

DIABETES CLOSE UP

Diabetes Close Up
March 2005, No. 45

The excitement called Symlin/New guidelines/Next Up, dLife/Kaufman on Diabetesity

The shorter version

Happy St. Patrick's Day! Can you imagine a better combination than St. Patrick's Day AND Symlin approval?! In this issue, we review the excitement around Amylin's Symlin, very smart new ACE guidelines on glucose management, an intriguing new TV show on diabetes called dLife, and Dr. Fran Kaufman's extraordinary manifesto, *Diabetesity*.

1. News of note:

- **Amylin's Symlin Approved!** Most excellent. Inside, our take on pricing (we think ~\$120/month on average is reasonable and even higher can be justified), the market (we're more optimistic than most), the black box warning (this is actually a good thing in our view as it should dissuade patients who shouldn't take it anyway not to take it), and why we think patients with diabetes will want to take it (better outcomes, weight loss).
- **New Glycemic Control Guidelines:** On January 31, ACE and AACE had a two-day consensus conference on outpatient guidelines, reviewing current research and looking at diabetes treatment questions. There are two *excellent* documents at the ACE website, <http://www.aace.com/pub/odimplementation/index.php>, which you **MUST** read: the new position statement and the agenda (which shows the various questions posed, along with the powerhouse presenters and a summary of objectives). It is clear that the organizations 1) feel strongly that we are not intervening early enough to address glycemic control and insulin resistance; 2) believe at present that A1C is the most important measure of glycemic control – but also stress that glycemic excursions need to be reduced; 3) assert that current glycemic targets are achievable (recall the ACE/AACE A1C target is 6.5%) – so this will need to be tough love, given that under 40% of patients with diabetes have A1Cs of less than 7% and likely well less are under 6.5%¹; 4) consider that glycemic control is likely important in reducing macrovascular complications (recall that DCCT and UKPDS showed evidence on microvascular front only – though follow up data clearly suggests macrovascular complications can also be reduced – key since 80% of patients with diabetes die of cardiac disease); 5) judge that treating to target – getting tough! – is essential in achieving glycemic control (sounds obvious, but it's become painfully clear that many type 2 patients don't even discuss diabetes with their PCPs – who has time after reviewing cholesterol and blood pressure and weight? Yes, our fragmented healthcare system is clearly a major contributor to suboptimal care); 6) believe that evidence-based guidelines are key for implementation to improve: **w e n e e d m o r e d a t a!** Recommendations from the consensus panel are inside. We applaud the new recommendations and hope they get as much play as possible with PCPs.
- **Ready, Set, TIVO ~ dLife!** Diabetes is going more and more direct-to-consumer – we're excited to tune into dLife both for the content as well as to watch the ads. dLife premieres Sunday, March 20, at 7 pm EST on CNBC. It's exciting to see such a targeted program hit a mainstream TV station – stay tuned!

2. **Book Review: *Diabetesity* by Dr. Fran Kaufman.** Part memoir, part popular science, and entirely manifesto, Dr. Francine R. Kaufman's *Diabetesity* is a new classic for anyone engaged in a personal or professional battle against diabetes and obesity. Run, don't walk, to get a copy, or order at Amazon, where it's available both in hardcover and in electronic format. http://www.amazon.com/exec/obidos/tg/detail/-/0553803840/qid=1111138337/sr=8-1/ref=pd_csp_1/104-6810092-8475134?v=glance&s=books&n=507846
3. **Errata & etc.** Key upcoming conferences and more on insulin in the hospital.

¹ Five-year UKPDS follow up data presented at AACE in 2003 by Dr. Rury Holman showed that just 24% of patients for whom follow up data was available (n>1000) had A1Cs under 7% and only 14% had A1Cs under 6.5%.

The longer version

1. News of Note – Symlin approved, New Guidelines Emerge; dLife Premieres March 20 on CNBC; New A1C Public Service Campaign

- **Amylin's Symlin approved!** So Wednesday afternoon, across my screen I see for a split second an e-mail from Amylin's news service –fleeting – before it deposits itself into its filtered folder. I hold my breath, scrolling down, hoping against hope that – could it be? – YES! Symlin has been approved for patients with type 1 and type 2 diabetes. Excellent! I e-mail the news to some people, try to contain my excitement, come back to my screen, hold my breath again, type in www.symlin.com and yes! – again! – the company is very together and the website is already up, twenty minutes after the press release goes out! Check it out – the label is all there, the patient education – outstanding. The company held a conference call Thursday morning, and between the call and the information on the website, here are what we consider the important items and the less-important-but-where-people-seem-to-have-questions items:

- **Availability:** When will it be available, already? Symlin will be available in 90 days.
- **Pricing** isn't yet set, and the company had no news on this front on its conference call this morning except to say it believed a monthly price at or above insulin would be reasonable. For our back-of-the-envelope model, we assumed \$120/month base case, which we actually think is on the conservative side. Why?
 - Symlin is a novel agent, it acts on post-prandial hyperglycemia (those are the post-meal glucose highs that are most difficult to counteract with insulin), and clued-in patients have been waiting for it forever – so demand among the educated, motivated patients will ultimately be strong (although, we acknowledge, this isn't a huge group – today).
 - Lantus is around \$75/month/vial, and there are 1000 units in each vial – while we wouldn't want to hazard a guess on the average dose of patients worldwide, it's safe to say that many patients take more than 33 units per day (some even take more than 100 units/day) so require more than one bottle per month. That means many patients use \$1800 worth of insulin per month². When you get down to it, at the high end, some patients may wind up taking 120 mg of Symlin 3x/day – that's 360 mg/day, meaning that three vials, not even just two, will be needed for some patients.
 - Many type 2 patients not on insulin spend more per day on oral drugs, like TZDs, which are often used in combination and contribute to a daily price of ~ \$4-\$6/day for drugs, or more.

Incidentally, seems like cost-benefit studies *could* be done that show that Symlin will contribute over time to reduced complications. Now *complications*, as a country, is what we spend way too much money on – it is well-documented that close to half of the estimated direct cost of diabetes - \$92 billion per year³ – relates to complications and less than twenty percent stems from costs related to drugs,

² Kind of amazingly, insurers often pay for two vials or more per month even if the patient uses only one. My average daily dose of insulin is, for example, about 30 units – so I can get by, barely, on one vial of Novolog. BUT I always receive two, no questions asked. Because insulin shouldn't remain opened more than 28 days, I think they think it's simpler to just give me two per month. Meanwhile, I have a lot stockpiled in our fridge and give them to the uninsured on a regular basis (Insulin for Life) – otherwise they can't afford analogs, which is tragic.

³ So ... funny story about this. First of all, the \$92 billion is data from a study conducted by the Lewin Group, Inc., for the American Diabetes Association in 2002. It's good data, but it's old. If we apply a conservative 10% increase in costs per year, we're already at nearly \$125 billion in direct costs, just like that. Second of all, my story: I was at a conference watching a session on drugs in late 2003. One speaker brought up the slide that by now everyone has seen, with the \$132 billion in costs pie chart on it (\$92 billion direct, the rest indirect), and intones “*As everyone knows, diabetes costs our country far, far too much - \$92 billion per year.*” Pause, beat, beat. Confusion emerges. “*No, I'm sorry. \$92 million.*” Pause. “*Right, \$92 million?*” Pause. “*Right, \$92 million. Of course it couldn't possibly be \$92 billion. No. \$92 million. Well, let's move on ...*” This respected clinician sort of seemed to know that \$92 million was too low a figure, but even he could not *fathom* \$92 billion per year. Can we? Should we? But that's right, \$92 billion per year, or probably \$122 billion, or, if we assume 15% annual growth, actually \$140 billion. So much of the complications costs stem from a relatively smaller percentage of patients with outlandish costs tied to microvascular and macrovascular complications. (Hospitalization costs, in particular, are outrageous – we'll come back next month on that point, when we discuss a compelling conference we just attended in New York in early March, the Inpatient Diabetes and Metabolic Control Physician Champion Course.) The point: if you can radically slow down complications among this small group of patients by providing them with the right drugs and technology, we'll all be so much better off – patients, healthcare providers, payors, and society at large.

- blood glucose monitoring, pumps, etc. While Amylin hasn't talked about future studies, we still believe if healthcare providers and patients get behind the drug it will be difficult for payors to resist, especially at a reasonable price. While it isn't a foregone conclusion that all healthcare providers will be behind it from the get-go – titration will be time-consuming for some, particularly the uninitiated – we believe it'll ultimately receive strong support from the thought leaders, influence that will trickle down.
- **What does the pricing imply for the market size?** To us the street estimates for Symlin seem low. Peak sales are in the low hundreds of millions – one we saw is actually ~\$40 million per year, which assumes that in its *top* year, about 6 tenths of 1 percent of patients on insulin *at most* will be taking Symlin. Back to our back-of-the-envelope model – we assume that the number of patients on insulin will continue to grow (it will be interesting to see what happens when ACCORD and other key trial results emerge, reinforcing the importance of tight control), and as insulin more commonly prescribe. Now sure, we do expect GLP-1 to slow that down, as a new, exciting class is upon us. But overall, guidelines (see below) will continue to become more aggressive, and more type 2 patients, we hope, will learn they really need to stem hyperglycemia in order to reduce complications. At the same time, type 1 patients will continue to have a difficult time with post-meal hyperglycemia. So if we forecast that at peak, 8-10% of each group ultimately goes on Symlin, that the type 2 group continues to grow at a good clip, that average pricing settles at \$120-150 (see above), we've already reached well over ~\$500 million. Everyone, even the proponents, says, “Well, of course it'll never be a blockbuster...” No time soon, that's for sure, but “*not* never”, we say. While we aren't yet expressing *over* over-the-top enthusiasm, we are enthusiastic about prospects assuming patients and healthcare teams are well trained on titration and side effects – as such, we believe it's reasonable to point out that it's actually not impossible that this drug over time could climb to the high end of the estimates.
 - **How fast will the market develop?** We believe that the market will develop on the slower side – maybe not as slow as Wall Street thinks, but certainly education will be important, it will take time to teach and win over healthcare providers (Symlin is not as easy to teach as Lantus), and word -of-mouth always takes time. While this isn't exactly a direct-to-consumer ad market (none will be done) we do think word-of-mouth will be significant. We expect diabetic bloggers to be writing about the drug by Monday.
 - **What about the black box warning?** There seemed to be a lot of attention on the black box warning. Seems logical to us this would receive a black box warning since use is tied to hypoglycemia – note, though, that is *insulin-induced* hypoglycemia! It stands to reason that healthcare providers and the company would want the most educated, motivated patients to go on this drug, and that no one should go on it casually. If someone goes on it casually, they may in fact have a hypoglycemic meltdown, and who wants that early in, in this VIOXX-centered society? No, we want people to go on it intelligently, so it's available until we don't need it any longer.
 - **Come again – insulin-induced hypoglycemia?** Yes, that's important in our view – if taken *correctly*, Symlin itself doesn't prompt hypoglycemia. What prompts hypoglycemia is the wrong mix of Symlin and insulin taken. At the ADA in 2003, key data indicated that side effects, including severe hypoglycemia, were manageable, and that in fact, once titration concluded, there were actually *fewer* cases of severe hypoglycemia seen in the type 2 treated group (0.02 annual event rate versus 0.07 annual event rate for placebo) and virtually the same number of cases of severe hypoglycemia in the type 1 treated and placebo groups (0.27 versus 0.24 for placebo). Compelling, from a safety perspective.
 - **Why can't people with A1c's over 9% take it?** We also think this is not a big deal. We think this “no A1C over 9%” might be a proxy for “if-you-can't-get-your-A1C-under-9%, you-aren't-ready-to-take-this-new-drug.” While of course there are exceptions, with current therapies the average patient should be able to get his or her A1C under 9%. If they can't, it might be because they aren't monitoring their glucose responsibly; if that's the case, they shouldn't be on this drug because titration won't go well.
 - **Speaking of blood glucose monitoring...** Approval of Symlin is a positive for the blood glucose monitoring industry. It is required that patients on Symlin test their blood glucose before and after all meals and before bed. Given that the average patient in the US tests less than twice a day, and even an intensive user probably tests 4-5 times per day (but going up), it's great that eight tests per day are being advocated.
 - **Why will people really want to take Symlin?** Well, we believe that motivated patients, even those with A1Cs of 7% or lower, may want to take Symlin because it will “smooth out” their glycemc

- profile. In other words, they may have a “good” A1C of 7% or less, but it may be driven by a higher-than-desired degree of both hyper- and hypoglycemia. These patients may be satisfied with their A1C, but not with extensive glucose swings, and may look to Symlin to reduce those swings.
- **So why will people really want to take Symlin, again?** See above. We believe Symlin will improve the *quality* of A1Cs. Even if it is never proven, we also believe it’ll reduce complications. To clarify - lower A1Cs yield fewer complications. The DCCT proved that even a one-point reduction in A1C reduced microvascular complications by an average of 40%. However, we suggest that possibly, even if the A1C stays the same, reduced glycemic variability will result in fewer complications. To do this trial in the same way the DCCT was done would cost a bajillion dollars so we doubt it’ll happen anytime soon – and it would need to be a very long trial anyway – but we still believe this hypothesis is reasonable.
 - **So why will people really want to take Symlin, again?** See above. One really compelling factor we haven’t yet covered: people lose weight on Symlin! Rather consistently in trials, people in the treated group experienced a significant and persistent decrease in mean body weight throughout the duration of the study (a loss of nearly 2 kg from baseline and a loss of ~3 kg compared to placebo). EVERYONE IN AMERICA wants to lose five pounds (whether they need to or not) – need we say more? The drug will not be marketed on this front, but a little weight loss is a very big side benefit that we believe patients will start to discuss and relish. While some point out that patients with type 1 diabetes generally don’t need to lose weight, we counter that this isn’t true – actually, if you look at weight gain in the DCCT, the top quartile gained something like 25 pounds over time, if memory serves.
 - **Amylin, take two:** Two more things on Amylin (we could go on all night!).
 - We expect to hear yea or nay on Exenatide within 30 days – this has potential for even more excitement: if approved, it will be a very exciting new class of drug. More on that in our April newsletter, including an in-depth interview with John Eng, the holder of the Exenatide patent and a legend in our eyes.
 - Earlier today we pondered other potential corporate beneficiaries of an Exenatide approval, should it occur. We side with the majority in anticipating its arrival in the diabetes marketplace by the end of April. So we rang up Becton-Dickinson Medical Director (and diabetes care powerhouse) Dr. Barry Ginsberg to test our hypothesis that B-D could be a major beneficiary of pen needle sales once Exenatide is approved. He said, carefully, that he believed Exenatide will create an opportunity for all pen needle manufacturers. We thought about that. We guess he has to say so, from a legal perspective. But while Lilly will make the pens for Exenatide (again, assume “should it be approved” is tacked on to the end of all these sentences), it doesn’t actually manufacture pen needles. B-D doesn’t make pens, themselves, as such, by the way. So who makes pen needles? Well, B-D and Novo Nordisk and a couple of other smaller manufacturers – Owen Mumford and Ypsomed (formerly Disetronic). The lion’s share of the US business is shared by B-D and Novo. While Lilly was chosen by Amylin as the pen manufacturer for obvious reasons, we assume Amylin may ultimately urge users to buy B-D pens since Novo, a leading manufacturer of pens in the US, is a major competitor to Lilly on so many other fronts. Plus, Novo has a GLP-1 compound in the making, NN2211. Stay with me – although Lilly makes the pens themselves (and would also benefit in a myriad of obvious ways from real Exenatide zeal in the marketplace), the *real* competition in the US pen needle business is between Becton-Dickinson and Novo. We’re thinking that Exenatide approval could be a real win for B-D, as Amylin/Lilly will be unlikely to encourage patients to use Novo brand needles. Granted, patients can choose whatever pen needles they like. But what company is more likely to receive promotion opportunities, attention, etc? You, as they say, do the math!
PS. Baxter will manufacture the cartridges!

--by Kelly Close

- **New Guidelines** – we said all we had to say upfront, but will explicate further in the next newsletter.
- **Ready, Set, TIVO ~ dLife!** Diabetes is going more and more direct-to-consumer – I’m excited to tune into this both for the content as well as to watch the ads! We loved seeing diabetes communities develop online over the past decade, and now it’ll be interesting to see as diabetes goes truly mainstream with a new show on CNBC called dLife. We’re eager to see the dLife premiere this coming Sunday, March 20, at 7 pm EST on CNBC. dLife is the first weekly TV series that aims to support people living with diabetes – some stellar

shows are lined up, including Dr. Francine Kaufman on diabetes in school on April 10, National Diabetes Educator of the Year Theresa L. Garner on diet and inclusion on April 17 and Olympic swimmer and type 1 patient Gary Hall on April 24. The show will feature a bit of everything: interviews, diabetes management tips, food advice. It's reality TV for people with diabetes. It's exciting to see this go so mass but yet remain so targeted – stay tuned for more! In the meantime, for more information, see the colorful, lively and extensive website dLife.com.

2. **Book Review:** *Diabetes: the obesity-diabetes epidemic that threatens America –and what we must do to stop it* Francine R. Kaufman, MD. Bantam, 2005 \$27.00/\$38.00 CAN

Part memoir, part popular science, and entirely manifesto, Dr. Francine R. Kaufman's *Diabetes* is a new classic for anyone engaged in a personal or professional battle against diabetes and obesity. A pediatric endocrinologist at UCLA, Kaufman has witnessed first-hand a disturbing trend: the emergence of type 2 diabetes among American children. What used to be a disease of adulthood – formerly called “maturity-onset diabetes” – type 2 diabetes now threatens to decrease the quality and quantity of life of even elementary schoolers. In some school districts, she reveals, children as young as five years of age are being checked routinely for *acanthosis nigricans*, a skin discoloration that can signify diabetes. For Kaufman, the most troubling aspect of type 2 diabetes is that *much can be done* to stem the rising tide of the disease.

Kaufman's passion for fighting diabetes becomes palpable through her moving vignettes, from the case of a small child whose blood sugar was ten times normal at diagnosis of type 1 diabetes, to the case of a middle-aged Hispanic woman who died of cardiovascular complications of type 2 diabetes because she lacked adequate access to healthcare. Type 1 diabetes might be described as the more acute of the two main types of the disease: glucotoxicity and ketoacidosis can come on quite quickly if insulin is lacking, causing severe physical symptoms and even death. Meanwhile, type 2 diabetes is frequently undetected until long-term complications – nerve damage, foot ulcers, and heart disease among them – have developed. As we all should be, Kaufman is terrified that today's overweight, physically inactive teenagers may not live to know their grandchildren.

As we read *Diabetes*, we pondered why Kaufman tells so many stories throughout the book about type 1 patients she has encountered. Even if one subscribes to the “accelerator hypothesis,” which has it that type 1 and type 2 diabetes arise from a common metabolic defect but type 1 has a more insidious autoimmune aspect – the differences between the two diseases are manifold. Then we realized that the wide audience that Kaufman intends to reach must be *shocked* into considering type 2 diabetes a serious disease. The implied logic of Kaufman's inclusion of type 1 diabetes-related anecdotes in a work that is ostensibly about type 2 diabetes is simple: by relating dramatic tales of both types of diabetes, especially instances in which type 2 diabetes has been mistaken for type 1, Kaufman suggests that *both* varieties of diabetes can be deadly.

In some ways, *Diabetes* resembles a spiritual autobiography. In the book, Kaufman describes how her Grandma Sadie motivated her to become an endocrinologist. The trials and tribulations her family suffered because of Grandma Sadie's poorly controlled diabetes dominate Kaufman's memories of her childhood. Through training and professional and personal interactions with patients and other healthcare providers, Kaufman's resolve to defeat diabetes has been strengthened and confirmed. It becomes clear in her narrative that Kaufman sees her career as a *vocation* to improve quality of life for individuals and families grappling with diabetes.

In *Diabetes*, Kaufman probes socioeconomic, psychological, and physiological aspects of the diabetes epidemic in contemporary America. Her subtitle – *and what we must do to stop it* – promises some possible solutions to the burgeoning problem. In the final chapters of the book Kaufman delivers her vision of an America that consumes fewer “empty” calories, takes the stairs more frequently, and assumes collective responsibility for the health of the nation. Kaufman's perspective owes much to Eric Schlosser's *Fast Food Nation: The Dark Side of the All-American Meal* (HarperCollins, 2002), Kelly Brownell's *Food Fight*, and the groundbreaking work on food and nutrition of Marion Nestle. Kaufman's statistics and criticisms of the roles that the fast food and soft-drink industries play in America's public schools will be familiar to fans of Morgan Spurlock's 2004 documentary “Super-Size Me” (see http://www.closeconcerns.com/dcu/DCUFR_1_Super_Size_Me.htm for our review of this film that we think *everyone* should see.) This is not to say that Kaufman adds nothing new to the chorus – in contrast, her perspective as a clinician informs her contribution. The time has come to admit that the food industry's buzzphrase “personal responsibility” for eating habits is a moot point when middle schoolers' lunches are only either moderately

unhealthy or completely devoid of nutritional value. How can children be expected to learn and grow when both home and school are full of essentially toxic foods and “playtime” has come to mean sitting in front of the PlayStation rather than running around the playground? When adults blame the fast-food industry for their obesity, can children trust their parents to provide them with adequate nutrition? Perhaps not. Perhaps, to the chagrin of the processed foods tycoons who profit from children’s allowance money, governments and school boards will have to put children’s needs first and transform schools into learning laboratories for healthful living. This is Kaufman’s vision, and she has made strides to realizing it in the Los Angeles Unified School District, where she successfully led the charge to ban the sale of soda in schools. As anyone with children in public schools in America knows, that’s no mean feat.

Beyond her focus on children in her medical practice, Kaufman is also cognizant of her young adult medical students’ horizontal expansions as they proceed through residency (Chapter 14, *passim*). By the time Kaufman’s students are fully qualified to practice medicine, many of them need medical attention: immeasurable pressure to perform, no time to cook and eat well, and the near-impossibility of regular physical activity are undermining the strength of America’s medical profession. The question of whether pro athletes ought to be role models for America’s children may soon re-enter popular discourse: though they have historically been paragons of virtue, many of today’s teachers, doctors, and nurses are hardly modeling healthy lifestyles (and one might ask, were one ready to go off on another long discussion – how can they with the healthcare system being what it is, them forced to attend twenty-odd patient appointments per day – we’ll come back to this.) Kaufman calls for healthcare providers to become activists for their patients and *themselves* and we beg for a system in which it is easier for them to do so – their influence would be invaluable.

In summary, we commend Fran Kaufman’s *Diabetes* as an outstanding overview of diabetes and obesity as intricately linked public health issues. Americans ignore the ever-expanding base of evidence for obesity as a risk factor for type 2 diabetes at our collective peril. Perhaps the most futile social activist cause of the twentieth century was the “fat acceptance” movement, which metamorphosed overweight and obesity from *health problems* to “self-esteem issues.” We stand with Kaufman in earnestly hoping that the twenty-first century will bring a realignment of national and international priorities: may *health*, *wealth*, and *wisdom* (in that order) become our goals, rather than the relentless pursuit of profit at the expense of both physical well-being and common sense. Go buy the book to learn – and pick up extra copies to give away. You won’t have to look far to find many who could use the education.

–by Melissa P. Ford and Kelly L. Close

3. Errata & etc.

On conferences: Ones we are excited about continue to be the following – can you imagine any more activity over just six days? We will have Close Concerns correspondents at each of these – just printed out our plan for the Berlin pre-diabetes meeting: twenty pages of what looks to be a truly great meeting. If you’d like a copy of our crib sheet of the best-looking sessions, give us a shout at kc@closeconcerns.com.

- The 4th International Metabolic Diseases Drug Discovery World Summit – La Jolla, April 11-12 – this world continues to get more interesting and there are some very good speakers lined up as well as interesting companies speaking;
- The *1st International Congress on Prediabetes and the Metabolic Syndrome* – Berlin, April 13-16, www.kenes.com/prediabetes/;
- The *Clinical Diabetes Technology Meeting* – www.clinicaldiabetestechology.org, San Francisco, April 15-16

In the meantime, don’t forget to register for ADA – www.diabetes.org. The advance registration deadline is April 29 – the conference itself, in San Diego, takes place from June 9 – 13.

Errata: I received an e-mail recently that expressed some consternation over a piece from our December 2004 *DCU*, in which we appeared to take a cavalier approach to the difficulties surrounding maintaining normal glucose levels in the hospital. In that piece we referred to something we’ve been hearing more and more about since the AACE/ACE inpatient control conference in December 2003: in short, in hospital settings, hyperglycemia is common and there are major costs associated with this problem. One benefit of the current situation, we pointed out, was the

avoidance of hypoglycemia, but *at what cost?* We hasten to note that the more study that we have done on this topic (which will be examined in greater depth in our April newsletter), the more we have begun to appreciate the challenges associated with optimal (or *any*) control of blood glucose levels in a hospital setting. This is a big problem *and* a big opportunity. We're still working through how it should best be positioned so something can actually be done about it – we know getting through to hospital administrators – and JAYCO – is key, and this is easier said than done. We also know implementation is hugely challenging. We have been reminded that a typical patient with diabetes might present not *only* with diabetes, but also with hypertension, coronary artery disease, carotid artery disease, abdominal aneurysms, peripheral vascular disease, non-healing ulcers, amputations, infections, and even impaired kidney function or end-stage renal disease. Take that for complicated ...

We understand that, particularly in *non-ICU* settings, healthcare professionals are often extremely overloaded, beyond just average of “very overloaded.” We certainly didn't mean to be dismissive or unsympathetic in our assessment. It's just so frustrating for us to watch from afar and see that, from a cost-benefit perspective, the evidence is beyond overwhelming that poor glucose control behind hospital doors contributes to *poor outcomes* and *extremely high costs*. To boot, it sets up a very troubling situation for patients that do ultimately go home. Clearly in this case, we all concur. The main point of the letter I received was that continuous monitoring is desperately needed in the hospital setting. The hospital is a great place to test it – such a controlled environment – and we look forward to hearing more about this from the major players moving forward. While it is disturbing to learn that patients with diabetes have such poor outcomes – largely due to staffing and patient management issues – the goal of our piece wasn't to point fingers but to set the stage for an ongoing examination of relevant issues. More to follow.

Diabetes Close Up is a newsletter highlighting notable information and events related to selected companies with diabetes/obesity businesses. This newsletter is put forth as an unbiased commentary on the industry. If you have any suggestions or comments regarding content, please contact info@closeconcerns.com. If you would like to 1) unsubscribe; 2) receive a monthly digest rather than real-time updates; 3) add a name to the DCU mailing list; or 4) offer any suggestions or comments regarding content, please write to info@closeconcerns.com.

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