

P. 6 A PRESSURE P. 22 I COULD SEE, I COULD THINK,
IN MY HEART BUT I COULDN'T MOVE AT ALL

P. 28 I'M THE CHOSEN ONE

P. 34 ADJUSTING TO A NEW REALITY P. 38 A PROFOUND **DIFFERENCE**



Contents



4 Preface: Being a voice of advocacy 12 Our commitment: Progress in Mind

A pressure in my heart

Ambitious goals and hard work – that's what 46-year-old Xue Bing's life revolved around. As cofounder of a rapidly growing teambuilding firm, he was realizing the high achiever's dream. His job was to motivate and excite other people – but he lost his own spark to severe depression.

14

Discrimination according to patient groups

18

Leading change

I could see, I could think, but I couldn't move at all

Masashi Fujisawa longed to stand out. But anxiety forced him to withdraw.

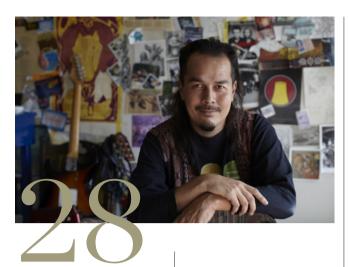
24

From idea to patient

26

Patients in genuine need





I'm the chosen one

Jakob was at the top of his game as a celebrated graphic designer in the advertising world. Ideas and award-winning record covers churned out, and in his mania, he was soaring higher and higher.

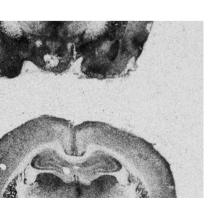
36 Mitigating mental health stigma 40

Taking action to promote sustainability



A profound difference

The stigmatization of people with depression infiltrates schools and workplaces. It splits families apart. And it's not only the acutely depressed who have to fear rejection; the high-functioning hide their mental health histories too. One of them is 52-year-old Ruth Joseph.



30 Lundbeck and the fascinating brain



Adjusting to a new reality

Colleen was 42 years old and living life at full speed when she noticed that her toes started curling. When she was diagnosed with Parkinson's disease a few months later, she decided to change her life completely. 42

Lundbeck in brief

Visit the Lundbeck website www.lundbeck.com

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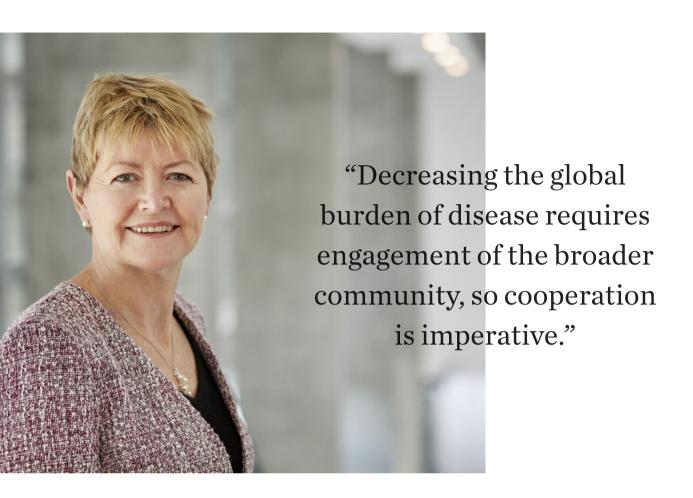
February 2019

Design: Make®

Being a voice of advocacy

As one of the only global pharmaceutical companies in the world dedicated to restoring brain health for people living with brain diseases, we first and foremost discover and develop innovative medical treatments.

We do, however, see it as our obligation to also be a voice of advocacy in collaboration with business partners, physicians, academic researchers and patient groups.



Raising disease awareness, fighting discrimination and encouraging conversations about brain diseases have never been more important.

People experiencing brain diseases are challenged by the very foundation of their being. Their ability to interact with others, their families, friends, workplace and society in general is directly or indirectly affected by their disease and others' experience of it. This unfortunately can lead to people experiencing discrimination.

It can be hard for people who have not had personal experiences with the impact of mental illness to relate to the patient without the interaction being overshadowed by the impact the disease has on that individual. In order to end discrimination and work towards a nuanced and educated understanding, it is crucial that we continue to find ways for people who live with brain diseases to advocate for themselves. This can happen by

enabling patients to use their own voice, or via a caregiver or patient advocacy group. Patients sharing their stories is an important way to reduce stigma and create an open and transparent view on brain diseases.

In this year's Lundbeck Magazine, you can meet a number of brave people who have chosen to speak out about their disease and how it impacts their life. I am incredibly proud that we have the opportunity to bring these stories to you, and we hope to inform, inspire and engage you. Throughout the magazine, you will meet Xue Bing from China, Ruth Joseph from the US, Masashi Fujisawa from Japan, Jakob Tranberg from Denmark and Colleen Henderson-Heywood from the UK, talking about their experiences with depression, anxiety, bipolar disorder and Parkinson's disease.

In the magazine, you can also read about a number of global patient advocacy initiatives and how they tackle discrimination. You will hear from the patient organizations and advocacy groups about their work and how they successfully raise awareness around the world, and I am glad that we are able to present to you some of these efforts.

At Lundbeck, patient and disease advocacy is an integrated part of what we do. Decreasing the global burden of disease requires engagement of the broader community, so collaboration is imperative. We use our voice as specialists in psychiatry and neurology and share our knowledge about the many unmet needs in the treatment of brain diseases. We call this Progress in Mind.

I hope you will enjoy our magazine!

Deborah Dunsire
President and CEO of Lundbeck

A pressure in my heart

Ambitious goals and hard work – that's what 46-year-old Xue Bing's life revolved around. As cofounder of a rapidly growing team-building firm, he was realizing the high achiever's dream. His job was to motivate and excite other people – but he lost his own spark to severe depression.



"I didn't feel anything at all."

ue Bing recalls how focused he used to be when he led a teambuilding session. One of the activities he often did with a group of clients was rock climbing – an exercise that demanded his full attention. It was his responsibility to ensure that the safety harnesses and helmets were properly adjusted, so that no one got injured. He constantly needed to pick up and act on the needs of every single participant. It was as if his mind managed to expand under pressure: "Just a few seconds of delay and I'd react too slowly – but I was quick!"

Xue challenged his clients to conquer fear, to trust themselves and to push their limits. And their feedback was enthusiastic. One success catapulted him to the next, and two decades passed in a whirl of long workdays, airports and hotel rooms.

For years, he gave everything he had to achieve his escalating ambitions. And during the whole time, his cognitive skills served him faithfully. Logical, constructive, precise and extremely responsive – those are the words he uses to describe himself.

Time flew – and he could match its speed.

I'm so tired

When did he start losing altitude? It was gradual, during the course of 2016. He used to immerse himself in his work with clients.

Used to enjoy the laughter and camaraderie of his coworkers at the end of a working day. Now he looked at the clock in the middle of a session and wished it would be over soon. Now he withdrew to his hotel room instead of sharing a meal with his colleagues. And he began to doubt – to doubt whether he was good enough. Whether he was still equal to the task.

"I longed to feel the self-confidence and passion I inspired in others. But I didn't feel anything at all," he remembers. He explained his state to himself as simple tiredness. Yet it was a strange tiredness; contact with the outside world began to seem meaningless. And in his inner world, a disturbing thought began to intrude.

To soothe himself, he insisted on absolute calm in his surroundings. He called in sick. He walled himself off at home and grew increasingly silent. And when his young daughter would sing or dance, his sudden fury made her scared of him.

His wife attempted to reach him, but he rejected her too. In the end he stopped speaking to her completely, and she and their little girl moved in with family.

Now he was alone.

He'd withdrawn from his surroundings as far as he was able. And yet he couldn't withdraw



"I longed to feel the self-confidence and passion I inspired in others. But I didn't **feel anything at all,"** Xue Bing remembers. He explained his state to himself as simple tiredness. Yet it was a strange tiredness; contact with the outside world began to seem meaningless. And in his inner world, a disturbing thought began to intrude.

far enough. For the frightening thought grew stronger and stronger. "I felt a pressure in my heart," Xue says, and so intense was this pressure, it almost prevented him from breathing. An inner voice kept proposing the same solution:

You're so tired. There's nothing for you to hold onto. Go to the climbing rock and this time, climb it without helmet or harness. Climb to the top.

And then jump.

There's help

Xue Bing's wife had moved out, but she hadn't given up on her husband. One day she succeeded in persuading him to have dinner at a barbecue restaurant. And there, at the restaurant, he spoke for the first time about everything he'd kept hidden, and how he couldn't understand why he was in such agony. But she had a hunch. One of her colleagues had committed suicide – and she had suffered from depression.

So she insisted that Xue see a doctor. And the doctor listened to his account of sleepless nights and self-reproach, of the fear of failure and his dangerous inner voice. Xue still remembers the doctor's conclusion. "You have a severe case of major depressive disorder," he said. And: "There's help for you." When Xue noticed the very first sign of recovery, it felt so convincing that he dared to trust it. "I felt my heart releasing the pressure," he says. Since then, he's seen steady progress. His wife and child have moved back home, and he enjoys their company. He's returned to work with reduced hours, and takes part in the business' day-to-day operations.

The price of openness

But he's not the same as before. That's why he no longer takes on clients, even though he'd like to. "How could I?" he wonders. He's had trouble remembering and managing complex situations, and those things are critical in a job as team builder.

When Xue looks back, he has his own explanation for why things went so wrong. The gap between the demands he placed on himself and what was humanly possible just became too great, and he feels there must be many others who are experiencing the same

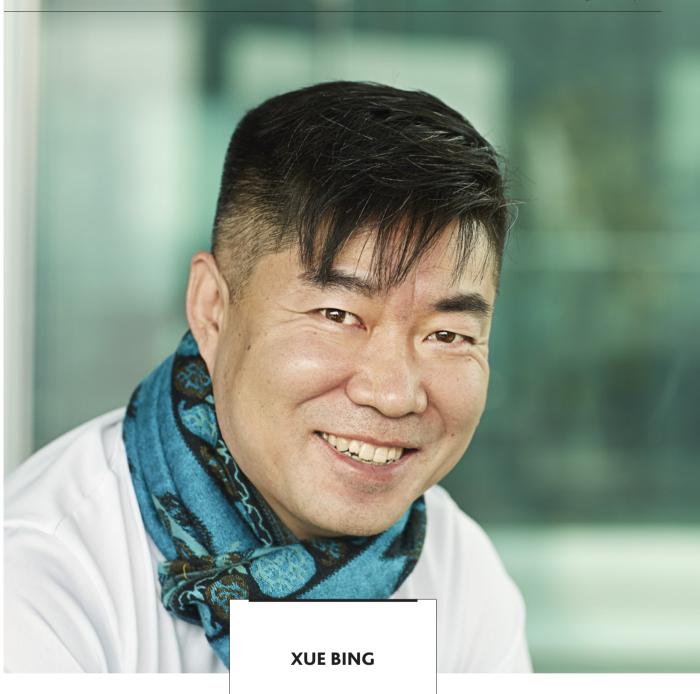
thing. "The Chinese economy is developing so fast, I think more and more people suffer from depression," he says. He also thinks that many of them suffer – as he did – in silence, not knowing what's wrong.

They're the people he wants to help.

Normally, someone with a diagnosis of depression will do anything to hide it. The price of openness is far too intimidating. And much is at stake for Xue too. Both he and his company are held in great respect, and he asks himself what people will think when they hear his story. "Will they judge me and think that I'm controlled by my emotions? Or will they still trust me to make sound decisions?" That's a question he doesn't know the answer to. But it's been his calling to elicit people's best, he says, and now he wants to do the same for those who suffer as he did. That is why he wants to be open about his medical history.

"Families need to understand," he says.
"Depressed people can't help themselves.
They need help – professional help."

"Depressed people can't help themselves. They need help – professional help."



Age

46

Residence

Beijing

Marital status

Married, to a wife who works as a financial controller

Children

A 5-year-old daughter

Education

Xue Bing studied at Beijing Normal University.

Employment

Xue is a partner in a team-building company that he cofounded. Over the last 20 years it has grown rapidly, attracting major investors. Now it is poised to expand further.

Diagnosis

During 2016, Xue began to feel increasingly bleak. For a long time, he thought he was exhausted by his hectic working life and just needed rest. Yet his misery escalated into intense thoughts of suicide, among other things. In the spring of 2017, he was diagnosed with major depressive disorder.

Today, millions of people all over the world live with brain diseases. At Lundbeck, we want to understand why these diseases occur and develop the best therapies to treat them.

Research into the brain costs more, takes longer and fails at a higher rate than most other medical research. But with brain diseases sharply on the increase, it's more important than ever. Lundbeck is one of the only global pharmaceutical companies to focus exclusively on diseases of the brain. By investing in research, we can discover and develop therapies that ease the global burden of these diseases.

For more than 70 years, we've been pushing the boundaries of neuroscience. By combining the logic of science with our passion for making a difference to patients, we've pioneered some of the most important and commonly used therapies within antipsychotics and antidepressants. We work closely with patients, healthcare professionals and the neuroscience community to uncover causes and to find new treatments that can bring back quality of life to people living with brain diseases.

When every other organ in our body gets sick, we find compassion and care. When our brain suffers, the world typically turns away. As a global specialist, we owe it to those who live with psychiatric and neurological disorders to fight stigma and promote better treatment. That's why we work to improve understanding and parity of care across communities and societies – so we can empower people and rebuild hope.

Today, we're 5,000 employees in more than 50 countries. We build on our Danish heritage, fostering a culture of collaboration and responsibility. Whether we work in labs, in offices or in the field, we all have the same aim: to develop innovative treatments that improve the lives of people living with brain diseases. We call this Progress in Mind.

IMPROVED MEDICAL TREATMENT

- Scientific collaboration and partnerships
- Funding independent research
- Scientific education

HELP PATIENTS REGAIN POSSIBILITIES

- Patient support programs
- Patient safety information
- Patient disease education

Palio







BROADER SOCIETAL ACCEPTANCE

- Disease awareness
- Community and advocacy partnerships (donations / sponsorships)
- Embassy programs and government affairs

MORE HELP FOR IMPACTED FAMILIES

- Family support programs
- Carer education
- Evidence generation and awareness campaigns on the value of carers

Discrimination according to patient groups – 'We've got a long way to go'

Every day, the patient groups that support people living with mental illness see, hear and experience the discrimination that the world – often unwittingly – casts upon its members. At Lundbeck's #1voicesummit 2018, representatives from patient groups around the world expressed their viewpoints on discrimination. These are excerpts of some of their stories.

Ellen LeeSingapore, President, Silver Ribbon





Ann Marie Mac Donald
Canada, Executive Director and CEO,
Mood Disorder Association of Ontario



How do you see discrimination in mental health vary globally across cultures?

Ellen Lee

(Singapore, President, Silver Ribbon):

"Discrimination in mental health varies across cultures globally in very different ways depending on which parts of the world the discrimination happens. I believe that in Europe, in the UK, people are more open to talk about mental health issues or to even acknowledge the fact that they are seeing a psychiatrist because they have an issue. But in Asia, which is more conservative, people shun talking about it because they feel that it speaks of weakness in character. It speaks of an inability to control one's faculties and perhaps even how to manage oneself when you have some mental issues."

Paul Gionfriddo

(USA, President and CEO, Mental Health America): "I think one of the problems with discrimination in mental health is that across cultures, people are still treating mental illnesses and mental health very differently. There are still some cultures where people are removing people from society and moving people into large institutions and keeping them. There are others where people are in the community and fully engaged in the community, and I think what we've got to be working toward is getting everybody to more of that second vision and less of that first."

Julie Lau Singapore, President, Parkinson's Society Singapore



What do you think are the

"It's fear. It is the fear of the unknown. And so when someone is physically ill, if they've broken their arm or they have cancer, society treats them differently than someone who has a mental illness. And the more that we can build awareness on the fact that we understand that there is fear, but through education, understanding that people who have a mental illness can live very, very productive lives."

Julie Lau

(Singapore, President, Parkinson's Society Singapore): "For me, I think, the most important thing is ignorance. Because of ignorance, the patient, the person who is suffering, it's not acknowledged that he or she has the problem and therefore comes forward to ask for help. The other part of ignorance is there may be people out there who want to help, but they do not know how to help. So, we have got to find a bridge to pull these two together."





If you were to mention three action points to eliminate discrimination in mental health, what would they be?

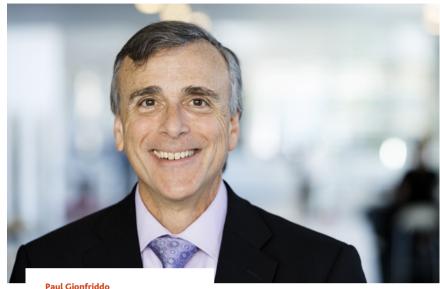
Paul Gionfriddo

(USA, President and CEO, Mental Health America): "I think the first one would be that we understand that these are public health issues; they are not public safety issues. The second would be to understand that these are diseases that affect children more than they affect adults. Half of mental illnesses emerge by the age of 14; three quarters by the age of 25. If we care about our children and we care about our future, we're going to have to deal with that as a reality. And I think the third thing we need to do is to recognize that recovery is possible. Too many people believe that once somebody becomes seriously mentally ill, they've got no prospect of recovery. But we all know that's false. And so, if we could fix that misconception, we'd do a lot toward ending discrimination."

Ellen Lee

(Singapore, President, Silver Ribbon):

"I think first and foremost there has to be education. Not just formal education, but public education targeted at everybody in society to let them know that mental health actually is blind towards the victims. Nobody selects the victims. They come from different strata in society. Secondly, I think people who are afflicted with mental health issues should come out into the open and identify themselves. Particularly people who have fans . . . singers, stars, or whoever is rich and well-known. Because when these people come out into the open and share how they have suffered, what sort of treatments have they obtained that have helped them to regain their balance in life, they will certainly attract more attention than any other ordinary folks. Lastly, I think it's important to walk the talk for people who are advocating mental health - to really be seen to be doing something about it."



USA, President and CEO, Mental Health America



How do you see discrimination in mental health developing over the coming years?

Tony Stevenson (Australia, CEO, Mental Illness Fellowship of Australia): "We've seen, particularly in Australia, a much greater awareness of some mental health conditions like depression and anxiety - where people who are well-known to us, perhaps sporting people, celebrities, politicians, who have talked about their own depression and anxiety, and that's generated far more acceptance and understanding in the general community. But we still have enormous discrimination about serious mental illness like schizophrenia. So, I would hope that over the coming years we would see some of that change that we've already seen in terms of depression and anxiety also extend to mental illness such as schizophrenia."

Paul Gionfriddo (USA, President and CEO, Mental Health America): "I think that when we look at discrimination with respect to people with mental illnesses that there's some hope on the horizon. I think young people are much more willing to talk about their mental health issues and are much more willing to seek help for them. And I think the more we engage, the better off we're going to be, and the less discrimination we'll see. But truthfully, we've got a long way to go. And I think it's going to take a while for governments around the world to catch up with where the population is."

"The more we engage, the better off we're going to be, and the less discrimination we'll see."



What are your hopes for better mental health in the future?

Paul Gionfriddo

(USA, President and CEO, Mental Health America): "My hope for better mental health in the future is that we understand that these are conditions from which people can recover. and that we don't have to wait for crises to occur before we pay attention to them. We don't have to wait for families to fall apart, for societal structures to be diminished around people, for all the supports that we all expect to disappear before we do something about this. So, I think, looking forward, if we can keep our thinking moving upstream - like I say, before Stage 4 in our thinking – and really look at early identification and early intervention, then there's a lot of hope for where we're going to end up."

Tony Stevenson

(Australia, CEO, Mental Illness Fellowship of Australia): "Well, I would love to see a holistic approach to health and wellbeing. A combination of being able to be healthy physically, healthy mentally. At the moment those two areas of health are totally separated. And we know that people with serious mental illness are not getting the physical health treatment that they need. So I would like to see mental health being equally as important as physical health. And that everyone is able to find the treatment that's available, that health professionals equally look at our physical health and our mental health, and that we have that holistic approach to our health and wellbeing."

"I believe that everyone has the right to live well, to be connected into their community."



What motivates you to keep fighting to end mental health discrimination?

Tony Stevenson (Australia, CEO, Mental Illness Fellowship of Australia): "Well, I believe that everyone has the right to live well, to be connected into their community. From a very personal perspective, as many of us do, my family has deep experiences of mental ill health, and that motivates me. But I also believe in a just society. I believe everyone has the right to live their life to their greatest potential, so that motivates me as well. And I guess from a broader perspective, our community, our economy will only benefit if all people are healthy and well and get the support that they need. So, from a personal perspective as well as a broader community's perspective, it can only improve everyone's life if we are able to provide a great mental health system."

Ann Marie Mac Donald (Canada, Executive Director and CEO, Mood Disorder Association of Ontario): "It's hope. Any time you deal with an individual who is struggling or a family member that is struggling and they have an opportunity to start to heal and recover is what keeps me going."





Leading change

The Global Anti-Stigma Alliance is fostering a movement to end mental health discrimination

At Lundbeck, we are very concerned with the question of how to best tackle mental health stigma and discrimination. We know that discrimination is an ongoing issue among those living with brain diseases, and we are encouraged by the fact that so many organizations and groups actively work with this topic. The Global Anti-Stigma Alliance (GASA) is one such group working to end mental heath discrimination – and spreading its findings throughout the world.

By sharing learnings, methodologies, best practices, materials and the latest evidence with its members, the Alliance strives to achieve better outcomes for people facing stigma and discrimination related to mental health issues.

The Alliance was created in 2012 at the 5th International Together Against Stigma conference, co-hosted by the Mental Health Commission of Canada and the World Psychiatric Association. Members and program leads run initiatives in Australia, Canada, Denmark, England, Ireland, the Netherlands, New Zealand, Northern Ireland, Scotland, Spain, Sweden, Switzerland, the USA and Wales.

Alliance members receive a quarterly newsletter and aim to meet face-to-face every 18-24 months.

For more information about the Alliance, go to www.time-to-change.org.uk and search in the upper right corner for "GASA."

USA

The Carter Center

The Carter Center's Mental Health Program works to promote awareness about mental health issues, inform public policy, achieve equity for mental healthcare comparable to other healthcare, and reduce stigma and discrimination against those with mental illnesses.

Former First Lady Rosalynn Carter has been a longstanding champion for the rights of people with mental illness.

In the spotlight

The Rosalynn Carter Fellowships for Mental Health Journalism is the Mental Health Program's signature stigma-reduction activity. As part of an international effort to reduce stigma and discrimination, the fellowships have provided stipends to journalists from Colombia, New Zealand, Qatar, Romania, South Africa, the UAE and USA to report on topics related to mental health or mental illnesses.

The fellowships develop a cadre of better-informed professional journalists to more accurately and sensitively report information – and to influence peers and important stakeholders to do the same.

Learn more

www.cartercenter.org

NEW ZEALAND

Like Minds, Like Mine

Established in 1997, the Like Minds, Like Mine program was one of the world's first comprehensive national programs to counter stigma and discrimination associated with mental illness.

The program's vision is to end discrimination and increase social inclusion towards people with experience of mental illness and distress through public awareness campaigns, community projects and research.

In the spotlight

The program's Experience Leaders Initiative – also called Rākau Roroa (which roughly translates as "Tall Trees") – recruits, trains and supports people with lived experience to talk about their mental distress and recovery. The goal is to counter stigma and discrimination and to inspire others. By growing mental health leaders for the future, Rākau Roroa enables people to tell their own story and to champion positive mental health messages in their communities.

Learn more

www.likeminds.org.nz

CATALONIA, SPAIN

Obertament

A Catalan alliance of mental health service users, families and service providers, Obertament fights the stigma and discrimination suffered by people who experience mental health issues. Its name means "openly" in Catalan and is a play on words that also signifies open-mindedness.

Obertament encourages activism, brings the reality of living with a mental disorder to the public agenda, creates anti-stigma methodology and supports local associations' and service providers' efforts to fight stigma.

In the spotlight

More than 200 people with mental health problems have received training from Obertament to lead the fight against stigma. A number of them have been featured in the four social marketing campaigns Obertament has organized. Thanks to them and their stories, Obertament has reached 11% of the population in Catalonia.

Each year, the Health Department of Catalonia measures the impact of Obertament on the general population through a survey.

Learn more

www.obertament.org

CANADA

Opening Minds

As the anti-stigma initiative of the Mental Health Commission of Canada, Opening Minds is the largest systematic effort in Canadian history focused on reducing stigma related to mental illness.

Opening Minds works strategically with four main target groups: healthcare providers, youth, the workforce and the media.

In the spotlight

In 2009, Opening Minds recognized that few grassroots programs focusing on anti-stigma had been formally evaluated, and that evidence-based programs were needed. That's why they pulled together a team of principal investigators from Canadian universities to lead the research of more than 70 programs.

Opening Minds now promotes the programs identified as most successful for the four key target groups. They've also created resources and toolkits for these programs that enhance their replication, given the challenges of distance and geography in Canada.

Learn more

www.mentalhealthcommission.ca/ English/opening-minds

NETHERLANDS

Together Strong Without Stigma

"Samen Sterk Zonder Stigma," as it's called in Dutch, is working towards a society in which everyone can talk about their psychological issues. Striving towards more understanding and acceptance, the organization believes society will be more equal, more (psychologically) diverse and offer a higher quality of life for everyone when there is less stigma around mental illness.

Their activities encompass ambassadors with lived experience who address opinion leaders, patient organizations, workplaces, the mental healthcare system, the media, and youth and schools.

In the spotlight

The organization's CORAL (Conceal or Reveal) program addresses employees' personal considerations regarding whether or not to be open about mental illness at work. It's a decision-making tool that employees, potential employees, human resource professionals, employers, mental health professionals and others can use to gain useful insights into their own situation and others'.

Learn more

www.samensterkzonderstigma.nl

AUSTRALIA

SANE Australia

SANE works with individuals, caregivers, friends and families affected by complex mental illnesses, including schizophrenia, bipolar, borderline personality disorder, eating disorders, OCD, PTSD, and severe depression and anxiety.

SANE also has a long history of working with offline and online media in Australia and Australian film, television and theater on various stigma reduction activities.

Four strategic pillars – better support, stronger connections, less discrimination and longer lives – guide SANE's work in mental health awareness, online peer support and information, stigma reduction, specialist helpline support, research and advocacy.

In the spotlight

The SANE Media Center's flagship initiative, StigmaWatch, works with media professionals and the wider community to ensure the accurate and responsible portrayal of mental health and suicide.

StigmaWatch builds collaborative relationships with the media while providing leadership, resources and guidance to ensure safe and effective reporting and communications.

Learn more

www.sane.org

SCOTLAND

See Me

See Me is Scotland's national program to end mental health stigma and discrimination. It aims to enable people who experience mental health problems to live fulfilled lives.

See Me works to change minds, policy and practice where stigmatizing and discriminatory behavior around mental health stops people from living fulfilled lives and realizing their rights. They challenge discrimination where it has the biggest effect, in health and social care, in the workplace, and with children and young people.

In the spotlight

The See Me in Work program helps workplaces become more inclusive, mentally healthy places where staff can have open and honest conversations about mental health – and get the support they need.

A newly established See Me in Work Peer Network provides a platform for workplaces to develop and share best practice around tackling mental health stigma and discrimination in the workplace. The network meets quarterly.

Learn more

www.seemescotland.org

ENGLAND

Time to Change

Time to Change, in England, is a growing movement of people changing how we all think and act about mental health.

It aims to: improve public attitudes and behavior towards people with mental health problems; reduce the amount of discrimination that people with mental health problems report in their personal relationships, social lives and at work; make sure even more people with mental health problems can take action to challenge stigma and discrimination in their communities, workplaces, schools and online; and to create a sustainable focus on anti-stigma work that will continue long into the future.

Time to Change works across communities, local hubs, workplaces and schools, via social marketing and holds an annual Time To Talk Day.

Time to Change acts as secretariat for the Global Anti-Stigma Alliance.

In the spotlight

The #AskTwice campaign stresses how sometimes we say we're fine when we're not. So, if your friend is acting differently, ask twice. The campaign features a video, simple 5-step guide and other resources.

Learn more

www.time-to-change.org.uk

DENMARK

ONE OF US

A Danish campaign, ONE OF US is designed to destigmatize mental illness in Denmark. The campaign targets service users and relatives; young people, especially students; the workplace; staff in health and social services; and the media and general public.

ONE OF US promotes social contact between those who have experienced mental illness and those without much knowledge of the issue – through presentations, training and informational events, festivals, distribution of awareness materials, happenings, and the workplace. Social media, TV, radio and film are also important channels.

In the spotlight

The Coffee Shop on Wheels ("Den rullende kaffesalon") is one of a host of different activities. A cozy, old-fashioned living room, it travels around the greater Copenhagen region, offering a cup of coffee, a "flødebolle" (a favorite Danish confection) and a chat with people who have or have had mental illness in their lives.

Learn more

www.one-of-us.nu

I could see, I could think, but I couldn't move at all

Masashi Fujisawa longed to stand out. But anxiety forced him to withdraw.



GENERALIZED ANXIETY DISORDER (GAD)

GAD has a lifetime prevalence of nearly

4% globally 1

¹ Ruscio et al., 2017

GAD is a long-term condition that causes the person to feel anxious about a wide range of situations and issues, rather than one specific event ²

² NHS, 2018

People with GAD often also cope with other psychiatric conditions, including major depression ³

³ Stein et al., 2001

The passengers in the Tokyo metro sit lost in thought. There's no reason they should notice Masashi, but that could change at any moment. The mere thought gives the slender 21-year-old student the urge to crouch beneath his seat, hands over his head for protection. His heart is racing faster and faster; surely it will burst. Masashi tries to keep still. His face glistens with sweat.

If he dies now, everyone's eyes will be on him.

Today, Masashi is 35. When he recounts his life, it seems like a low-voltage buzz of dread has been with him ever since he was a child. Back then, it was the fear that his father would raise his voice in anger, that strong boys would wrestle him to the ground, that the teacher

would rap his knuckles against Masashi's head. It was impossible to defend himself against so many humiliations. He withdrew so far into himself that though he yearned to come out of hiding, he often found he couldn't.

That day in the metro wasn't the first time his body had, suddenly and inexplicably, gone haywire. "My life was firmly on track. But I had been experiencing tremors and sweats more and more, though they weren't as frightening as that day in the metro. And at night, my body would freeze up – I could see, I could think, but I couldn't move at all."

A short time later, he received an anxiety diagnosis. But that didn't stop the anxiety from invading his life. Soon, Masashi didn't dare to

leave home – and reaching out to his friends was out of the question. "I couldn't ask them for support. How could I confess my weakness? They all knew me as a success. Shame on me for being miserable!"

It wasn't only Masashi who was unable to express what was happening to him. As he remembers it, a profound silence descended on his entire family.

Four years after the incident in the metro, the disease had taken full control. He quit his small jobs, lived at home and went on disability. Then one afternoon, he was sitting and surfing TV channels when he heard something that made him prick up his ears.

An adolescent psychiatrist was talking. This psychiatrist specialized in social withdrawal. When Masashi recalls his immediate reaction to the specialist's words, his voice rises: "I felt, that's me! He's describing me!"

The experience spurred Masashi to action, and soon after, he found himself – and his father – sitting in the consulting room of the very same psychiatrist.

Some years after that first consultation, Masashi was ready to be eased into a workplace that accommodated vulnerable employees. Now, he can work full time, and he has just taken the last exams for his degree.

He's even able to ride the metro again.



From idea

Inventing and developing efficacious and innovative treatments is complex. It takes approximately 10-15 years for a new drug to move through the pharmaceutical value chain from when an idea is conceived until an approved treatment is made available to patients.





Research

In Research, we identify new disease targets and establish and confirm an understanding of the mechanism of action for new, safe drug candidates. Researching new treatments requires deep insight into the disease and into the unmet medical needs of patients. Researchers work to understand the underlying disease biology and identify new targets in the brain. New substances are then selected based on efficacy and are tested for safety and tolerability, before being selected for drug development.

Drug Development

In Drug Development, we conduct clinical studies globally to establish evidence for new drug candidates, we engage healthcare specialists in scientific discussions to enhance the understanding of our clinical results, and we work to develop safe, reliable and efficient manufacturing processes. Safeguarding the rights, safety and wellbeing of study participants is of the greatest importance.

to patient





Manufacturing

The manufacturing process has three major stages: Chemical Production, where the Active Pharmaceutical Ingredient (API) is made; Pharmaceutical Bulk Production, where the product is produced; and Finished Goods Production, where the products are packed. We strive to create the best supply chain in the pharmaceutical industry through continuous improvement of reliability, quality and cost. Every year, more than 100 million finished goods are sent to distributors, wholesalers and hospitals through close collaboration with our sales affiliates globally.

Marketing

Our products are registered globally in more than 100 countries. We produce and conduct scientific and promotional events to educate healthcare professionals about the safe and effective use of our products. We engage decision-makers in activities to help them prioritize psychiatric and neurological disorders and argue the societal value of our products based on thorough assessments.

Sales

In Sales, we inform and educate the key stakeholders who are responsible for managing treatment with prescription drugs. We have sales representatives in more than 50 countries. Our activities towards healthcare professionals aim to ensure a correct understanding of our products and their use. We also engage experts and leading specialists as speakers for educational events, where information is exchanged with the purpose of enhancing patient care.

Patients in genuine need

In a healthcare system under pressure, psychiatry needs strong advocates. In China, one champion is Yang Fude, the president and chief physician at Beijing Huilongguan Hospital, a leading psychiatric teaching hospital.

Policymakers in the Chinese healthcare system must take on a huge responsibility: They have to respond to a torrent of urgent needs. There aren't enough resources. And every decision they make affects the lives of millions.

Among experts who specialize in major diseases like cancer, heart disease or diabetes, competition for the attention of these policymakers is fierce. They try to secure whatever they can for their particular field from the scarce funding available. In this battle, psychiatry often risks coming in last. Yang Fude is the chief physician at one of the three largest psychiatric hospitals in China, and throughout his career, he has fought for the mentally ill – a group of patients he calls "underserved."

As a government advisor, he has access to health system policymakers. And there he's noticed a shift in the attitude toward the field of mental health. "Policymakers are increasingly aware of the suffering of psychiatric patients," says Professor Yang. "They recognize that if these patients do not receive early treatment, the burden on

the patients, their families – and society – will be even heavier." But there's an enormous backlog of untreated mental illness. When Professor Yang was a young psychiatrist in the late '80s, for instance, the treatment rate for people with depression was less than 5%. The great majority of the patients he saw were the ones suffering from severe schizophrenia.

Only a systematic effort will be able to address such a heavy backlog. Professor Yang has helped draw up national guidelines, which for instance have established standards for detection rates. But what good are guidelines when there aren't enough health professionals to implement them?

An ambitious vision

To serve its population of nearly 1.5 billion, China has about 30,000 psychiatrists at present, says Professor Yang. Only a third of them have received advanced training in psychiatry. And that is precisely the group that there's a desperate need for. Among their other challenges, they must help retrain

general practitioners so they will be better equipped to diagnose mental illness. Rural districts in particular are contending with a severe shortage of health professionals who are capable of recognizing the symptoms.

Policymakers have made the recruitment of skilled psychiatrists a top priority. Yet it's difficult to recruit newly educated doctors – especially the most talented ones – to psychiatry, which still receives much less funding than specialities in physical illness. The government has set a clear target, says Professor Yang: "By 2020, we aim to increase the number of qualified psychiatric doctors to 40,000."

But is such an ambitious vision realistic?

"We are optimistic that it's achievable," he replies. The government target is being supported by a series of initiatives, including the establishment of a psychiatry major at more than 30 universities. He adds, with a little smile, that once the government sets a target, it's usually realized.

YANG FUDE, MD

Doctoral supervisor, chief physician, professor and government advisor on mental health

Residence

Beijing

Selected education

- · President and chief physician, Beijing Huilongguan Hospital. Huilongguan Hospital is a leading psychiatric teaching hospital and one of the three largest psychiatric hospitals in China.
- Vice-chairman, Chinese Association for Mental Hygiene
- · Codirector, WHO Collaborating Center for Research and Training in Suicide Prevention

Dr. Yang has received numerous honors, including the Capital Labor Medal and the title of Excellent Dean in Health Promotion in China, and he has been named one of the country's

A special group

Professor Yang recounts that, during the course of his professional life, he's been able to observe major progress in the mental health field. For example, the treatment rate for people with depression has risen from less than 5% to 20-30%. He's watched this change manifest itself in his clinical practice, where three quarters of the patients he now sees are suffering from depression or bipolar disorder - a proportion that better reflects the prevalence of these illnesses in the general population. The trend is headed in the right direction.

At the same time, there is still far to go. During the course of his career, Professor Yang has had the opportunity to change to other disease specialities that have more resources. Yet he says that psychiatry remains his top choice. It's a field that continues to fascinate him professionally because of the many factors involved, social, mental and clinical. "I'll do this work for the rest of my life," he says.

But for Professor Yang, there's an even more compelling reason to remain in the field – and that is the patients themselves. "They are quite a special group of patients," he says, adding that they cannot address their condition on their own. "They're in genuine need of care. It would be impossible for me to give up on them."



I'm the chosen one

Jakob was at the top of his game as a celebrated graphic designer in the advertising world. Ideas and award-winning record covers churned out, and in his mania, he was soaring higher and higher.

Jakob grew up in a Danish provincial suburb. He was one of those kids who like to draw, and his drawings earned him praise. His skills continued to improve because he could concentrate for hours on end. Just graduated as a commercial and graphic artist, 23 years old, Jakob longed to get away. By a stroke of luck, he landed a job at a Copenhagen advertising agency with clients in the music business. The agency had plenty of work. So much, in fact, that he ended up sleeping there on a mattress on the floor.

Four years after moving to the city, Jakob became creative director at his own agency. Assignments kept pouring in. Jakob's workday began at 11 a.m. and stretched until 1 a.m. the next morning. When you work so much, you also deserve to party, he reasoned. And Jakob could always start a party with his disco ball, smoke machine and colorful group of friends.



BIPOLAR DISORDER

Bipolar disorder is a recurrent, lifelong illness ¹

¹ Malhi et al., 2012; Grande et al., 2015; Vazquez et al., 2015 Bipolar disorder is the

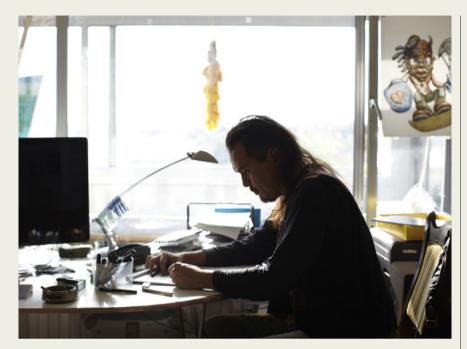
12th

leading cause of moderate to severe disability worldwide in those aged <59 years ²

² WHO, 2011

The mean delay between symptom onset and diagnosis of bipolar disorder is up to 10 years ³

³ Hirschfeld et al., 2003; Goodwin et al., 2016; Phillips & Kupfer, 2013





Later, Jakob was puzzled that nobody stopped to wonder what was going on. Maybe he overheard their warnings? Perhaps they said nothing because he was always overflowing with energy? "Because I did feel fantastic. I'm the chosen one!"

Jakob moved into his office in 2001. "That's probably the time when things began to fall apart," he says, "because I started to stay awake for several days at a time, working." One night he was scribbling down ideas, faster and faster, and suddenly he exploded inside. "There was this FLASH and I had a vision. Everything that we were doing was totally passé. And I knew what we needed to do. We had to reform the entire music industry – no, the entire entertainment industry – and I saw how things would be in six or seven years, I saw it so clearly."

"My mania kept soaring because I couldn't talk to anyone. I felt quite lost, and yet everything was so beautiful."

Some time later, his father asked him how he was doing. Not very well, Jakob told him. Should his father come and get him? Yes. And then Jakob fell silent.

He moved into his parents' basement and tried to get his life together. Jakob describes these years as a long, downward spiral. Eventually, his parents went so far as to try and get him committed to a psychiatric hospital.

But when he was finally ready to leave the hospital, his past was waiting for him on the outside – and eager to catch up. One night, Jakob discovered that he was trying to figure out the most rational way to commit suicide; this time, he caught himself and was voluntarily admitted to the hospital for depression.

Jakob has now lived with the diagnosis of bipolar disorder since 2003, the same year he went bankrupt. The realization that he would never return to his old life came slowly. "I was Mr. Rock'n Roll when I lived in Copenhagen, and continued to be so for a long time in my own mind." For an extended period, he believed he was sad, not sick. Accepting his illness with the help of the Mood Disorders Clinic is a process that has taken years.

Lundbeck and the fascinating brain

Merging daily life with a healthy life with wearables

You probably know that your phone can register the number of steps you take in a day, or maybe you have downloaded an app to measure the quality of your sleep? But what if objects from your everyday life could help improve the lives of people suffering from severe diseases such as Parkinson's? That is just what Lundbeck is aiming to achieve.

Striving for new ways and innovative methods to help patients, Lundbeck has initiated a digital strategy that includes looking into wearables and how they can improve the life of patients.

"The prospects of wearables are really interesting, and may be a way to improve the quality of life for people living with neurological disorders, such as Parkinson's," says Christian Brasen, Project Manager in Biometrics.

Christian is part of a team at Lundbeck that is looking into digital ways of improving treatment of diseases. One of the ways forward is wearables.

"The wearables we look at are already a part of our everyday life. Your phone and watch

are already known cases, but we are investigating all sorts of opportunities, such as shoe soles, bandages and bracelets," says Christian.

With small sensors in the wearables, it is possible to measure steps, shakings and other body movements. These measurements are highly relevant and can be used to characterize many of the movement symptoms commonly seen in Parkinson's disease.

"It is a challenge today when we do studies and trials within psychological and neurological diseases that many diagnoses are based on subjective assessments by clinicians and the self-reporting of patients," Christian explains. "With the wearables, we can obtain objective data from the patients' home environments, adding important information when we do studies and diagnoses. In the end, our studies with wearables should not only improve studies and products, but hopefully improve the lives of patients."



Christian Brasen is part of a team at Lundbeck that is looking into digital ways of improving treatment of diseases. One of the ways forward is wearables.





Using big data to find mental illness before symptoms occur

Mental disorders are both complex to understand and to diagnose. Often it is a psychiatrist who diagnoses a person living with a disease like schizophrenia.

But in the future, Lundbeck might be able to help doctors identify patients at risk of mental disorders before definitive symptoms appear. To explore the possibilities of early detection, Lundbeck's disease strategy group initiated a joint project with IBM focusing on analyzing the medical events leading to schizophrenia. This analysis was done using data from IBM Explorys, a database of medical health records featuring anonymized data from more than 60 million people.

Through a novel machine learning technique called recurrent neural networks, a method known from Google Translate, Lundbeck has found a number of factors in medical health

records that increase the likelihood of a person suffering a future psychosis. More importantly, the neural network can predict how a new event, for example a diagnosis of depression, interacts with the personal medical health history to change the risk for future psychosis.

The data science lead on the project, Lars Lau Raket, Lundbeck Department of Bioinformatics, sees wide opportunities in using data-driven research to help patients with mental disorders: "There is strong evidence that early intervention in mental diseases is very important. Our work with the Explorys data indicates that our algorithms can detect the subtle signs of mental illness before a doctor," says Lars.

In this project, almost 70,000 individuals who developed schizophrenia were compared to a group of demographically similar individuals who did not develop schizophrenia. One year before the first diagnosed psychotic symptoms, these methods correctly predicted whether an individual would develop schizophrenia with 70% accuracy.

"In a real-world setting, only very few people develop schizophrenia, so simply assuming that no one will develop schizophrenia within the next year will be accurate more than 99% of the time. With this new technology, we can, however, detect early signs that predict future psychosis and schizophrenia in the small group of patients that will develop schizophrenia. This allows monitoring and intervention before the patients' symptoms develop," says Lars, who underlines that the method cannot stand alone.

patients with mental disorders.

"You still need to consult a doctor, psychiatrist or another healthcare professional. These methods are not a substitute at all, they are meant as tools for healthcare professionals that help them see psychiatric symptoms earlier and to intervene in the earliest stages of the disease, where there is the best chance of changing the course of the disease," Lars concludes.

Ayodeji Asuni and his colleague Mimi Folden

Flensburg have been working on the project

unmet need for Alzheimer's treatments with

since 2017. Their hope is to help fill the big

Fighting Alzheimer's disease with your immune system

Lundbeck is pursuing new ways to treat Alzheimer's disease by activating the immune system, thereby modifying the disease processes. This novel method may provide new perspectives on potential treatments for Alzheimer's disease.

A new way to use antibodies to activate the immune system and alter the brain's immune profile plays a key role in the project by Lundbeck and its external partners.

"Your immune system is your body's natural defense system that works to create cells that keep you healthy. So, we are basically trying to use our natural immune system to combat Alzheimer's disease," says Ayodeji Asuni, Head of Section, Systems Biology – Symptoms at Lundbeck. "This approach has not been used to treat Alzheimer's disease before, so if we are successful in making this work in humans, it will be groundbreaking."

Ayodeji and his colleague Mimi Folden Flensburg, Project Director, Research and Development Project Management, have been working on the project since 2017. Their hope is to help fill the big unmet need for Alzheimer's treatments with new knowledge.

"An estimated 50 million people worldwide live with dementia, and the number of Alzheimer's patients is expected to double every 20 years, so it is definitely an important area to look into," says Mimi.

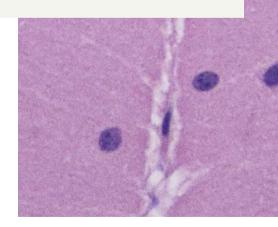
Both she and Ayodeji see an opportunity for the new approach to help many people.

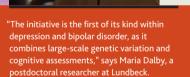
"The project is changing the common opinion on how to treat Alzheimer's disease. We're using antibodies to modulate inflammation and alter the way in which the immune system performs, and how particular brain immune cells handle the Alzheimer's disease-related proteins in the brain. Normally you would like to avoid inflammation, but under the right circumstances it might have a positive treatment effect," Mimi explains.

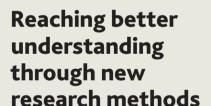
The new approach may push boundaries for the general knowledge and understanding of Alzheimer's disease.

"We continually have to challenge ourselves, our thinking and what is the accepted norm in relation to immunology and the human brain. That is the only way to discover and further develop novel treatments to help patients with brain disease even better than today. The Alzheimer's disease field is gradually moving that way now," Ayodeji concludes.









Lundbeck always strives to better understand the underlying disease biology. In 2017, that led to a very special partnership with the personal genetics company 23andMe, Inc. and the Milken Institute, a think tank.

Together, the three parties set out to understand the link between genetics and cognitive abilities in depression and bipolar disorder by collecting and examining data from more than 50,000 people.

"The initiative is the first of its kind within depression and bipolar disorder, as it combines large-scale genetic variation and cognitive assessments," says Maria Dalby, a postdoctoral researcher at Lundbeck. In 2019, she will take a deep dive into the data

to find new knowledge and help accomplish better treatment in the future.

The study both analyzes the DNA of the participants and examines a large body of cognitive tests and surveys. It is the first time these elements are combined to study the interaction of mood symptoms, cognitive processes and environmental factors.

"It is not only the novelty of our study that is special, but also the scale of information that we have collected. 15,000 patients with depression and 10,000 patients with bipolar disorder have taken a genetic test and answered multiple mood scale assessments and cognitive tests. This gives us the possibility of exploring the biological processes underlying cognition, which is a very important aspect of mood disorders," Maria elaborates.

With this method, the study addresses two main challenges in treating mood disorders: the fact that patients can be very different both with regards to symptoms and to the biological processes leading to these symptoms, and that patients may respond very differently to treatment.

"Cognitive abilities are clearly hit when people suffer from mood disorders, but it really varies from patient to patient how they are affected. If we could find a link between cognitive abilities, mood symptoms and the patients' genetics, I believe that we can come a long way in creating better treatments in the future," Maria explains.

Adjusting to a new reality

Colleen was 42 years old and living life at full speed when she noticed that her toes started curling. When she was diagnosed with Parkinson's disease a few months later, she decided to change her life completely.



PARKINSON'S DISEASE

Approximately

6 million
people worldwide
are estimated to
be affected by
Parkinson's disease 1

¹ GBD 2016 Disease and Injury Incidence and Prevalence Collaborators, 2017

The prevalence of Parkinson's disease in the US will double by the year 2040 ²

² Compared to 2010; Kowal et al., 2013

Parkinson's disease usually develops in people in their late

 $50s_{and}$

early $60s^3$

³ Weintraub et al., 2008



On a rainy afternoon, Colleen Henderson-Heywood found herself sitting in her car outside a specialist's office. After nine months of consultation with specialists, she had just received the news that she had Parkinson's disease. "I decided that the disease would be allowed to rob me of just one day," Colleen explains.

The first sign that something was not quite right with Colleen's body was when the toes of her right foot started curling. "I spent three weeks in Mexico wearing flip-flops and thought the toes would straighten themselves out. But I couldn't keep my shoes on my right foot – the foot would shoot the shoe off at some distance," she says. In fact, Colleen chose to ignore her right foot.

Four or five months later, she went to Barcelona and found herself standing across the road from a café she wanted to go to. "I set off towards it but didn't move. I was stuck. I kept sending the signal to my body to walk to the café, but I couldn't get my right leg to move," Colleen recalls. "After this, I finally went to see my doctor. He said he had no idea what was wrong with me, but would start a process of elimination." Colleen had among other examinations a DAT scan1, which is used to diagnose Parkinson's disease.

"The specialist rang and asked me to come and see him. He asked me to sit down.
I said, 'No, I just want to know now.' 'You have Parkinson's disease,' he said. I replied: 'Thank goodness for that! At least I now know and can get on with my life and you can do something for me.'" Colleen's initial optimism did, however, suffer a blow: "I mistakenly thought that there would be a treatment that solved everything; that I would have medication that would allow me to walk normally. Unfortunately, this wasn't the case."

Colleen describes her symptoms: "I woke up at four o'clock this morning and was very slow to get going. I have to roll out of bed because my body doesn't move too well. And as soon as I get out of my environment it becomes a bit of a challenge. Sometimes I can't walk because my brain doesn't tell my body to walk. But I can trick it by walking backwards or sideways and then get it back into action."

"I don't consciously think about my illness. It is by my side, not in front of me. It is only when I take my medication that I am reminded that I am a patient."

Colleen has a mission to try and show people with Parkinson's disease that they should not feel that they have lost their lives. She puts her mission into practice by speaking as a patient at Parkinson's conferences and sitting on various advisory committees for the Parkinson's Disease Society of the United Kingdom.



Mitigating mental health stigma

"Stigmatizing attitudes held by the general public are primitive, non-evidence-based beliefs."



Internalized stigma is common among people with severe mental illness and is associated with a 10-fold increased risk of loneliness – which in turn carries an increased risk for psychiatric hospitalization.

As presented at Psych Congress 2018, Joseph McEvoy, Professor of Psychiatry, Medical College of Georgia in Augusta, notes that the best strategy for mitigating internalized stigma associated with psychosis is effective intervention to make the first or current episode of psychosis the last episode. Psychosocial and case management strategies are also important to promote social inclusion and connectedness and stigma resistance.

The term "stigma" derives from a visible mark that is often made with a pointed object, Professor McEvoy explains. "Its associated 'undesirable' status has resulted from its use to describe the branding of prisoners. Stigmatizing attitudes held by the general public are primitive, non-evidence-based beliefs."

On average, 65% of patients with schizophrenia spectrum disorders perceive

stigma and 49% report alienation (shame) as the most common aspect of self-stigma, says Professor McEvoy. A lower quality of life and social anxiety correlate with personal stigma.¹

Features of internalized stigma and stigma resistance

Stigmatizing attitudes directed towards individuals who have a severe mental illness cause considerable distress for those individuals who "give in" and experience "internalized stigma." Studies using the Internalized Stigma of Mental Illness (ISMI) scale² have shown that internalized stigma correlates with depression, low self-esteem and more severe symptoms.³

Compared with individuals with mental illness who have "stigma resistance" and who do not "give in" to stigmatizing attitudes,

those who experience internalized stigma are more likely to be lonely⁴ and have:

- more severe psychiatric symptoms⁵
- a longer duration of illness⁶
- an increased risk of psychiatric hospitalization⁴

Stigma resistance correlates positively with self-esteem, empowerment and quality of life, and negatively with stigma measures and depression. Higher stigma resistance is associated with:

- a social network with a sufficient number of friends
- being single or married
- receiving outpatient treatment⁷

Strategies to mitigate internalized stigma

A meta-analysis of 26 randomized controlled trials to mitigate stigma associated with mental illness found no evidence that stigma interventions reduce perceived stigma or self-stigma.⁸ Although many advocate changing stigmatizing attitudes held by the general public, such initiatives have been found to have limited efficacy for overcoming internalized stigma for individual patients, explains Professor McEvoy.

The most important strategy to mitigate internalized stigma is to treat patients psychotherapeutically to make their first or current episode of psychosis the last episode, he says.



Studies using the
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severe symptoms.³

Psychosocial and case management strategies that promote social inclusion and connectedness are also necessary to mitigate stigma internalization and promote stigma resistance. The importance of these interventions has been highlighted by studies that have found:

- individuals with psychosis desire to have something productive to do and to be close to someone in the community⁵
- individuals with severe mental illness who have high levels of internalized stigma were nearly 10 times more likely to be lonely than those without internalized stigma, and those who were most lonely were 2.69 times more likely to be placed in psychiatric hospitals than those who were less lonely⁴.



Stigma resistance correlates positively with self-esteem, empowerment and quality of life, and negatively with stigma measures and depression.



65%

of patients with schizophrenia spectrum disorders perceive stigma and 49% report alienation (shame) as the most common aspect of self-stigma.

¹ Gerlinger G, et al. World Psychiatry 2013;12(2):155–64.

² Ritsher J, et al. Psych Res 2003;121(1):31–49.

³ Boyd I, et al. Compr Psych 2014;55(1):221–31.

⁴ Prince J, et al. J Nerv Ment Dis 2018;206(2):136–41.

⁵ Drapalski A, et al. Psychiatr Serv 201;64(3):264–9.

⁶ Turner N, et al. Int J Soc Psych 2017;63(3):195–202.

⁷ Sibitz I, et al. Schizophr Bull 2011;37(2):316–23.

A profound difference

The stigmatization of people with depression infiltrates schools and workplaces. It splits families apart. And it's not only the acutely depressed who have to fear rejection; the high-functioning hide their mental health histories too. One of them is 52-year-old Ruth Joseph.



DEPRESSION

Cognitive symptoms (difficulty concentrating, forgetfulness and/or indecisiveness) appear 94% of the time during major depressive episodes ¹

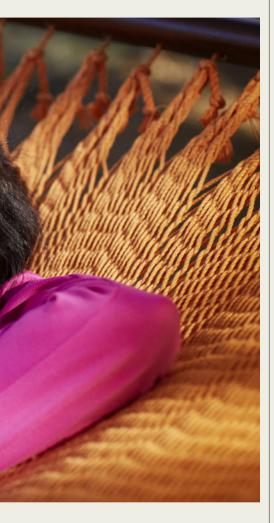
¹ Conradi et al., 2011

The WHO lists depression as the leading cause of disability worldwide and a major contributor to the overall global burden of disease ²

World Health Organization, 2017; https://www.who.int/en/news-room/ fact-sheets/detail/depression More than

300 million people worldwide are estimated to live with depression ³

³ World Health Organization, 2017; https://www.who.int/en/news-room/ fact-sheets/detail/depression



A privileged wife and mother

Ruth's family has a strong genetic predisposition to mental illness. Her grandmother, for instance, was committed to a mental hospital for a long period in the '70s, when Ruth was a little girl. Her grandmother's illness was shrouded in silence.

Depression entered Ruth's own life back when she was a stay-at-home mother with two small boys. She was living what she describes today as "a dream life" – and yet she felt ashamed. She felt ashamed that she wasn't happy. Outwardly, she was a privileged wife and mother who enjoyed her life. Only her husband and twin sister knew she was in a bad way – and only her sister knew the full story. Ruth did have friends, but no confidantes. Often, she was on the point of opening up and then held herself back. In 2000, Ruth was diagnosed with depression.

True happiness

No one at her workplace knows that story, and no one will. It's a friendly work environment, but experience has taught her what can happen to employees with depression. Ruth sums up their fate in a few words: "They didn't fare well." Ruth loves her job and has a lot at stake. "I would never dare to share my history for fear of appearing weak," she says. "The less emotion in the workplace, the better."

In recent years, Ruth has responded well to treatment, and she finds herself in stable remission. Yet depression is not absent from her life. Her younger son has had serious psychological problems since he was 12. Ruth's son is stuck in a place in his life where she was once stuck too. He has much to be happy about – but he doesn't feel that way. And like many of the people who text Ruth on the crisis hotline, he blames himself for not being able to pull himself together. True happiness and fake happiness can look like each other, but they lie worlds apart. Ruth has known both. She takes pleasure in her life now, and she talks about what a profound difference that is. And she fervently hopes that one day, her son can join her in finding genuine joy.

Ruth has a demanding corporate job. She is required to drive and deliver on many projects – and keep a cool head while she does it. Her boss and her coworkers know her as an employee they can rely on, and at the same time as someone whose snappy wit makes them laugh. It's the professional Ruth they work and have fun with. A certain side of her remains invisible to them.

The private Ruth is a volunteer counsellor for a text-message helpline for people in crisis. Ruth tries to help people who are afraid to talk with the people in their lives. And she understands. Since her mid-30s, she's slipped into and out of depression, and she knows a great deal about keeping your vulnerability hidden.





10 October 2019

WORLD MENTAL HEALTH DAY

World Mental Health Day (WMHD) takes place on 10 October on an annual basis. For the last 27 years, WMHD has been driven by the World Federation for Mental Health (WFMH), endorsed by the World Health Organization, and rolled-out worldwide by a variety of entities. Stakeholders from all walks of life and from all over the world, including Lundbeck, therefore join forces to put mental health on the agenda and to drive change for the people impacted by these diseases.

As a leader in psychiatry, Lundbeck partners with the WFMH and works alongside the mental health community in nearly 40 countries. From the green ribbon awareness campaign to educational workshops, hospital initiatives and policy events, Lundbeck is striving to put an end to the stigma and discrimination that people with poor mental health still endure.

In 2019, in line with the UN's Sustainable Development Goals, WMHD's theme will be focused on Mental Health Promotion and Suicide Prevention. With more than 90% of persons who die by suicide being associated with mental disorders¹, this is a cause we at Lundbeck care deeply about and are looking forward to supporting further beyond existing initiatives.

Read more about WMHD here: https://wfmh.global/world-mental-health-day/

Taking action to promote sustainability

Since world leaders in 2015 adopted the 2030 Agenda for Sustainable Development, Lundbeck has acknowledged its responsibility to actively support six of the 17 Sustainable Development Goals (SDGs).²

As a global pharmaceutical company highly committed to improving the quality of life of people living with psychiatric and neurological disorders, we take a special interest in Goal 3 and the associated target 3.4: "By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being."

Mental health promotion

In our work to promote mental health and well-being, we share society's concern that suicide is the second leading cause of death among young adults between the ages of 15 and 29, and that depression and

schizophrenia too often lead to suicide. We know that mental illness and suicide is something that affects the individual, their friends and families. Many of Lundbeck's affiliates are working to promote mental health and well-being through a number of activities and initiatives. In the coming years, we wish to unite with other stakeholders sharing the same commitment to the SDG on mental health promotion as well as suicide prevention.

² Read more about SDG 3 and the other SDGs on the UN's website: http://www.un.org/sustainabledevelopment

DID YOU KNOW?

Mental disorders occur in all regions and cultures. The most common are anxiety and depression, which not infrequently can lead to suicide. In 2015, an estimated 800,000 people worldwide committed suicide, and 86% of them were under the age of 70, with men about twice as likely to commit suicide

as women. Globally, suicide is the second leading cause of death among those between the ages of 15 and 29.

Source: Global Health Estimates 2015: Deaths by cause, age, sex, by country and by region, 2000–2015. Geneva: World Health Organization; 2016.

¹ https://www.ncbi.nlm.nih.gov/pmc/articles/ PMC5054879/

SDGs supported by Lundbeck

LUNDBECK'S APPROACH AND SAMPLED ACTIONS



GOOD HEALTH AND WELL-BEING

- · We address the global medical unmet need through the development, production and marketing of effective treatments. We engage with patient groups and caregivers to better understand their needs.
- · We take responsibility for keeping the patients who need our medicine safe. Our actions are driven by regulatory requirements established by authorities and ethical considerations described in Lundbeck's Code of Conduct.



GENDER EQUALITY

- · We offer equal opportunities for men and women across the organization in accordance with our employee policies and guidelines that provide equal opportunities and benefits for all genders.
- Our due diligence procedures for suppliers include their effort to end all forms of discrimination.



CLIMATE ACTION

- Our long-term climate target for 2026 is aligned with the principles in the Paris Agreement, UN Climate Change Conference of the Parties (COP-21). The target includes a 30% reduction of emissions from our combustion of fuels and purchase of electricity compared to 2016.
- We continuously reduce our CO₂ emissions by optimizing our processes and facilities. By the end of 2018, we reduced our CO₂ emissions by 66% compared to 2006.



DECENT WORK AND ECONOMIC GROWTH

- We ask our suppliers to prevent corruption, provide safe and healthy working conditions, minimize their impact on the environment and respect human and labor rights in the mutually binding agreements we enter into.
- · Our OHSAS 18001 certified HSE management system involves our managers and employees in taking prioritized and coordinated decisions that ensure a safe and healthy working environment and the well-being of our employees.



RESPONSIBLE CONSUMPTION AND PRODUCTION

- · We minimize the environmental impacts from our research, development, manufacturing and distribution activities via our ISO 14001 certified Health, Safety & Environment (HSE) management system.
- · In 2018, we recycled 76% of the most used solvents at our Danish chemical production site and eliminated the need for approximately 5,600 tons new solvents.



PEACE, JUSTICE AND STRONG INSTITUTIONS

- Our Code of Conduct represents our commitments to and expectations of our employees for the areas that are critical to the pharmaceutical industry. The Code's anti-corruption principles are supported by corporate and local procedures that include requirements concerning our interactions with suppliers and key stakeholders.
- · All employees carry out annual training in our Code of Conduct, and we continuously monitor compliance internally and with key partners.

Lundbeck in brief



PURPOSE

We are tirelessly dedicated to

restoring brain health,

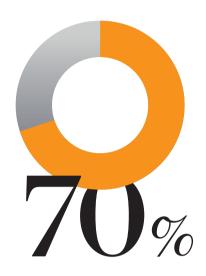
so every person can be their best

OUR BELIEFS

We are

Patient-Driven Courageous Ambitious Passionate Responsible

We are a global pharmaceutical company specialized in discovering and developing innovative treatments for brain diseases.



OWNERSHIP

Our largest shareholder is the Lundbeck Foundation, which holds approximately 70% of the shares. The Foundation annually grants around DKK 500 million to support medical research and educational and communication activities.



EMPLOYEES

We are approximately 5,000 employees across four divisions.



GLOBAL PRESENCE

We are headquartered in Denmark and located in more than 50 countries.



HISTORY

Lundbeck was founded by Hans Lundbeck in Copenhagen more than 100 years ago, in 1915.



Xue still remembers the doctor's conclusion. "You have a severe case of major depressive disorder," he said. And: "There's help for you." When Xue noticed the very first sign of recovery, it felt so convincing that he dared to trust it. "I felt my heart releasing the pressure," he says. Since then, he's seen steady progress.

> **Xue Bing** Living with depression

2500 Valby