

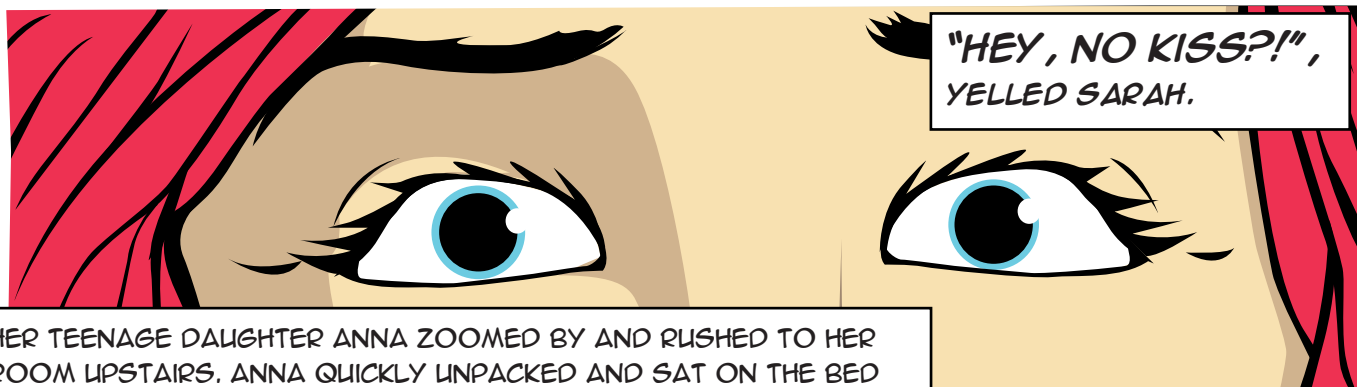
78 YEAR-OLD TOM WAS GRUMPY THAT MORNING, AS HE ALWAYS WAS ON MORNINGS LATELY. AS HE SIPPED HIS COFFEE AND BROWSED THROUGH HIS FAVORITE RSS MORNING FEEDS, A FAINT HUM CAUGHT HIS ATTENTION.

"THAT DARN PILLBOX IS GOING TO DRIVE ME MAD".



HE RETURNED TO HIS READING AND TRIED TO IGNORE THE PERSISTENT BLINKING OF THE APPARENTLY ORDINARY-LOOKING PILL CONTAINER. TRUTH BE TOLD, HE WOULD NEVER HAVE AGREED TO USE THIS CONNECTED HEALTH TECHNOLOGY IF LARA, HIS YOUNG LAWYER OF A GRANDDAUGHTER, HADN'T THREATENED TO STOP VISITING HIM AFTER HIS RECENT VISIT TO THE HOSPITAL DUE TO ARRHYTHMIA. AND LIFE WOULDN'T BE MUCH FUN WITHOUT HER. SO, RELUCTANTLY, TOM REACHED FOR HIS BLOOD PRESSURE CLIFF, LISTENED FOR THE FAMILIAR BEEP THAT MEANT THE READINGS WERE UPLOADED AND GRABBED THE ANNOYING PILLBOX FOR HIS USUAL DOSE OF MEDS. NOW LARA SHOULD GET HER MORNING AUTOMATED SMS AND HE WOULD HAVE HIS EVENING VISIT FROM HER.

**"HEY, NO KISS?!",
YELLED SARAH.**

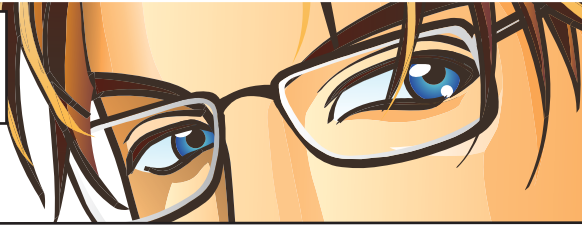


HER TEENAGE DAUGHTER ANNA ZOOMED BY AND RUSHED TO HER ROOM UPSTAIRS. ANNA QUICKLY UNPACKED AND SAT ON THE BED WITH HER IPHONE AND HER CONNECTED INHALER. IF SHE HURRIED, THAT LOSER MATTHEW WOULDN'T BE ON BREATHEBOOK YET AND SHE MAY STILL HAVE A CHANCE TO WIN THE COMPETITION. DR. MCMURPHY'S OFFICE HAD JUST EMAILED HER THE SPRING HIGH-POLLEN UPDATE FOR HER ASTHMA TREATMENT, AND THAT MEANT THE INHALER WAS ALREADY ON THE NEW SCHEDULE AND WOULD BE BLINKING ANY MINUTE.

SARAH DIDN'T MIND MISSING THE KISS FROM HER DAUGHTER. ON THE CONTRARY, SHE WAS JUST GRATEFUL THAT ANNA WAS NOW ABLE TO RUN UP THE STAIRS WITHOUT LOSING HER BREATH, SOMETHING SHE COULDN'T DO JUST A COUPLE OF MONTHS AGO. ANNA HAD TO BE FORCED INTO TAKING HER PREVENTIVE ASTHMA MEDICATION, BUT NOW WITH THE CONNECTED INHALER, SHE HADN'T MISSED A SINGLE DOSE IN 3 WEEKS!

THERE! THE INHALER STARTED BLINKING! ANNA QUICKLY REMOVED THE CAP AND TOOK HER PUFF WHILE NERVOUSLY LAUNCHING BREATHEBOOK WITH HER FREE HAND. THE MESSAGE FROM THE INHALER CONFIRMING A COMPLIANT DOSE APPEARED SECONDS LATER ON THE WEB APPLICATION, GRANTING HER TEMPORARY FIRST PLACE AND ONE STEP CLOSER TO THAT TRIP TO DISNEYLAND.

**"THERE YOU GO MR. SMITH
... HAVE A NICE DAY!"**,



SAID THE PHARMACIST AS HE HANDED OVER TWO CARTRIDGES TO ADAM. THE YOUNG BUSINESSMAN GRINNED. GIVEN HIS HEALTH HISTORY, HE NEVER THOUGHT HE'D GET HIS INSULIN FOR FREE, LET ALONE DISCOUNTS ON HIS INSURANCE PREMIUM. THIS HEALTH MILES CLUB THING WAS PROVING TO BE QUITE A BOON. AS HE WALKED BACK TO HIS CAR, ADAM THUMBED HIS BLACKBERRY. 10,587 HEALTH MILES LEFT. NOT BAD, CONSIDERING HE'D MISSED TAKING GLUCOMETER READINGS SEVERAL TIMES EARLIER THIS YEAR. BUT HIS RECENT 8 WEEKS OF FULL COMPLIANCE HAD ACCUMULATED A HEFTY LITTLE BONUS. ADAM MADE A RAPID CALCULATION IN HIS HEAD. AT THIS RATE, BY CHRISTMAS, THE SAVINGS GENERATED IN REFILLS AND PREMIUM DISCOUNTS MIGHT EVEN PAY FOR THAT NECKLACE STEPHANIE HAD HER EYE ON. HIS THOUGHTS WERE INTERRUPTED BY A VIBRATION IN HIS POCKET JUST AS HE PULLED INTO HIS DRIVEWAY. RIGHT ON TIME FOR DINNER AND A DOSE, HE THOUGHT AS HE WALKED IN AND RETRIEVED HIS INJECTION PEN FROM THE REFRIGERATOR.

"KER-CHING!"
ADAM SAID AS HE INJECTED HIMSELF, AND LAUGHED.

A DAY IN THE LIFE OF ...

Sound strange? Maybe today. But we are not very far from seeing this seamless ecosystem of connected monitoring and therapy devices on the market, thanks in part to the efforts of companies in the Continua Health Alliance®. The first few Continua Certified™ devices based on the Version 1 standards are already on the market. These include pulse oximeters, blood pressure machines, and weighing scales. The next version of the standards covers even more devices and should be issued just as this article is published in Fall 2009. The aim of these standards is to set out data formats and communication protocols so that a range of devices can work seamlessly with each other, communicating their readings to computers, hubs or phones via USB or Bluetooth, and integrating with the Electronic Medical Records that will be at the heart of our future healthcare systems.

Cambridge Consultants' Vena wireless healthcare device platform implements the standards selected by the Continua Health Alliance on a single chip, thereby providing a cost-effective means to enable devices such as the connected inhaler. The platform can be rapidly customised for any of the device families covered by the Continua standards.

The 'Connected Health' space is evolving quite rapidly. Several pilot studies have been conducted by notable institutions such as the VA Health System, the Partners' Center for Connected Health in the US, as well as others in Europe. These have shown strong evidence that bringing simple monitoring technologies and reminder systems into patients' lives can prevent acute incidents and expensive emergency room visits. Real financial incentives tied to improved adherence to treatment regimes could further help reduce longer-term complications.

Whether it is the carrot or the stick that gets the job done, what is clear is that regular monitoring of chronic diseases and improved compliance with sustaining medication regimens can save millions of healthcare dollars. Despite their potential, we have not yet seen widespread adoption of such connected technologies. A lack of solid infrastructure and, more importantly, a lack of reimbursement for at-home monitoring have probably held them back. However, we predict that readily available and affordable devices, along with new players on the market offering data management systems and services, will help launch the patient-centred care models that will save cash-strapped employers and indeed governments from rocketing healthcare bills.

VAISHALI.KAMAT@CAMBRIDGECONSULTANTS.COM
& PAUL.WILLIAMSON@CAMBRIDGECONSULTANTS.COM