to create with the Anthology of Bright Spots and what he has made this turn into on the web is absolutely huge. I hope everybody will spend time on that this evening.

This next part of the program is really connected. I'm just going to take this moment to be off script—this is hypoglycemia. My brain isn't totally working right. And some of you might be like, "Oh it's the altitude," but it's not actually the

altitude—it's hypoglycemia. Think about how there are so many hours that every person with diabetes spends in hypoglycemia or hyperglycemia. This affects their productivity, and if you multiply the number of hours we spend unproductive because we're not thinking completely straight, and if you thought about how could that change if we actually had diabetes management that was really smart? And if we invested in people the way—this is my third and last prop—the way that Adam Brown has written about. This came out in large part from d16, *Bright Spots and Landmines*. This is so much focused on diet, exercise, mindset, and sleep. Most people actually don't get a chance to have someone invest in them enough to focus on all of that. And if I focused on it a little more, I probably wouldn't be hypoglycemic right now. Just to say thank you so much to Adam and so many people on the team who have helped make this happen. I don't even know if there's been a diabetes book before. This is in the hands of 60,000 people+. And Adam has just put this together in his spare time over the last year and a half, also while leading all of the work in technology and digital health at Close Concerns. I'm so excited he's going to end our speeches tonight. Every one of the speeches, including his, really relates to the Anthology either to its creation, focus on prevention, workplace wellness and healthcare teams of the future, or to the goal of increasing awareness of and investment in successful efforts in diabetes.

So, to lead us through this portion of the evening, I'd like to welcome an irreplaceable advisor and guide to me personally and to our Foundation as a whole. Every single day, sometimes every hour of every day, nothing short of a true bright spot in our ongoing work, David Lee Strasberg, creative director and CEO of the Lee Strasberg Institute.

Introduction—David Lee Strasberg

So, Albert Einstein tells us that in theory, theory and practice are the same. And in practice, they're not. This (has been) on my mind over the last day. We spent the last day really getting into the potential of collective impact, and then tonight here we are celebrating all these bright spots

in our landscape as well as bright spot thinking. Naturally, the cynic pops up in my head. The cynic, by the way, doesn't call himself a cynic. He's a realist, but we all know the truth. He's looking at this, all that optimistic, fairy dust thinking—the same type of thinking that leads to that January

gym membership, it's unused by Valentine's Day, and all you're left with is guilt and a recurring charge on your credit card. And you're too lazy to go to the gym and cancel.

However, tonight the cynic doesn't get to win. The cynic gets shouted down with actual evidence. Because if you look around, this conference alone is a bright spot. But within the conference we are just surrounded by bright spots. And all the talks we're going to hear are about context and then real-world examples of things that are working in our space. In all the overwhelm and all the difficulty, here are things that work. They're all proof that bright spots and bright spots thinking—it is a theory AND it is a practice.

Letting Bright Spots Light the Way—Benjamin Pallant

This Anthology isn't a project that you can do in a library or alone at a laptop. This comes from people, and I just wanted to begin by saying many of those people who we learn from, who created the work that's featured in this, are you. It just feels right to be launching this tonight because of the people in this room, what you've added to it. And because we're here at d18 alongside Spotlight Health, which are both such forward-thinking events, and I think that goes so nicely with the idea of Bright Spots.

I'm in a moment right now where I'm thinking a lot about my own future. In a couple weeks, I'm actually going to be leaving The diaTribe Foundation. I'm headed to medical school back home on the East Coast. I'm nervous, and I'm proud, and I'm excited like I thought I would be; but I'm also feeling a little bit disoriented in a way that I wasn't quite looking out for. I think a lot of where this comes from is that for almost two years now at The diaTribe Foundation, the bulk of my work has been trying to answer this question: what's working? And I'm about to enter a phase of my life where I'm undergoing a really intensive training in how to identify what's not working. And this is a really important skill for health professionals and for public health experts and for researchers to have to diagnose and assess and understand severity and complexity, but it is a fundamentally different mindset than a lot of what I've been

This leads me naturally to our first speaker who has led the Anthology effort for The diaTribe Foundation. I've had the pleasure of working with him over the last year quite a lot. I can tell you he is a man of great intellect, sophistication, but also heart and a tremendous reflection and self-awareness. He's also driven to look at the intersection of medicine and public health, which we need more of. He's going to be talking about the Anthology from the perspective of what it's like to search for answers to this curiously challenging question of "what is working?" And he's the one who went to find out. With that, welcome Ben Pallant.

doing with the Anthology, and the whole team has been doing with the Anthology at The diaTribe Foundation.

Asking this question of what's not working tends to lead to responses—it's reactive by its nature. It requires acuity first. There's a problem, and it demands action because of it. It can have real benefits for the future and it has real implications for some of the scenario planning we were talking about earlier today, but fundamentally, that benefit for the future is simply by cutting off a problem that already exists so it doesn't get worse or at least not too much worse. Asking what is working strives toward possibility. It moves us from what's wrong to what could be right. It's not the full picture, but it shows us that the path to a good, better, even ideal future is already being blazed by people who are doing this work for us. We just have to find them.

The problem is that it's really hard to ask this question of what is working. I think fundamentally, I know for me and I sense from a lot of people, especially because I've gotten to talk to so many of you about this very question—that we tend to approach this question of what is working with a lot less intensity and seriousness and gravity, than we give what's not working. For me, a problem is something that demands insight and critical thinking and a lot of learning from other people, and



you have to try and try again and fail, and you get there and maybe you'll get there but sometimes you won't get there and that's what problems are. A bright spot deserves a pat on the back at best. You might recognize it, you're thumbs up, keep it up, then you go back to the problems.

What I've been trying to do, and what I'm so glad that the folks at d16 made the opportunity for me to do, is to let us invert that question and to really think critically about it. I've gotten to talk to about 100 people in formal settings and certainly many more in informal settings—about this question of “what's working”—and almost without fail, when you ask the question what's working in diabetes and prediabetes, the answer is what's not working? People speak to barriers of all sorts—social determinants, political battles, lack of funding, discontinuity in our medical system, other archaic ways that are keeping us from innovating. They talk about the social norms and the stigma and the things that prevent us from having successful conversations. Then they talk about funding again because it is such a critical challenge: how do we invest in all of these things that we're doing? And all of these things are incredibly important, and I know they define so much of your daily life and the really powerful work that you do.

But that wasn't the question that I was asking. And it turns out what you have to do to actually get to what's working, in many of these cases but not all of them, is something we learned last year at the previous dSeries meeting. For those of you who weren't there, Dr. BJ Fogg talked to us—he's a behavior design expert from Stanford University—among many other things he shared with us, he taught us the idea of the magic wand question. He actually sent us all home with a magic wand, which I have lost but not the question. He's talking in terms of individual behaviors. He said if you could set the barriers aside, wave the magic wand and allow a person or get a person to do one thing, what would that be? It pulls back that “Oh, but you can never do it” way of thinking and indicates the right behavior to strive toward, and then you can question the barriers later.

Turns out we were doing something a lot like this, myself and my colleagues at The diaTribe

Foundation, but at a systemic level. What that looks like in diabetes is: if you had unlimited funding, and you could only do one thing to address diabetes or prediabetes, and we were focusing on type 2, what would that one thing be? Where would you start? And this incredible thing happens when you start doing this. People give you these really beautiful, elegant ideas that are really promising and are totally plausible and could actually happen, and in some cases may be even are happening. And they get about 3/4 of the way through this description, and they stop. And they go—you should talk to so and so down in Arizona because she's leading this project that's just like this, and it's really interesting and I've been trying to learn from them and I've had trouble getting them on the phone; but you might be able to and they won't shut up about what's working and it's amazing. You need to get people to look into the future, not the existing barriers or the past, to get them understanding where the bright spots are.

There are many people in this room whose work is featured or in some ways supportive of the Anthology. There are folks here tonight from UCSF, from Brighter Bites, from several incredible bright spots in Houston, I believe from the YMCA DPP (I hope she's made it), and from FitBit's group health solutions, which does incredible workplace wellness work among the other things that FitBit has accomplished. Meet these people, learn about their work, go on the Anthology website, read up on what they're doing, and meet all the other people who I might not even remember to highlight in here who are in some way supporting these and other bright spots that are out there.

But I most want to challenge you tonight to consider the bright spot thinking in your own life. I know it's changed things a lot at The diaTribe Foundation. I came in right at the time when we were doing a lot of this, starting to think what's working that we can do more of. It's made us much more interested in how we can move towards the future at The diaTribe Foundation. I'd argue it's a lot of why we are here and the people in this room are here with us. In my own life, that challenge is going to be bringing the bright spots mentality and keeping it and sharing it with my

friends and colleagues when we're deep in the throes of pathology. I don't know what your bright spots are, but I want you to take 10 seconds now and actually think about what they are in your work, your organization, and your goals. What's working? Now come back to that question. Ask yourself if you're part of this—are we allocating budget to this bright spot? Are we spending as

DAVID LEE STRASBERG: So ever since I've been involved with diabetes, people have always talked about how we need a movement—there needs to be a movement in diabetes. Well, our next speaker can actually raise her hand and say “Oh yeah...I started one of those. I did that.” Her work eliminating all the sugar sweetened beverages from UCSF has sort of sprung, and it keeps catching like a wildfire, spread over the pond into the UK

much time improving it as the areas where we see problems? Are we engaging with the bright spots in our own community outside the walls of our workplace? The people we claim to serve—do we know what's working for them? I can't ask that question for you, but I truly believe we cannot get to a better future unless that's a big part of our conversation. Thank you.

where they're now trying to eliminate that from all the UK hospitals, and honestly, it's not slowing down. She's also been a regular participant at the dSeries, so those of us who have followed her work—she's been a constant source of inspiration. As we get to meet her each year, a constant source of inspiration. Everyone please welcome Dr. Laura Schmidt.

The Airtight Case for Diabetes Prevention—Dr. Laura Schmidt

The airtight case for diabetes prevention, and it is airtight. So, I don't know if you saw this in the New York Times—it came out a couple weeks ago—it is an op-ed that talks about prevention. It makes the case that public health prevention strategies don't just save lives. They save money. A lot of money. That's pretty cool. And I appreciated seeing it said out loud in the New York Times because I've known this for a long time. So, whether we're talking about putting air bags in cars or putting drinking-driver checkpoints on roads, or vaccination throughout the population, public health strategies yield a huge return on investment. A recent analysis by economists showed that on average, a public health intervention will return \$15 for every \$1 spent within a 10-year period. There's a little delay like we learned about today, but it pays off. And so, the question you have to ask is: why aren't we doing more prevention? Why are we letting people get sick with diabetes and letting them develop complications before we start treating them? Why do we have to treat sick people? Why don't we just help to keep people well?

There are a few explanations for this. One is that the private sector can't always make money and monetize prevention, and some prevention policies actually push against commercial interests,

such as food policy reforms. So, that leaves the public sector holding the bag for prevention as the main stakeholder. While prevention can have big impacts on population health, we know that, for any given individual voter, the impacts may seem small or even uncertain (whether I'm going to benefit from that intervention). Finally, the benefits from prevention pay off in the long run. By the time they really are starting to pay off, the elected officials have termed out of office.

Having said all that, I wanted to show you a picture of what prevention can do. This is a picture of per capita tobacco consumption in the 20th century. Right around 1970, the US population starts to cut back on smoking. And right on time, rates of lung cancer among men and women start to plummet. This is the kind of picture we want to be seeing for diabetes. Right? So, a few years back I started working with Stan Glantz and the UCSF Tobacco Center. Stan and the Tobacco Center were in the middle of that discussion around tobacco and cancer and were active in those debates and really made a big contribution to that picture I just showed you. I wanted to know how they did it. I work on food reform—and I wanted to know about the biggest success story in public health from the 20th century—tobacco



reform. And what I've learned from these guys is that it comes down to four steps: (1) public health officials start speaking out and making the connection—unhealthy diet and physical inactivity causes diabetes; (2) that triggers, what I call, a virtuous cycle—a positive feedback loop that starts with small local taxes on whatever the unhealthy disease vector is. Then (3) those tax proceeds don't just drive down consumption of the unhealthy product, but more importantly, they raise money for prevention. In the case of tobacco smoking cessation, tax raised money for promoting indoor clean air regulations and smoking bans in public places. And then (4) ultimately in the tobacco case, it didn't just lead to major US legislation, it led to the first public health treaty by the UN. Small changes in local taxes can make a big difference.

The question is, where are we in the obesity, diabetes, and unhealthy food debate? I think we're at step 2—we're at the very beginning of soda taxes. We know a few things about soda taxes. We know they work, and they achieve a return on investment. Data from Mexico show within 6 months of passing a very small tax, we saw a 12% decline in consumption, and increases in water consumption. Economists project a penny-per-ounce tax in the US would return \$55 on every dollar invested, and would save 26,000 premature diabetes-related deaths. Now this is a very fragile ecosystem. Currently, we've only got about 7 localities in the US that have successfully passed taxes. We have a lot more momentum going worldwide. We've got 33 nation states, not local governments, nation states that have passed these taxes. I work with policymakers, with the treasury department in South Africa, Mexico,

DAVID LEE STRASBERG: So that talk really takes us around the country, around the world to a degree. Our next conversation is actually going to be from someone who stayed in one place. Whose programs are growing deep roots. She's been particularly involved in addressing discrepancies in access to care, and as the assistant director of the Houston Department of Health as well as the leader of the Cities Changing Diabetes, a global

India, and let me tell you something—they get what we get. These people are looking down the barrel of a gun—they realize that diabetes-related complications are going to saddle their healthcare budgets. They are passing prevention policies out of necessity, not because they have progressive politics or anything like that.

Preemption is a key threat I want to alert everybody to because it is new. Preemption happens when state laws get imposed that restrict the ability of local governments to pass new laws, such as soda taxes. We currently have in the US 2 such laws at the state level and many more in play. A recent one in California, that's currently up for play, would make it very difficult for local governments to exercise the right to tax soda. We already have preemption legislation in Michigan and Arizona.

So, to close down, my concern is that when I look around at our infrastructure for diabetes prevention, I don't see anything like the UCSF Tobacco Center. I don't see anybody who's protecting the rights of local governments to do what they need to do to prevent diabetes. Kelly asked me what my fondest wish would be if I had the resources, and it would be to create something like a tobacco center for diabetes prevention.

We don't need another Think Tank, we need a Think-Action Tank. One of the first things this effort should do is not just go to public-sector stakeholders, to governments, but we also need to go to private policymakers, large employers. We should go to health plans too, because the return on investment for these kinds of simple, elegant interventions is huge. So, thank you.

public private partnership—there we go, I knew I could get that one, no notes needed, we're good. It's the altitude, I'm already loopy, it's gone—but she actually owns, really, her signature is all over several of the bright spots in the Anthology. At this point we could almost just put the whole city of Houston in as a Bright Spot. Largely thanks to her. Please welcome Dr. Faith Foreman.

Cities Changing Diabetes—Houston—Dr. Faith Foreman

I want to thank you all for your willingness to listen to the conversation and the little bit I have to offer about Cities Changing Diabetes in Houston. First, I want to take a point of privilege to thank Kelly and the entire diaTribe Foundation team for your graciousness. You've been so gracious to Houston. I think the managing of these expectations that you've placed on me tonight, not sure I can do it, but I want to personally thank you. I was not able to attend d17 last year, but I'm happy to be here with you this year. So, thanks again to Kelly and her team. Everybody can give them a round of applause because they are awesome and great.

So, in my short little bit of time I'm delighted to be able to be here to share a bit of what we've learned about systems leadership and systems change and systems thinking in the Houston/Harris County area. I'm also very proud to say that Houston was the first city to host the Cities Changing Diabetes Global Summit last October in 2017, and if you know anything about Cities and I'll tell you a little bit, that was a great feat because Houston is the only US city involved in Cities Changing Diabetes. For those of you who have not heard it enough, and may not be familiar enough with it, Cities Changing Diabetes is a global public private initiative and partnership and collaborative that focuses to really bend the curve on diabetes and change the trajectory of diabetes as we know it across the world. We are honored to have been asked, really, by Novo Nordisk—and I want to give them a shout out and say thank you Novo Nordisk—I know Alan had to leave but anyone else in the room for being that change agent for a city like Houston. And also giving us the big data; when we first saw it, we were kind of ashamed and a little defensive about it. But once you get over your shock and shame and awe, you can then galvanize your collective efforts to do something about it. So again, thank you to Novo Nordisk.

I want to thank one other person—Klaus, Klaus Madsen is my right-hand man, and he is really one of the facilitators and project leaders as a consultant that helps Houston and Harris County move this forward. I also want to say we are very proud in Houston to have five existing collaborative system level projects in implementation currently

in Houston and Harris County. Our population is a population of about five million, if you look at Houston proper and then you look at Harris County. We feel like that's a pretty big thing to be proud of.

So, when someone asks you to speak about systems change and systems leadership, you start to reflect and think who are we and who am I to talk about systems leadership? So, I went to the Bible, the Internet, to find some definitions, and we've heard a variety of definitions of systems leadership throughout our day; so there are various definitions, but I found one that I thought was really something that I could use to kind of spend my time with you tonight in a very efficient manner. That was the definition from Debbie Sorkin. She is a UK person that works a lot in systems leadership, and I found that her definition was the best. I'm going to read it to you because I don't want you to read it, I want you to hear it, and think about yourselves as leaders who can change things on a system level and see if you find anything in your locale in your book of business that you have to do that identifies and gives you that characteristic. Her systems leadership definition is systems leadership for beginners. What is it? How does it work? Why does it help? She defines systems leadership as system leadership is how you lead across boundaries, departmental, organizational, or sector. It's how you lead when you're not in charge and you need to influence others rather than pull a management lever. It describes the way you need to work when you face large, complex, difficult, and seemingly intractable problems where you need to juggle multiple uncertainties, where no one person or organization can find or organize the solution on their own. Where everyone is grappling with how to make resources, meet demand, which is really overtaking them and where the way forward therefore lies in involving as many people's energies, ideas, talents, and expertise as possible.

So, when you think about her definition, it's almost like system leadership for dummies in a way, but it's the most basic definition I could find. So, I then went back and reflected on, did we do that in Houston? I think we did. Cities Changing Diabetes



really is anchored as you can see by our diagram here in the Houston Health Department. The initiative is led by 12 organizations in the Houston area and they make up our core team. In addition, we have about 20 individual organizations that we keep close that serve to advise us, give us a pulse on our city, on our patient population in various sectors. There are five action work groups who translated much of the data through our mapping process using that data into interventions. They developed the interventions including the implementation of those interventions, the funding, and the resources. This is what these organizations have done through our systems in Houston. Now in our Cities Changing Diabetes community, we are surrounded by a very diverse group of leaders who are passionate about the disease and about disease prevention and health promotion just like I am. They are executives from private sector companies. They are faith leaders. Members of small nonprofits. Leaders for patient organizations, government employees, and regular people just very interested in the topic of diabetes prevention.

When we started Cities Changing Diabetes three years ago, I thought I had actually participated in public private partnerships before. But they were completely different from what I experienced through CCD. Traditionally, a public private partnership is typically led by one entity—government or private who sets the agenda and gets the other players to do what they want. (laughter) You can laugh because that’s usually how it goes. And that’s not a true partnership. That’s not an equal partnership. In Houston, we have indeed achieved what we believe is an equal partnership from the very beginning.

Now, here’s the face of diabetes in Houston. I won’t read everything to you, maybe I can get two more minutes, but I will say this: we’re fortunate to collaborate with a very dynamic researcher at the school of public health. Through his research, we’ve been able to pinpoint what Houston looks like and what vulnerabilities are there. They definitely cut across racial and ethnic backgrounds and geographical locations in Houston, and vulnerability to diabetes is impacted by social and cultural risk factors that the public health and the medical community should consider when

developing new interventions to address the disease. This was an “aha” moment for me, and it allowed me to think how the health department should be addressing this issue differently. We now have an understanding of how everyone in our community is actually vulnerable for diabetes.

Now, this is what people think success and systems leadership looks like on the left here, but this is really what it looks like. And this is what it looked like in Houston. We really did have to go the squiggly line. How did we get there? It was really not linear. We learned to appreciate the process and appreciate our partners who were going through challenges and challenging times that impacted their commitment and involvement in Cities Changing Diabetes. We had a Harvey flood, a lot of things going on. We had to work around that. Three years is a very long time—organizations merge, they close, strong leaders leave and new ones join.

So, what’s our secret sauce? Well, to sum it up, the secret sauce behind Cities Changing Diabetes Houston is that we pursued multi-sector representation from the beginning. We actually went around thinking: who is missing from the table and making sure they were there. We invested a lot of time in understanding the complexity of Houston. I’m a Houstonian, and I thought I knew Houston, but I did not know it as well as I thought until we started this process. We deliberately sought out organizations that do not often collaborate but have a lot to contribute when they do. We were focused on the Cities Changing Diabetes initiative that would prevent diabetes for people not diagnosed but more importantly, we wanted to make life a lot better for people already diagnosed with the disease. We were constantly exploring what national and international models were useful, and we didn’t just copy them or adapt them to Houston. We tried to update them and make them better. Finally, we had a completely grassroots driven process where Novo Nordisk allowed the Houston stakeholders to translate the research, propose solutions, and decide how best Houston should collaborate around implementation of the interventions. Again, true public private partnership with an emphasis on partnership. So, thank you very much.



DAVID LEE STRASBERG: So, our final speaker is a gentleman and a scholar, also the head of diabetes technology and digital health at Close Concerns, moonlights at diaTribe, but anyone who knows him knows he is absolutely relentlessly committed to constant improvement, iteration, optimization. I think the word obsessed might come in every now and then, and the other thing we know as a person

of integrity, he walks the walk. He is committed to improving—he doesn't just talk about or say other people should do it, he does it in his own life, and then he looks to see how can I translate that? How can I share that knowledge? That experience, that optimization with the people around him to make them more productive, happier, and healthier. Please welcome, Mr. Adam Brown.

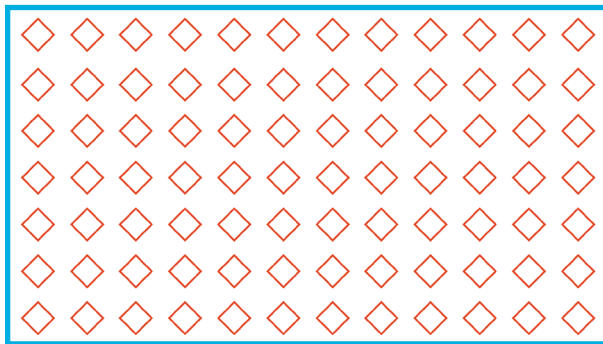
Our Greatest Challenge (& Opportunity)—Adam Brown

Thank you, David. That was a very kind introduction, and thanks to the diaTribe team. It's such an honor to be here in such a distinguished room of brilliant, amazing, committed people. I'm just so thankful for the opportunity. I wanted to talk a little bit about learnings from publishing *Bright Spots & Landmines* about a year ago. This is framed as a challenge for the room, but also what I think is one of the biggest opportunities for everyone here. What's really challenging about understanding prediabetes and type 2 diabetes is the gravity and scope of the problem—it's so big that it is hard to wrap one's head around. This is a

way that helps me at least conceptualize it. Here is Michigan stadium. It's the largest stadium in the United States. It seats just over 100,000 people. Imagine this stadium as it looks now—completely filled. Every single seat is taken, totally packed, super loud. Now imagine 10 of those stadiums right next to each other. Super loud, all of them totally packed, there's no parking anywhere. That's 1 million people. A million. So, when I think about a million people affected, I try to think about 10 Michigan stadiums filled completely to the brim—every person has diabetes.

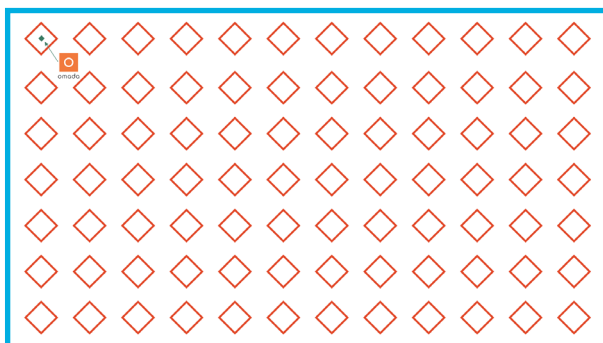


But the prediabetes problem is 84 million people in the US. This is the only way I can wrap my head around the scope of the problem and how big it is.



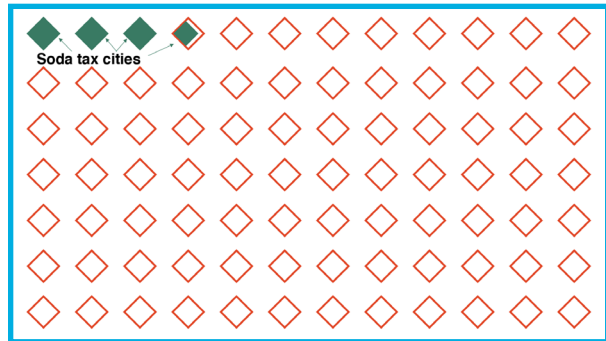
What's been so awesome about the Anthology and the work diaTribe has done is pointing out successes, bright spots, things that are having an impact on this problem. And one that comes to mind a lot, especially following digital health and diabetes is a company called Omada Health. They've done a lot of work taking the Diabetes Prevention Program, published in the *New England Journal of Medicine*. But the DPP wasn't rolled out in an efficient way, and Omada said, "Can we use technology and scale this"? And they've been really, really successful in doing that. They've reached over 150,000 people, which is incredible. But when you actually draw 150,000 people on the scope of the problem—on all those stadiums filled with people—it's insane how much work we have to do.

It's easy to look at this and say, "Oh my gosh," the most successful diabetes prevention program is a blip on the map? But there are also successes.



Laura Schmidt talked earlier about soda taxes. If you tallied up the cities in the US who have soda

taxes, that's almost 4 million people. I think we should remember that—there's momentum and things that we can look forward to. The Anthology is an awesome collection of all of those different programs.



To me, the big challenge for this room, for this community, and for every single program is to fill more of these boxes. We have such a tendency to think "we need new stuff," "we need new medicines," "we need new technologies," "we need new people." It's true that new stuff helps, but here in the Anthology is a >100-page book of stuff that works. We just need to get these programs in more people's hands, and this is what I think about every single day at diaTribe and when we talk about *Bright Spots & Landmines*. This is actually really hard. It's just as hard to get stuff in people's hands as it is to build it in the first place—I've learned this first hand writing this book and then trying to get the word out. Some of us may argue that it is way *harder* to tackle the last mile into someone's hands than to build it in the first place.

The biggest challenge for this room?
Fill more of these boxes!

The really good news—the big opportunity—is that we don't need to fill every box with the same color. There are tons of ways we can impact prediabetes and type 2, and it's not all the same



program or solution. Maybe a soda tax works in one city. Maybe the things Faith is doing in Houston are applicable in another city. What I love about the Anthology is it is now a toolbox that we can take around the world, apply in different cities, mix and match, and I think that's going to be incredible.

The biggest opportunity for this room?
Many ways to fill these boxes!

At the end of the day, I can talk at a high level about stadiums in Michigan, but it really comes down to each of us in the room. I remember a few years ago when Kelly said, “Hey you should really write a book about diabetes that shares what you’ve learned and helps people,” and I said, “Kelly, that’s a terrible idea. I write about diabetes every day; there’s no need for me to do that. There are a million diabetes books; what could I possibly have to add?” And now nearly every day Kelly and I receive emails from people whose lives have been changed by this book, and it’s been really, really cool. I really hope that everyone in the room remembers you can have an impact, you really can.

When you go home, don’t just go back to your day job. Really think about how you can make a difference because there are a lot of stadiums that

need help. There are a lot of boxes to fill. And I think we have the tools to do it.

Participant Responses

Throughout the event, participants were asked to give brief responses to big-picture questions so as to capture their current state of mind. The main report already includes syntheses of these responses, but we also want to share the complete set of responses.

What Brought People to d18

At the end of the introductory session, participants were asked to share two words that summed up their reason for being here:

- Complexity, uncertainty
- Sharing, learning
- Contemplate, contribute
- Passion, making a difference
- Inspired action
- Preventing chronic disease
- Mindfulness, deep learning
- Pumped, curious
- Stimulating ideas
- Common ground
- How might...
- Passionate impact
- Hard, heart-driven
- Listen, challenge
- Kelly, collaboration
- New approaches
- Quantify, scale
- Crossing borders
- Prevention, outcomes
- Challenge
- Better, easier
- Energetic, intrigued
- Learning, listening
- Engagement, connection
- Collaborative intelligence
- Forward movement
- Searching for the .01%
- Groundbreaking
- Learning, disruption
- Text and learn, innovation
- Resolve, partnerships
- Commit, disrupt
- Imagination, implementation

- Loves challenges
- Kelly, fix
- Real world, long term
- Implementation, scale
- Prevention, granddaughter
- Patient-centric
- Grassroots
- Insight, change
- Why not?
- Analytics, wellness
- Strategic choices
- My father
- Altruistic love
- Growth, change
- Easier, evidence-based
- Innovative solutions
- Ethics, bridge-building
- High altitude
- Hyper-personalization
- What if?
- Meaningful impact
- Complex, hope
- Future, think outside the box
- Diverse, together
- Connection, inclusion
- Grateful, empowerment

Mid-Session Insights

Ahead of Thursday's final day of sessions, participants shared insights that had emerged since the previous afternoon:

- "I woke up at 3:30 thinking about [Laura Schmidt's] talk on preemption laws. I saw New Mexico on the list, which inspired me to formulate a letter to the soon-to-be governor. I let her know that I'm a diabetes advocate, and I want to work with her."
—Virginia Valentine
- "You need to do the work, be smart, and understand the system to change the system. You can't just walk in as a patient advocate and say 'I'm here,' you have to do the work."
—Margaret Anderson
- "Most patient advocates have full-time jobs... it's hard. If it's hard for me, we are not going to be able to get the diversity of voices we need. I would like the group to help us get

more diversity in patient voices, since the diversity of patient advocates is not necessarily reflecting the diversity we see in diabetes."

—Kelly Close

- "We need to think about why it's not working, about deeper systems-level forces like media bias and stigma. If you think about other disease states that are at a tipping point like mental health and the opioid crisis, it's because of media literacy and the breakdown of stigma."

—Alex Slater

- "One of the paradoxes of systems thinking is that we are both trying to think at a high level while also trying to capture diversity. Multi-pronged approaches will be important."

—Brooking Gatewood

- "Sometimes when you're doing systems work you operate from a position of 'What should happen?' instead of 'What might happen?'... When you do this for a long time, work with the same people—that was an 'aha' moment for me."

—Faith Foreman

- "We can't ask this group to work harder. So, how do we get more intentional...It doesn't have to be big to be powerful."

—David Lee Strasberg

- "My mantras from yesterday are act local, start small, and then replicate like crazy."

—Marcia Kadanoff

- "How are we going to work to prepare the future of the health system workforce to be able to address the wicked problem of diabetes prevention and control?"

—Wizdom Powell

- "Nobody has been glamorized for being fat. I was the health commissioner of the first state that outlawed tobacco, and the shaming piece of that movement was a significant element...I want to be really careful with the parallels that we draw."

—Christine Ferguson

- "Obesity is where diabetes was 30 years ago. Quit eating sugar, come back when you've



got your head back on straight...How do we help HCP's understand what people with obesity struggle with, have to put up with?"

—Tim Garvey

- “We assume we know the cause of diabetes. There is a possibility that our fundamental understanding of what causes this, what aspect triggers, might be wrong.”
—Gary Taubes
- “I worry a lot about people who don't know they have diabetes. In order to curb this epidemic, the next cohort of people need to know sooner that they are sick.”
—Laura Schmidt

Closing Reflections

To close the gathering, participants reflected on what they learned:

- How many allies there actually are.
- Absolutely inspired—that's part of the magic that Kelly is able to bring to this field.
- Still mindful of the challenges that relate to power, which is harder to penetrate at a legislative level. There are less powerful people who are trying to help who are less represented in the design process. The power not just of “can” but of “will do.”
- Higher altitude.
- Motivated by problem-solving that's focused on systems, not just individuals.
- Idea of reframing your questions as a way of opening possibilities.
- As a student, educated, inspired, and grateful.
- Grateful to have played a role in these meetings and have seen their growth.
- The difficult part is execution—we will stumble if we don't commit. Kelly and her team are a catalyst, but they can't be responsible for doing everything.
- Moving toward collective action.
- It's going to take an army to work on these things. I'm excited to see the power of what you've put together.
- Leaving more energized and informed. I'm more enthused and committed. I like to work, and I'm really excited to go back to work.
- Logic was used as part of the conversation,

but there wasn't enough shock or humor. Don't be so smart that you lose people. Can you simplify it enough to go on the front of a hat?

- Want to survey thousands of patients, doctors with new language and better code lists. Seeing just how much things would need to change just to get the type 2 diabetes incidence to level off.
- The dSeries is unbelievable, that Kelly can bring us to such a beautiful place and make us work harder in 36 hours than we ever have before.
- Most interesting is about systems thinking, since the work at PwC is about systems modeling.
- The process of this systematic approach is coming up with insights that I could not come up with myself and maybe my colleagues might not have.
- Answer the “I met you at d18” emails. I feel reintroduced to the immensity of the problem, and the tech piece screamed really loud and clear about how it has disrupted the way we do a whole part of our lives. There's space for that to happen in diabetes.
- When I left d17, I was energized and I went back and made some changes, and now I'm more energized and know even more ways of thinking.
- Nichola is my hero because she did really execute on what she learned at d17. We need more government here.
- I'm inspired to go back to Brighter Bites and apply what I learned.
- I love doing bigger initiatives to try to solve bigger problems, to help activate hot spots.
- Mindfulness and deep learning.
- We need a north star, a common set of identifiable goals to be more than the sum of our parts.
- Almost without fail every single continuity scenario was about inequality. A recession precipitated all the collapse scenarios, and we have to anticipate this. From the transformation scenarios, we have to understand that there is not one vision.
- There was not one moment where I said to



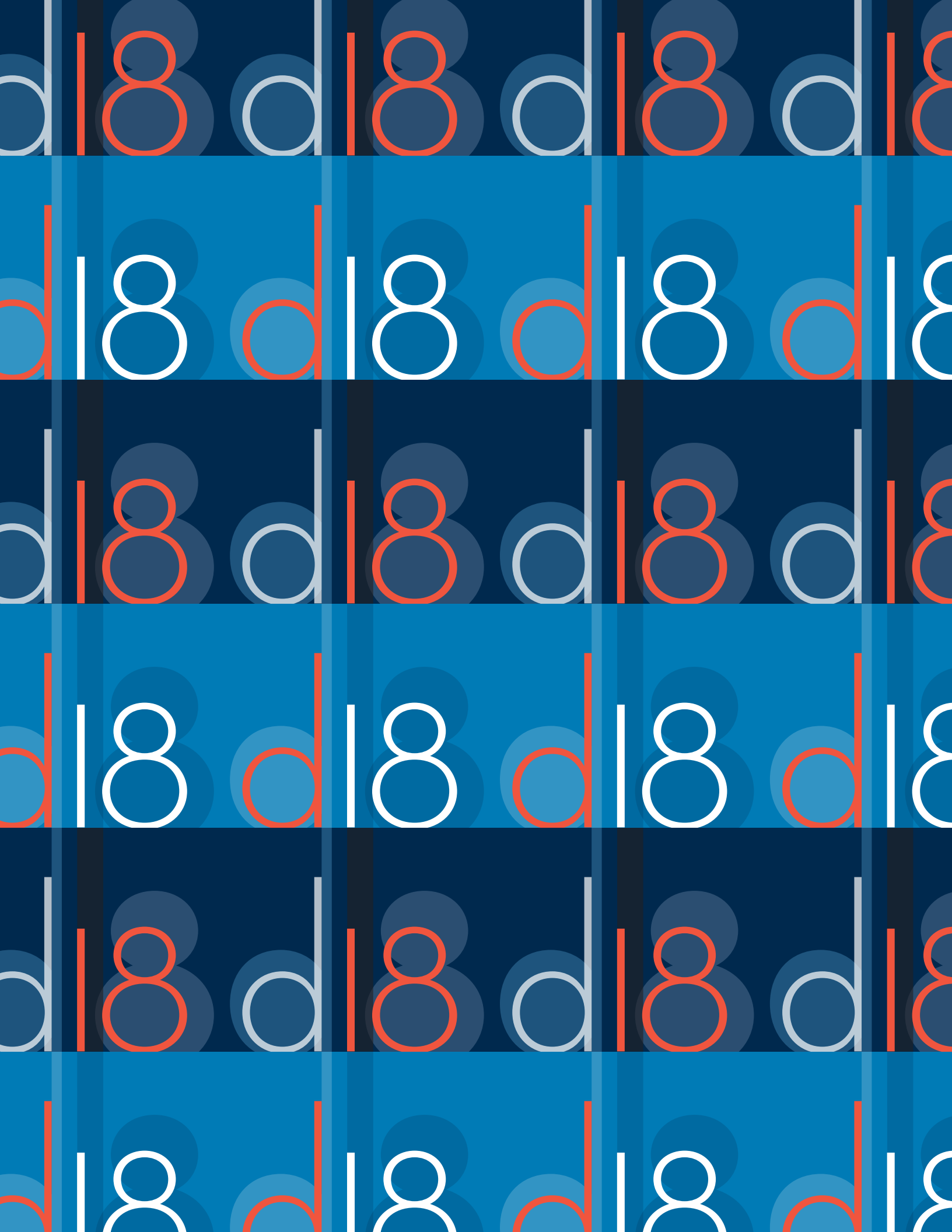
myself, “There are so much more important things that I could be doing.” Tomorrow I’ll walk away smarter and better at what I do.

- Meeting all of you feels like a new beginning. My two words are “not yet.”
- Social fabric (local), long term (coming back next year), and short term (lunch).
- I really feel that we have achieved resolve. I’ve learned a lot of practical skills that I can apply to my work.
- Focus and drive. How can we get more?
- F words: funding and fear. How do we achieve diversity? As a fundraiser, you get to match people to something that matters to them, so push past that in the fear piece.
- We are a story-formed community. History has its eyes on us, and this can be a beacon. The common test of the morality of a society is the treatment of its poor and vulnerable.
- Close alignment of continuity and collapse. I feel inspired and excited.
- Policy by proxy and the marshmallow study.
- Role models.
- Grateful and amazed.
- As students, we come in knowing the least and in many ways, we learn the most.

A SPECIAL THANK YOU TO OUR SPONSORS

The diaTribe Foundation would like to thank our d18 sponsors for their support. We are grateful for their dedication to generating new ideas and pioneering solutions for those living with diabetes. We are proud to have them as partners. Thank you.







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