

The National Kidney Foundation



50 Years
together





Foreword

My heartiest congratulations to The National Kidney Foundation (NKF) as they celebrate their 50th Anniversary this year.

Since entering politics, I have taken a keen interest in social issues, and in helping the needy and disadvantaged. I had the privilege of working with community social agencies in my constituency. When I was the Minister for Social and Family Development, I gained a better appreciation of the importance of the work, the challenges in meeting the evolving and complex social needs of our society, and the need to strengthen our social support fabric and system.

To do more and make progress in improving the lives of our people, I cannot emphasise enough the importance of partnerships between the social service organisations, the Government, healthcare agencies and the community. I believe all of you at NKF understand this well as it is the very reason why NKF exists today when your founder, Prof Khoo Oon Teik, garnered support from various quarters of society to establish NKF. This togetherness of a caring community is what has propelled NKF forward for the past 50 years.

I have attended a number of NKF events in recent years, in particular, to honour kidney patients for their courage and determination for not letting their illness weigh them down and keep them from leading purposeful lives. This is the essence of NKF's mission and this is where NKF has played a vital role to go beyond providing dialysis treatment for kidney patients by putting in effort into holistic care.

When a patient has kidney failure, his or her quality of life is often compromised. Many patients struggle with the discomfort and pain of their condition and the effects of dialysis. If one is often feeling unwell, it is difficult for one to pursue one's daily activities and this easily leads to negativity and depression.

NKF has steadily built a spectrum of rehabilitation programmes, including the support of, and collaboration with, restructured hospitals and healthcare agencies, to help kidney patients and their families and to tighten the social safety net so that they do not fall through the cracks. NKF's allied health team supports patients and their caregivers by providing them emotional, psychosocial and family therapeutic support. Patients are thus able to re-integrate into the society, work, regain their dignity and self-respect, and lead meaningful lives.

NKF also plays a key role in kidney transplant, which is the best solution to kidney failure. More importantly, it is raising awareness on kidney health upstream by reaching out to people from all walks of life through its various education and prevention initiatives to curb the onset of kidney failure. While the government continues to provide a supportive environment for disease prevention, intervention and management, community partners such as NKF are vital in this endeavour. Singaporeans must also do their part by making small, progressive steps to change their lifestyle and eating habits.

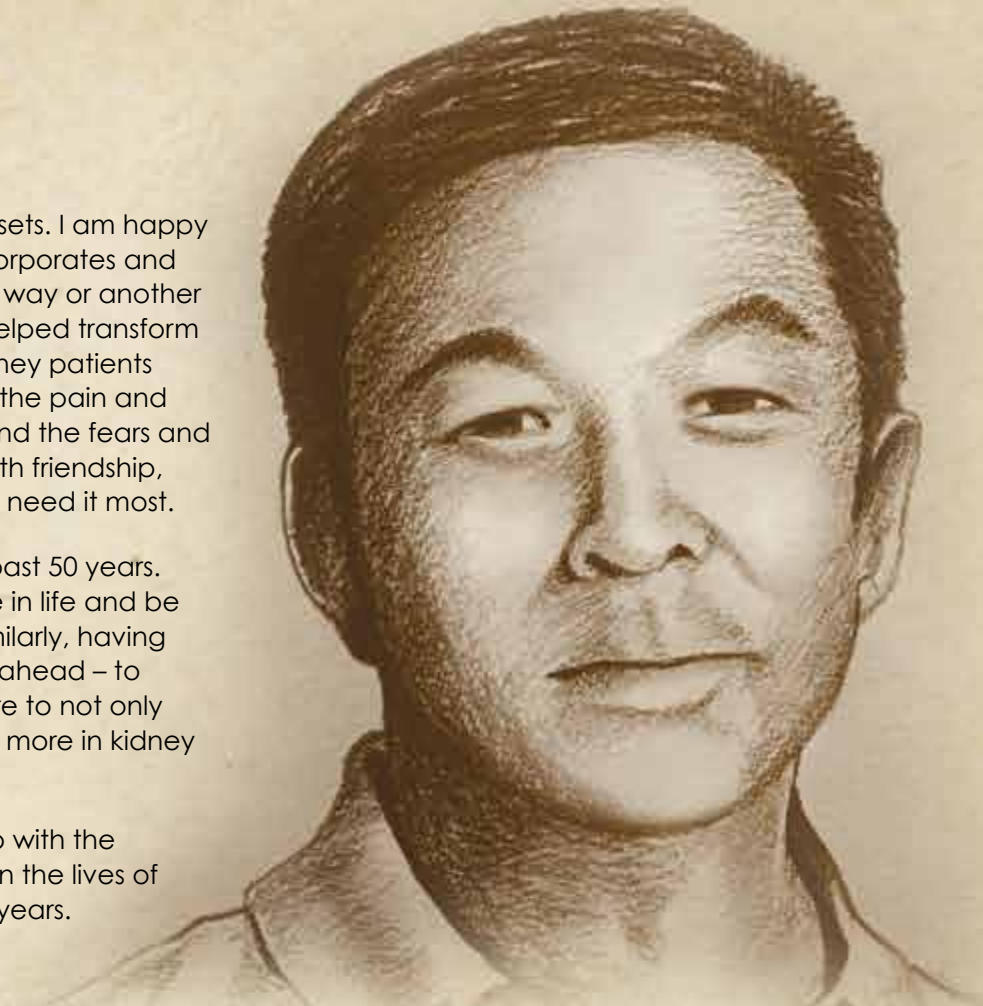
I also believe that NKF's volunteers are one of its greatest assets. I am happy to know that it has tapped on the strengths of individuals, corporates and schools - in fact, people from all walks of life - to help in one way or another with their support and human touch which, ultimately has helped transform kidney patients' lives. It is heartening to know that many kidney patients themselves do volunteer work at NKF. Having been through the pain and struggles as a consequence of kidney failure, they understand the fears and anxieties of newly diagnosed patients, and provide them with friendship, emotional support and encouragement at times when they need it most.

I appreciate how challenging NKF's work has been for the past 50 years. At 50, it is said that one will understand better one's purpose in life and be able to focus one's energies according to one's mission. Similarly, having reached this significant milestone, NKF is clear with the way ahead – to continue working hand in hand with the people of Singapore to not only benefit kidney patients holistically, but more importantly, do more in kidney disease prevention.

NKF's 50th Anniversary is truly a celebration of this partnership with the community. Together, let us continue to make a difference in the lives of kidney patients and the health of our nation for the next 50 years.

I wish NKF many more decades of good work.

*Mr Tan Chuan-Jin
Speaker of Parliament*





Chairman's Message

The National Kidney Foundation (NKF) has come a long way since its inception in 1969. Today, because of the notable work of the NKF through the unstinting support of our community partners, patients have the hope of living a normal, quality life.

However, this was not always the case. Up until the 1980s, hundreds of kidney patients were dying every year because they could not afford dialysis treatment. Many lost their entire savings. They had no choice but to sell their belongings and even their homes to pay for expensive private dialysis – as high as \$3,000 a month. Kidney transplants were not an option for most due to the serious shortage of kidney donors. The result – devastation, despair and eventually tragic death.

Against these bleak circumstances, Prof Khoo Oon Teik, a nephrologist, rallied the support of the community to establish the NKF in 1969. To arrest this urgent and serious problem, NKF carried out intensive public education campaigns in the 70s and 80s to promote kidney transplant to dispel fears and apathy about kidney donation. But the wait for a kidney transplant was long and often futile. NKF had to ensure that the kidney patients stayed alive and lived well.

NKF began to look at establishing a financially sustainable dialysis programme and came up with the idea of building dialysis centres in the void deck of HDB blocks, which would provide easy access and convenience to patients living in the heartlands. The result – the establishment of the first community-based dialysis centre in Toa Payoh in 1987.

However, kidney failure cases continued to rise in the last 10 years. When I assumed the chairmanship of NKF in 2012, 3 people were diagnosed with kidney failure in Singapore every day. Not long after, the figure went up to 5 per day.

We worked indefatigably with the support of the community to expand our capacity to ensure that no needy patient will die because they lack the financial means, or because of a lack of dialysis space. Today, we have 36 dialysis centres, including our Integrated Renal Centre at 500 Corporation Road. Besides having more capacity to accommodate patients, this first-of-its-kind, one-stop centre offers complementary services including community education and preventive care activities with other partners to provide holistic care to our patients and the community.

While we do our best to benefit kidney patients at our community-based dialysis centres, we also support and enable patients on Peritoneal Dialysis (PD) to do well at home. PD provides better time flexibility as patients are not restricted to dialysis centre schedules. They can fit PD into their work schedules. There is also better quality of life as patients can enjoy more independence. Our pool of medical professionals provide pre and ongoing PD support to ensure that our patients are confident of performing PD correctly.

50 years on, more than 10,000 kidney patients' lives have been saved and immeasurable difference made because compassionate people like you walked with us to support them in their courageous journey.

More than this, we continue to empower and partner the community by working hand-in-hand towards the prevention of kidney disease upstream to help every Singaporean to be more aware of their kidney health, not to take it for granted, and take proactive steps to care for their kidneys.

All our work would not be possible without the support of caring people like you. As we celebrate our 50th year, we will continue to work closely with our stakeholders to benefit kidney patients and their families, and the people of Singapore.

Thank you, once again, for your strong support and partnership.

Mr Koh Poh Tiong
Chairman

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together
we embark on
a journey



Mobilising the resources of the community to establish NKF

In the 1960s, about 200 kidney patients were dying every year because they could not afford the only treatment that could save their lives – dialysis – which was costly. Prof Khoo Oon Teik, a nephrologist, was determined to help after witnessing their plight and losing his own brother to kidney failure. However, he realised that the resources of the community had to be mobilised. By rallying support, NKF was inaugurated on 7 April 1969, and set up Singapore's first dialysis unit in Ward 21 of the Outram Road General Hospital (later known as the Singapore General Hospital).

To this day, NKF is guided by its mission to render all possible services to save the lives of kidney patients, promote kidney transplant, encourage research on kidney diseases and carry out public education programmes on kidney diseases.

Speech of Mr. Chua Sian Chin, Minister for Health, on the occasion of the inauguration of the National Kidney Foundation at the Allen-Faris Lecture Theatre, Faculty of Medicine Building, University of Singapore, Sepoy Lines, on World Health Day,

7 April, 1969 at 1700 hours



We are living today at an exciting time when astounding advances in medical science are being made. Organ transplants are beginning to offer new hope and a new lease of life to persons stricken with heart failure. We stand on the threshold of even more amazing discoveries. Spare-part surgery will be perfected before long and become common-place. The extensive research now being undertaken promises a breakthrough in cancer, which may be cured chemically or by immunisation. The growing list of diseases known as “inborn errors of metabolism” may even be prevented by genetic manipulation. More precise knowledge about certain common diseases of the heart and blood vessels and their relation to the chemistry of the body opens up the prospect of controlling this great killer in modern society. Research into the chemistry of our tissues and organs will provide more precise knowledge regarding the process of ageing to bring us nearer postponement of old age or even perhaps help us to discover the elixir of youth, an ideal which has tantalised mankind for centuries. New drugs and new antibiotics will be found to deal with hitherto elusive viruses.

Unfortunately, however, there is always a tremendous gap between medical science and medical practice. Although more and more medical knowledge is being acquired, the fruits of this knowledge are not being enjoyed by the ordinary people of the world. The time-lapse between discovery and application is agonisingly slow and communities sometimes wait in vain and even die waiting for the promise of the medical cure and the better life that never comes to them.

The fact of the matter is that, like everything else, it is a question of dollars and cents. There is a social cost for medical facilities. Each society gets what it can and is prepared to pay for, apart from the limited help that international organisations, such as the World Health Organization, are able to give.

The key question that decides how sophisticated a country's standard of medical facilities is to be is the price which the country itself can afford to pay for it.

This is a question which is posed not only to this Government of the country, but it is also put to each and every individual of the country.

Every Government has responsibilities extending over a wide spectrum of activities. On the limited budget of the nation, the Government has to decide between priorities not only in respect of different areas of service but also within each area. For example, on the budget provided for health services, the different claims of the various types of medical facilities must be carefully weighed to ensure the best allocation of the limited resources available. This decision on the allocation of priorities is one of the most difficult decisions which a Government has to make and more often than not it is also a very painful one. But as a Government it has to face realities and sometimes put aside sentiments and make a decision that would be to the best interest of the community as a whole.

However, this choice of priorities for spending of public funds on health services is not the end of the story. The people of a country can, through voluntary fund-raising and other voluntary efforts, come in to fill in the gaps and thus raise the degree of sophistication of services to higher levels. In this way the various voluntary medical foundations and associations may rightly be called the "left hand" of community health services, giving essential help to the right hand of governmental action.

Let us now focus our attention on kidney diseases which is the reason for the inauguration of our National Kidney Foundation at this meeting today.

Since 1965 we have been having a Kidney Unit in the Outram Road General Hospital. Initially, we had only an artificial kidney machine which was used for the treatment of acute kidney

We are living today at an exciting time when astounding advances in medical science are being made. Organ transplants are beginning to offer new hope and a new lease of life to persons stricken with heart failure. We stand on the threshold of even more amazing discoveries. Spare-part surgery will be perfected before long and become common-place. The extensive research now being undertaken promises a breakthrough cancer which may be cured chemically or by immunisation. A growing list of diseases which were once considered incurable may even be prevented by genetic manipulation. Knowledge of disease is increasing at a rapid rate.

failure. In 1967 newer machines were acquired through generous donations from individuals and fund-raising by the Lion's Club. The Kidney Unit then took on the treatment of 2 patients in the terminal stages of kidney failure. These 2 patients required regular dialysis twice a week each.

At this stage a problem had to be faced by all interested parties including the Government, the doctors involved, and others generally interested in community health and welfare. The question was whether Kidney Dialysis in Singapore could be expanded and sustained. As in any other new endeavour of magnitude, many questions arise.

The requirements of accommodation pose no great difficulty. Accommodation will eventually be available in the Institute of Medical Specialties. The cost of equipment is high. For example, an artificial kidney unit comprising a Console which can service 6 patients simultaneously costs about \$48,000/-. Although expensive, no doubt the money for the equipment can be found. The big hurdle is the running expenditure. An estimate of the requirements including recurrent equipment needs, staff salaries, drugs, machine depreciation, and so on, puts the cost at approximately \$5,000/- per year for each patient. At a conservative estimate of about 20 patients put on dialysis each year, the cost for maintaining these 20 persons will be in the region of \$100,000/- a year.

If there is an accumulative addition of 20 patients annually to the programme, the rise in cost can be quite considerable.

Fortunately, there is a cut-off in the build-up of such a programme. This has been made possible by the new medical technology of Kidney Transplantation. Once a kidney can be grafted to a patient, the need to continue on the artificial kidney machine ceases and the accumulative cost for dialysis goes down.

I am glad to note that we have today in Singapore the necessary back-up team of physicians, surgeons and technologists with



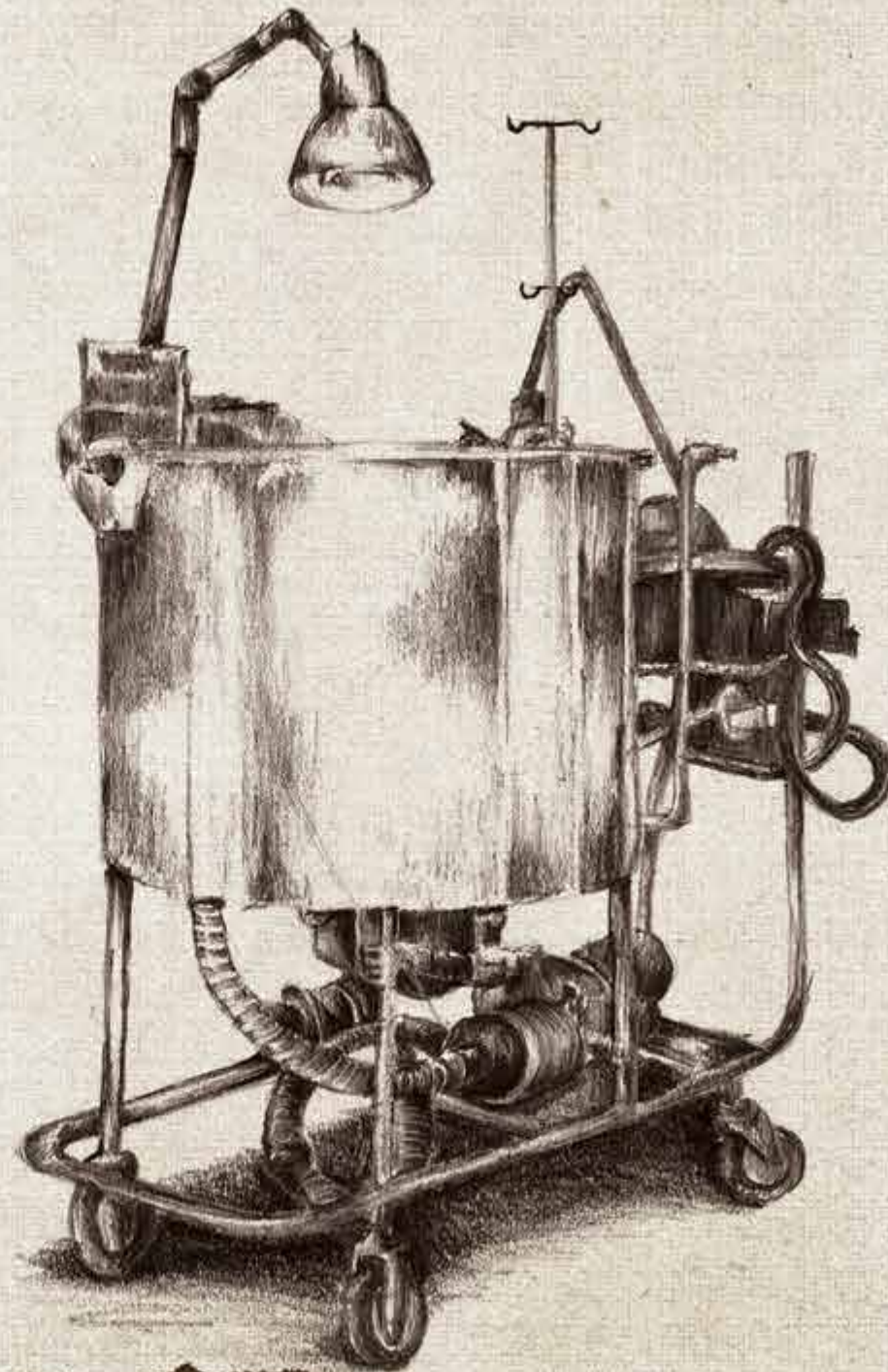
considerable expertise and training and who are able to cope with kidney transplantation apart from kidney dialysis.

At this point I would like to pay a special tribute to the courage, determination and hard work put in by this medical team who have not only built up the technological foundation but have also rallied the support of our community of welfare workers and philanthropists towards the formation of an institution which will be dedicated to the prevention and treatment of kidney diseases through the most advanced technologies of our time.

And so we come to the moment of the inauguration of the National Kidney Foundation. The piling work for this foundation has been admirably completed not only by the medical personnel interested in kidney diseases but also by many others in the community who have come forward to lend a much-needed voluntary helping hand, both in funds as well as personal efforts. The Foundation needs considerable help and I hope its organisers will not be disappointed in their faith in the sustained support which they expect to get and must get from the community if this Foundation is to succeed.

The organisers of the National Kidney Foundation have chosen an auspicious day indeed for this inauguration ceremony. Today (7th April) is World Health Day and all over the world people commemorate the day by focussing their attention on the challenges in the field of health. In Singapore, I have no doubt that World Health Day 1969 will come to be remembered as the day on which a number of good people, doctors as well as lay men, met together in Singapore to commence the operations of our National Kidney Foundation.

It is therefore with great pleasure that I hereby formally declare open the National Kidney Foundation.



A dialysis unit in an attic at SGH

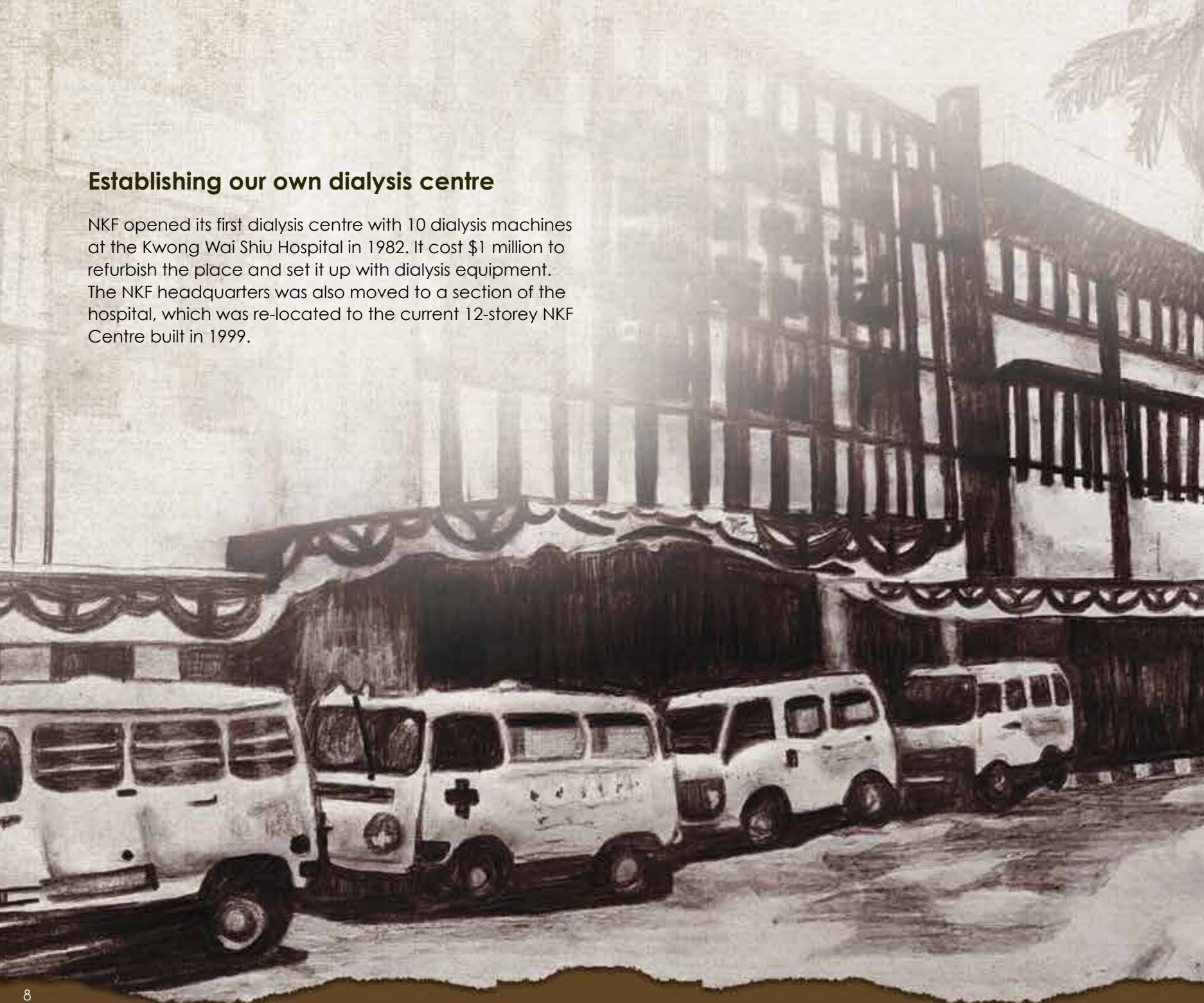
In 1969, the dialysis unit was expanded and moved into an attic above the Surgical Unit A of the Singapore General Hospital with 10 beds. To operate the unit, trained nurses, technicians and doctors were needed. A renal nurse was sent to Australia in order to return to train nurses in Singapore. Subsequently, more nursing staff and doctors were sent for training and technicians were employed.

“Everything was improvised by us. We didn’t have a tank so we had the first seamless stainless steel tank. And to mix the solutions we had to have a propeller, from a boat propeller. So everything was dumped into this place and it was propelled by this propeller and dissolved and then we used that by using a pump to go to these 10 machines.”

Prof Khoo Oon Teik
Founder of NKF

Establishing our own dialysis centre

NKF opened its first dialysis centre with 10 dialysis machines at the Kwong Wai Shiu Hospital in 1982. It cost \$1 million to refurbish the place and set it up with dialysis equipment. The NKF headquarters was also moved to a section of the hospital, which was re-located to the current 12-storey NKF Centre built in 1999.



Bringing affordable dialysis to the community

NKF introduced a new concept of building dialysis centres at HDB void decks to provide easy access and convenience to patients in the community, while also cutting down rental costs. SIA-NKF Dialysis Centre was thus opened in Toa Payoh on 24 December 1987 to bring affordable dialysis close to our patients. This pioneering move marked the beginning of a new era for NKF.

“I came to NKF and they said there was no vacancy. So I went to a private centre but only did two dialysis sessions a week because I couldn’t afford three treatments a week as each treatment costs me around \$200. As a result, I often felt sick as my body couldn’t get fully cleansed. I had three daughters and had to start work as my husband had passed on. I also sold my flat and stayed with one daughter. Luckily after one year, I got a place at NKF.”

Madam Ah Moy Kia, who has been dialysing at Toa Payoh dialysis centre for the past 25 years



Helping children with kidney failure

In 2002, NKF and Shaw Foundation set up the Shaw-NKF Children's Kidney Centre at the National University Hospital to support children with chronic kidney diseases and kidney failure.

“The Children's Kidney Centre (CKC) was a big family to me. It is a tight-knit community of young patients who share similar health issues. We quickly grew close and looked to one another for support. Looking back, it was very important for me to be able to have friends who understood what I was going through and shared the same struggles as I did. I felt less alone in the fight against my illness.

The CKC felt like a second home despite it being a hospital. The doctors and nurses were friendly, warm and caring. They always made an effort to accommodate my schedule as they wanted me to continue living a normal life despite my condition. This encouraged me to be independent and learn how to manage my time well such that I can pursue my own interests despite having to dialyse thrice a week.

From left: Mr Joseph Asogan, Mr Benedict Lee and Darren, they became close friends when they were young patients at the CKC



The children's programme empowers young patients to push themselves and not allow themselves to be limited by their illnesses. It is also a safe space for them to share and learn from one another's experiences as they grow up together.

I'm currently working as a course administrator at a training company. My hobbies are playing the guitar, singing, and cycling. Being a kidney patient does not hold me back from doing the things I enjoy and love.”

Mr Darren Lee, who has been on dialysis for 18 years

together
we give life

Promoting kidney transplant

An important part of NKF's mission has always been to promote kidney transplant and support the legislation and awareness of kidney donation since the early 1970s as kidney transplant offers the best long-term survival and quality of life.

Under the Medical Therapy, Education and Research Act or opting-in scheme of 1972, there were only about 25,000 opt-ins over 14 years. So, in 1986, NKF rallied the support of Singaporeans for the passage of the Human Organ Transplant Act (HOTA) of 1987, or opt-out law, which presumes the non-Muslims, from ages of 21 to 60, have pledged their kidneys upon accidental death, unless they have opted-out. This made Singapore the first Commonwealth country to adopt such legislation.

Continuing with our efforts to encourage kidney donation, NKF's Kidney Live Donor Support Fund was established on 1 November 2009 in conjunction with the amendment to the Human Organ Transplant Act (HOTA) to allow reimbursement to living donors in accordance with international and local ethical practices. The Fund provides financial assistance to needy live kidney donors which covers kidney-related medical welfare and insurance to encourage more people to donate their kidneys.

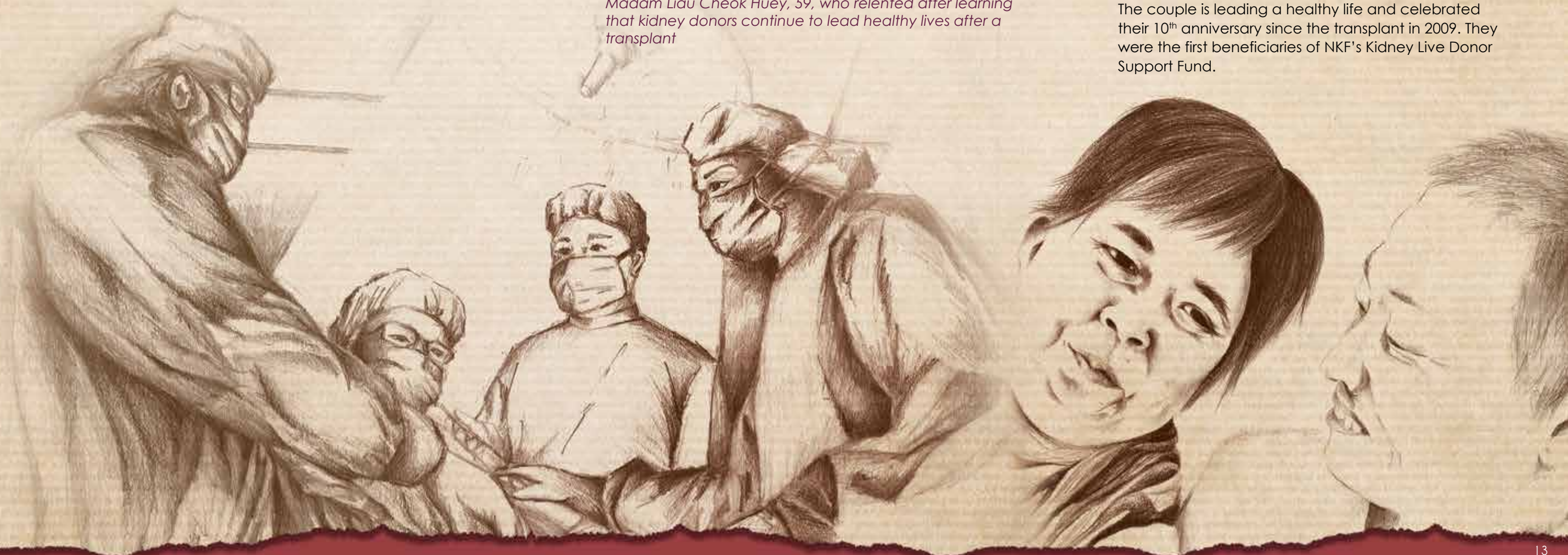
“I lacked knowledge and understanding about live kidney transplant, so I was reluctant and fearful for him. I was also worried that we might not be able to work after that.”

Madam Liau Cheok Huey, 59, who relented after learning that kidney donors continue to lead healthy lives after a transplant

“Because I love her. I saw her suffering and wanted to help her shoulder her pain.”

Mr Teo Eng Hong, 60, on why he wanted to donate his kidney to his wife

The couple is leading a healthy life and celebrated their 10th anniversary since the transplant in 2009. They were the first beneficiaries of NKF's Kidney Live Donor Support Fund.



“I’m glad Syasya no longer needs to suffer the pain of undergoing dialysis with a new kidney in her.”

Mr Suhaimi Sani, who gave his kidney to his daughter Syasya



My best birthday gift – thanks to my father

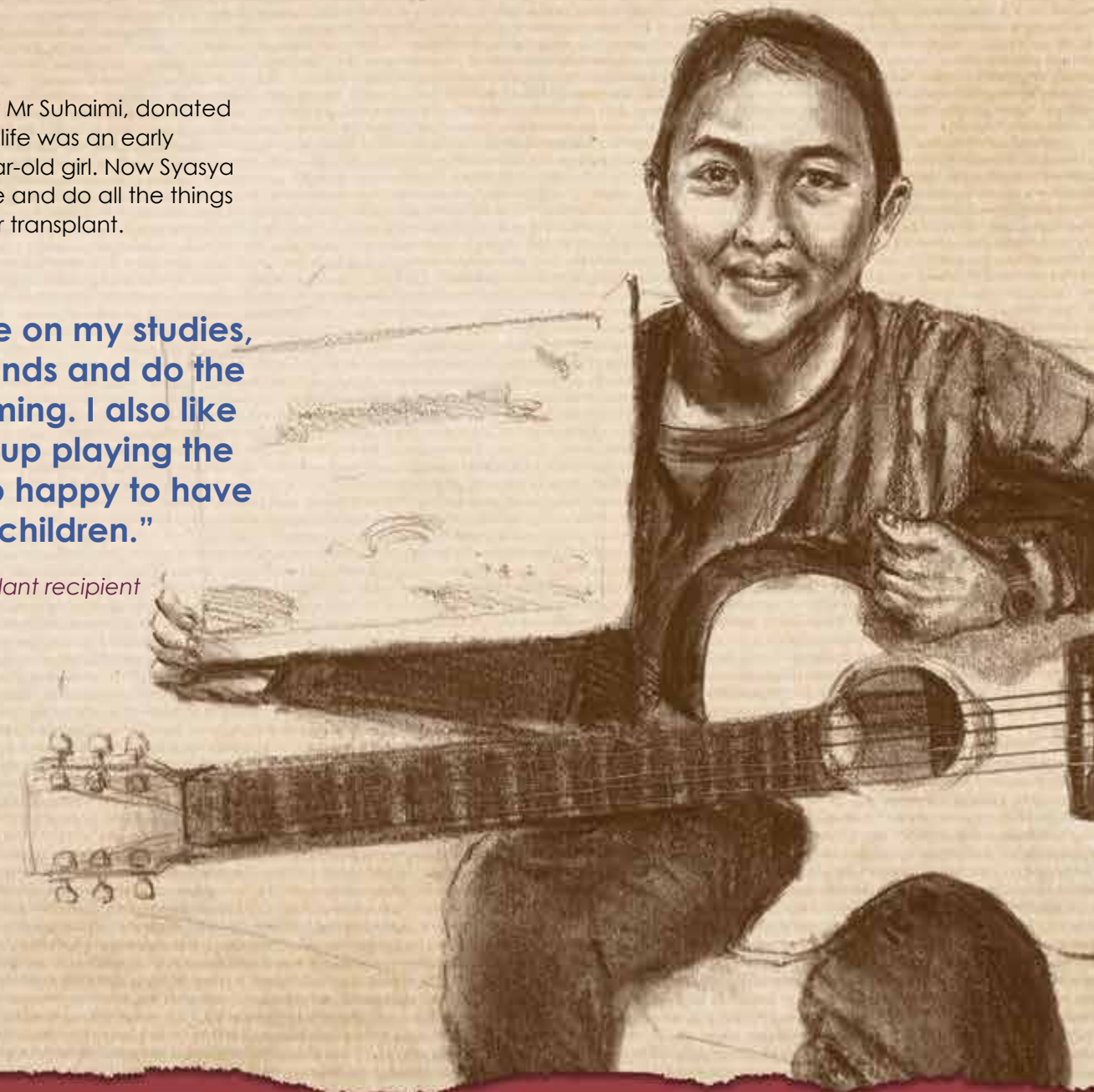
Syasya was born with a condition called congenital nephrotic syndrome that caused protein leakage from her kidneys. This condition limited her absorption of nutrients and restricted her growth. From infancy, Syasya had to take many drugs to stop the protein leak. When she was 4 years old, Syasya's condition worsened. She started having frequent bouts of vomiting and fever. Tests revealed that her kidneys had failed. Syasya began undergoing Peritoneal Dialysis. Not only was the dialysis journey difficult and painful for the little girl, it was heartbreaking for her parents too.

“Initially, it was very hard to accept that Syasya had to go for dialysis,” her mother Madam Kartini said. “Sometimes, if there were problems with the machine during the dialysis, or if the catheter became stuck, the nurses would need to reinsert it. Seeing her in so much pain, I wished I could take her place instead. But as no one could help her with this, we just had to accept her condition and help her through this stage.”

On 12 March 2014, Syasya's father Mr Suhaimi, donated his kidney to her. This new lease of life was an early birthday present for the then 6-year-old girl. Now Syasya has a chance to lead a normal life and do all the things which she could not do before her transplant.

“I can now concentrate on my studies, spend time with my friends and do the things I want like swimming. I also like music and have taken up playing the acoustic guitar. I am so happy to have a normal life like other children.”

Ms Syasya Dalili Suhaimi, 11, transplant recipient



Courage to lead a fulfilling life

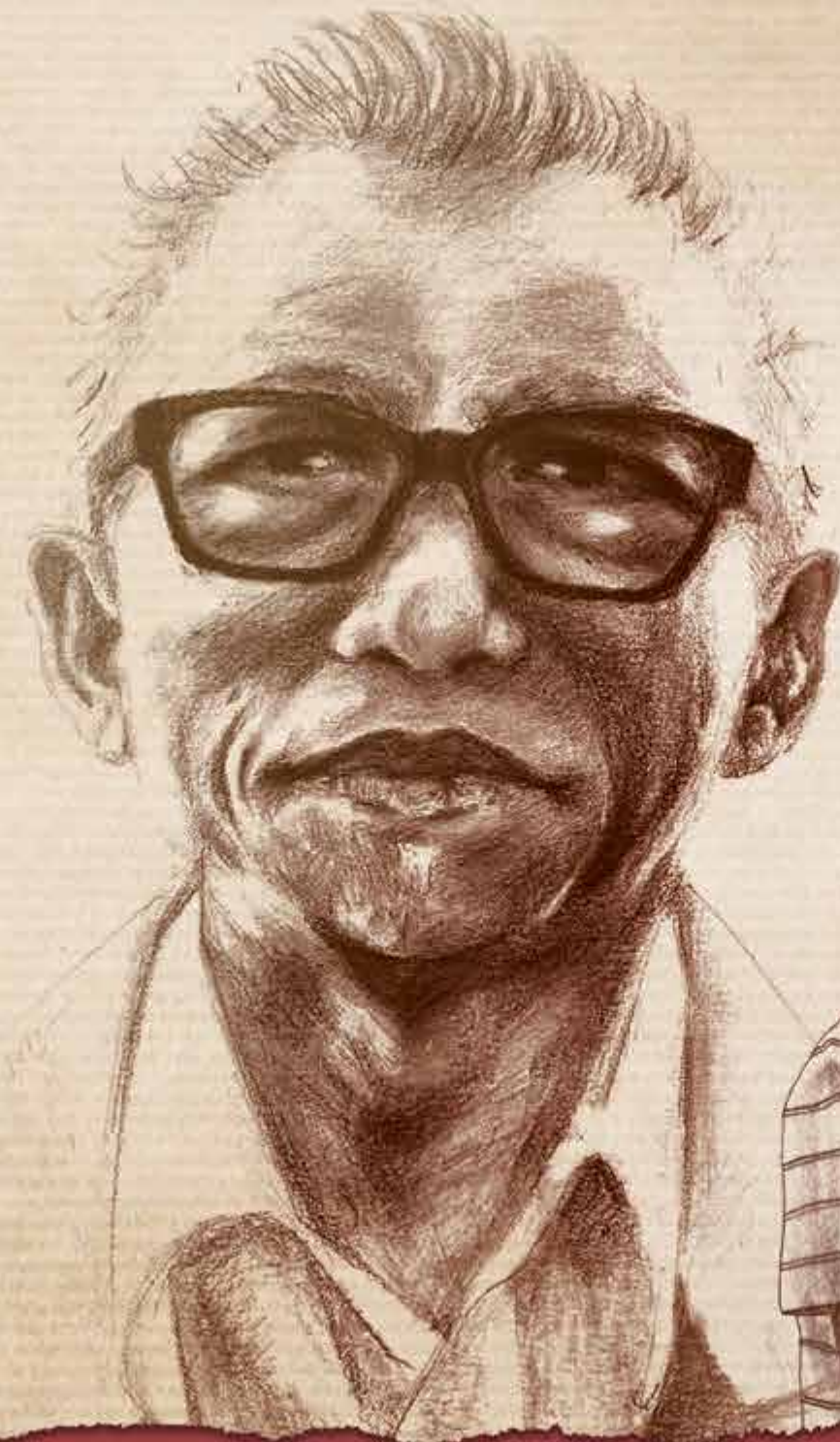
Johari was diagnosed with kidney failure in 1990 and started dialysis at a private centre. The monthly fees amounted to \$2,500 and as a result, his savings were quickly depleted. At that time, NKF had only 4 dialysis centres in Singapore. He applied and was fortunate to receive a place in its subsidised dialysis programme in 1991.

Every other day, for the past 28 years, he has had 2 needles inserted into his left arm. It is what keeps him alive. Due to this, he has many lumps on his arm which may be frightening to some people.

Johari has been working at Singapore Power for the past 40 years. They have been very supportive. He was promoted 5 times and is now a Senior Technical Officer.

“Today, I am a grandfather of 5 and my wife has been a pillar of support in encouraging me to continue leading a fulfilling life. I am a living testimony that kidney failure is not the end of the world.”

Mr Johari Marzuki, patient who has been on dialysis at NKF for the past 28 years



Leading a freer lifestyle because of home dialysis

Ever since 58-year-old Mong Lee started Peritoneal Dialysis (PD) treatment, he has been busy pursuing his goals and interests. Now that he need not spend time travelling to and from a dialysis centre, his days are packed with activities that bring him joy and fulfilment.

An avid gardener, Mong Lee grows potted vegetable plants along his house corridor. Gardening is not only therapeutic, but also provides him with fresh produce which is essential



in his diet. Besides doing home gardening, PD also frees him to continue with his volunteer work in the community. Mong Lee is a befriender to the lonely elderly, helps with gardening at a nearby kindergarten and is also a Patient Volunteer with NKF. Spurred by his passion for helping others, Mong Lee is currently taking courses in counselling and volunteer work.

Mong Lee does his 10-hour dialysis daily while he sleeps at night. He is self-reliant and carries it out with ease without help from his wife and 2 grown-up sons. An NKF PD nurse and dietitian visit regularly to check on his condition and ensure that he is coping well. Mong Lee is happy with his choice of PD as he says it only requires him to make small changes to his lifestyle. He remains active and has a positive outlook in life.

“At first, I was fearful that my life would be affected drastically if I chose PD over haemodialysis. After carefully weighing and discussing both options with my family, I decided on PD. Now, I’m able to take up an active role in the various things I want to do. I’m more in charge of my life.”

Mr Ang Mong Lee, who chose PD for freedom of lifestyle

Advancements in medical technology for better clinical outcomes

When I joined NKF in the mid-90s, most of our patients were below the age of 50, physically fit and able to work, and had few comorbidities such as diabetes. Today, NKF faces new challenges as our patients are older and have more complicated medical conditions and complex psychosocial needs.

During my 23 years at NKF, I have seen advancements in technology and increased rigour in NKF's service standards. NKF's high quality care has improved our patients' survival rates and quality of life. Advanced dialysis machines allow for more precise removal of fluid and the dialysers used today are also more effective in removing toxins. The quality of water used for dialysis has also improved significantly over the years, reducing the risk of inflammation.

We also introduced nocturnal dialysis which lasts about 8 hours resulting in better health outcomes; Haemodiafiltration (HDF) which removes bigger toxins and reduces long-term complications caused by dialysis; and are currently exploring self-dialysis, which empowers patients to manage their treatment themselves with the support of clinical staff when needed. Patients who are involved in carrying out their own treatment, tend to do better. With patients' needs continuously evolving, we remain committed to enhancing our treatment standards, improving clinical outcomes and bettering our patients' quality of life.

Dr Mooppil Nandakumar
Director of Clinical Services
Recipient of the Healthcare Humanity Award in 2015



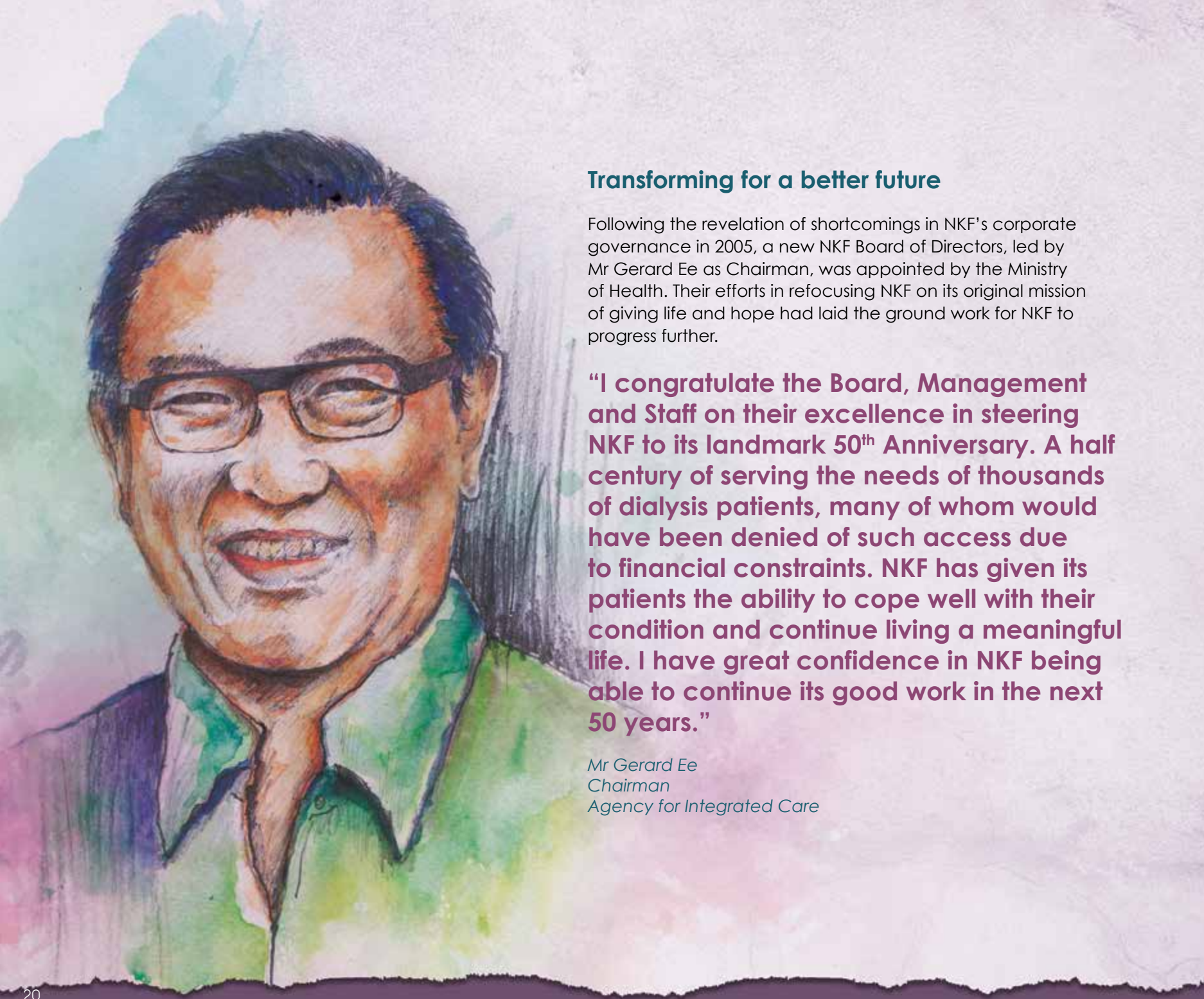
Renal nursing evolvement through my lens

I joined NKF's nursing team in 1989 during a challenging time when it was rapidly expanding. Back then, we had only 3 dialysis centres, a medical director and 10 nurses. Later in the 1990s, nurses were sent for nephrology courses and conferences to gain insight into the best practices for renal care. Service standards were also becoming more stringent, leading to the formation of nursing link groups to look into quality improvement in areas of care such as infection control, standard operating procedures, diabetic care and vascular access care.

In my 26 years working in NKF, I witnessed the establishment of 26 dialysis centres with close to 600 nurses caring for our patients. I believe that NKF's nurses will continue to provide holistic care and touch the lives of many in the years to come.

Ms Molly Tan, who played a pivotal role in advancing renal care as part of NKF's pioneering batch of nurses

together
we make a change



Transforming for a better future

Following the revelation of shortcomings in NKF's corporate governance in 2005, a new NKF Board of Directors, led by Mr Gerard Ee as Chairman, was appointed by the Ministry of Health. Their efforts in refocusing NKF on its original mission of giving life and hope had laid the ground work for NKF to progress further.

"I congratulate the Board, Management and Staff on their excellence in steering NKF to its landmark 50th Anniversary. A half century of serving the needs of thousands of dialysis patients, many of whom would have been denied of such access due to financial constraints. NKF has given its patients the ability to cope well with their condition and continue living a meaningful life. I have great confidence in NKF being able to continue its good work in the next 50 years."

*Mr Gerard Ee
Chairman
Agency for Integrated Care*

together
we bring hope

Holistic journey

Kidney failure, loneliness and lack of caregiver support isolate patients from society. NKF believes in holistic care, supporting patients beyond dialysis to imbue optimism, self-worth and self-respect into patients. A team of allied health professionals comprising of medical social workers, exercise specialists, dietitians and occupational therapists provide all-rounded care through a range of services to meet their physical, nutritional, psychosocial and emotional needs.

“As a counsellor, I have journeyed with individuals, couples and families during their toughest moments. I am able to support patients by applying my clinical skills and working alongside them as they build on their resilience to overcome challenges brought about by sickness, multiple losses, relationship conflicts, societal stigmatisation and family abuse. I derive satisfaction and comfort from what I do now, as it makes a positive impact to those under my care, especially seeing them move on from distresses to new chapters in their lives filled with hope and new encounters.”

*Ms Angeline Song
Senior Counsellor*

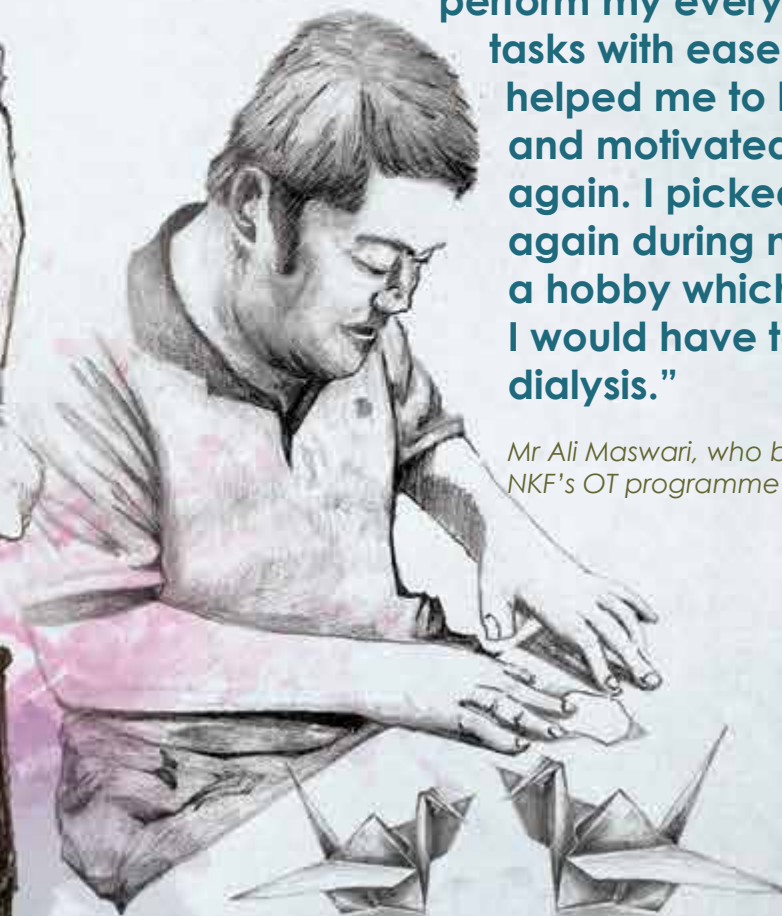
*Mr Wong Thien Kau, who overcame
his struggles with the guidance of
his counsellor*



“I have been attending occupational therapy (OT) at NKF since 2016. OT has helped me gain a greater understanding of how my body’s muscular system works. My rehabilitation has improved my mobility and enabled me to perform my everyday self-care

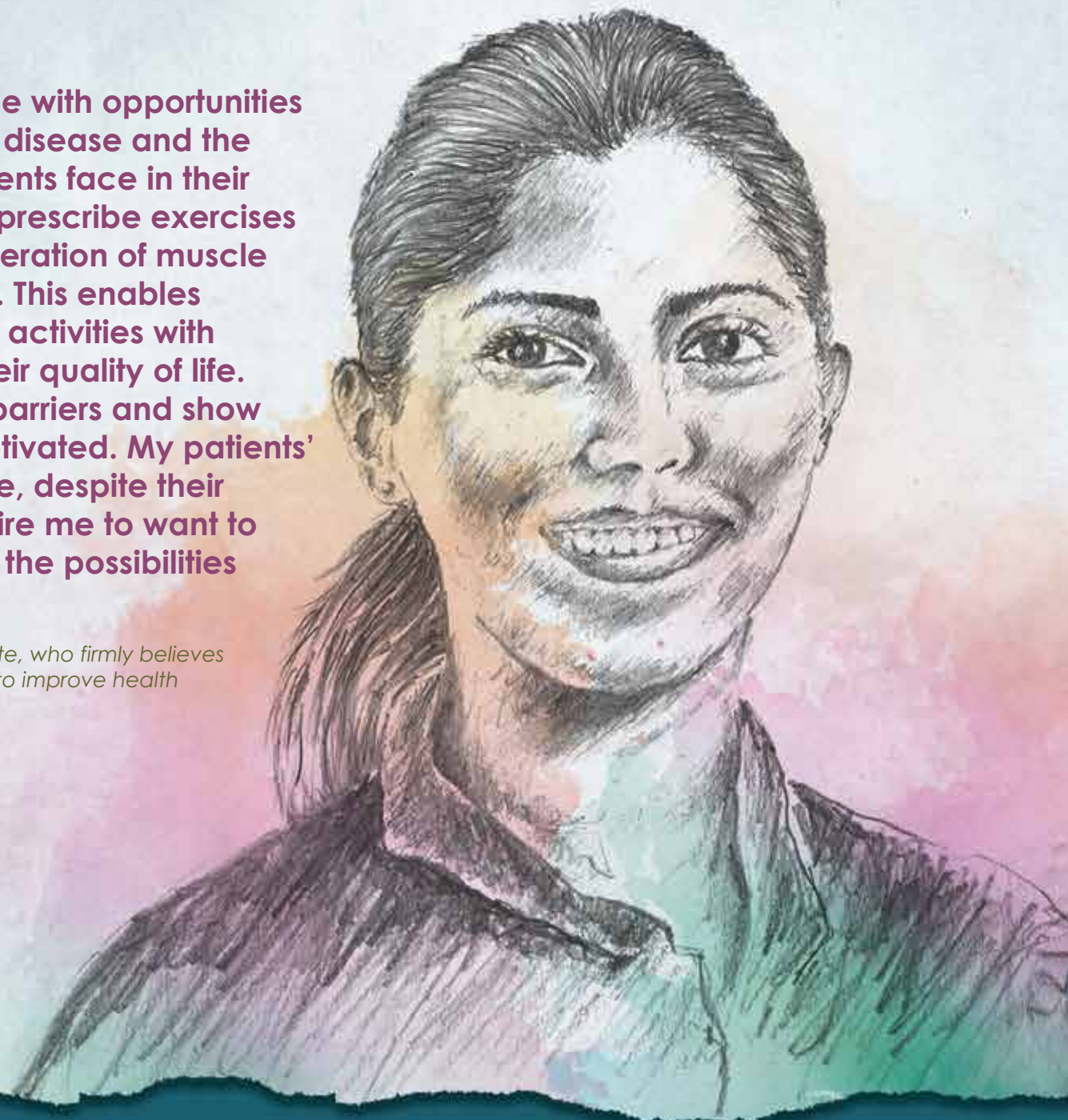
tasks with ease. It has also helped me to be more positive and motivated me to walk again. I picked up origami again during my OT sessions, a hobby which I once thought I would have to give up due to dialysis.”

*Mr Ali Maswari, who benefitted greatly from
NKF’s OT programme*



“Working at NKF provides me with opportunities to learn more about kidney disease and the challenges that kidney patients face in their daily lives. I customise and prescribe exercises to patients to prevent acceleration of muscle loss due to frequent dialysis. This enables them to carry out their daily activities with ease and helps maintain their quality of life. Seeing patients overcome barriers and show improvement keeps me motivated. My patients’ perseverance and resilience, despite their limitations, never fail to inspire me to want to do more. Working together, the possibilities are endless!”

Ms Derlinder Kaur, Senior Exercise Associate, who firmly believes that exercise can be a form of medicine to improve health



“In 2017, I was suffering from poor appetite, shortness of breath and weakness due to my heart condition. The dietitian supported me by reviewing me regularly. I received oral nutritional supplement because I was struggling to meet my diet requirements orally. When I eventually regained my appetite, the dietitian helped me to plan my diet to ensure I can enjoy food that is suitable for me. I appreciate the support from the dietitian.”

Mr Nar Wei Ming, who joined NKF in May 2010



“As a dietitian, I counsel individuals, educate groups and run health promotion campaigns. I believe that good nutrition is about nourishing our body with what we need to live life to the fullest. My job is challenging as it is never easy to change one’s dietary habit especially for patients who are struggling with their diet restrictions and medical condition.

It is very rewarding to see patients improve and take the initiative to make positive, sustainable changes in their lives.”

*Ms Lim Cheau Horng
Senior Dietitian*

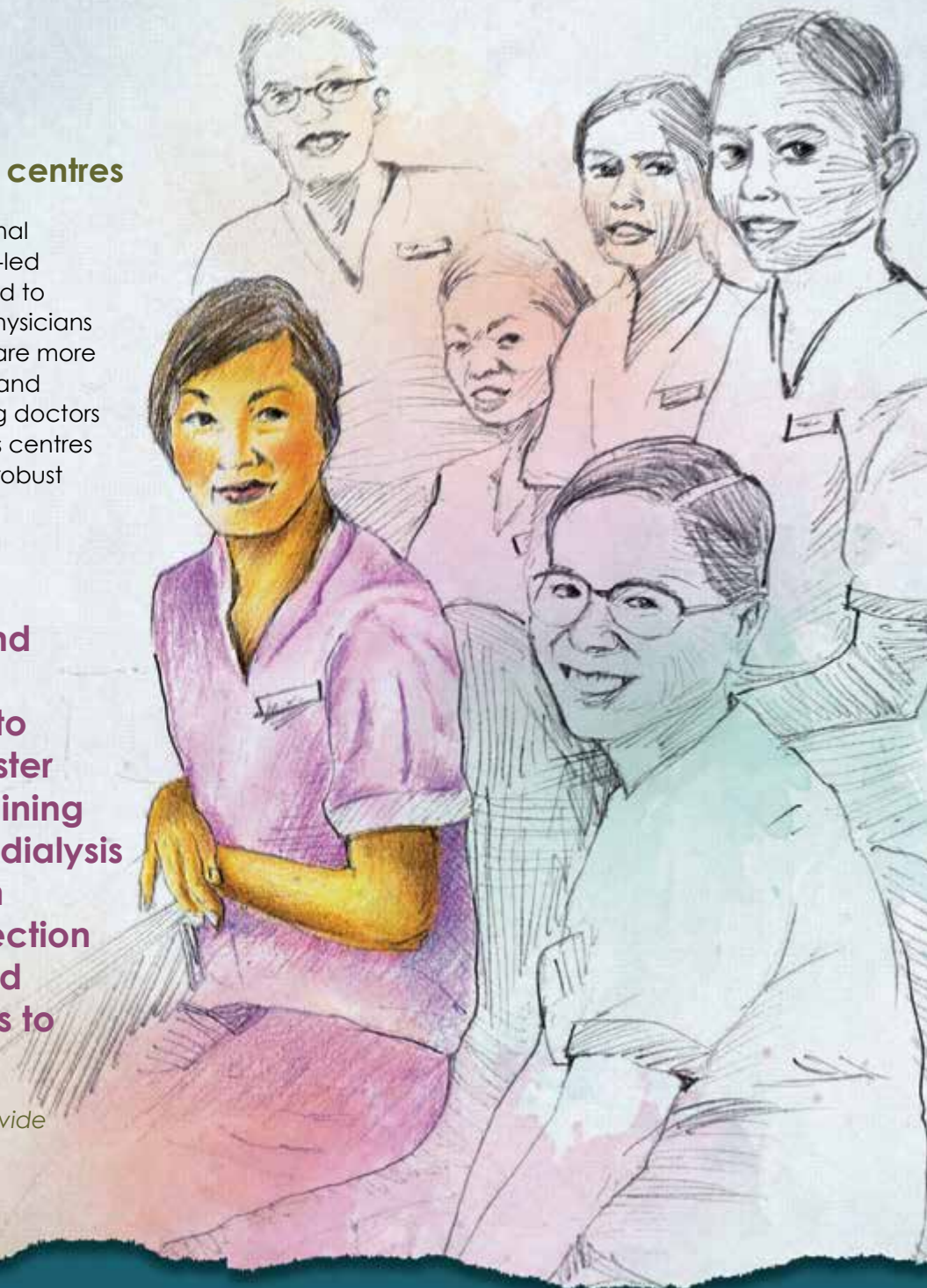


Empowering nurses to lead the dialysis centres

With the increase in patients and limited number of renal physicians, NKF has made its dialysis centres into nurse-led centres. Dedicated nurses are empowered and trained to do more advanced clinical work while working with physicians to ensure that patient care is not compromised. They are more pro-active in dealing with patient medical conditions and preventing recurring problems at the frontline, allowing doctors to focus more on complex cases. The nurse-led dialysis centres enable NKF to provide well-rounded quality care in a robust dialysis care setting for better clinical outcomes.

“In my past 28 years at NKF, I have seen nurses taking on larger roles and responsibilities, such as performing physical assessment of the patients to titrate their “dry weight” and administer medication. Nurses also undergo training to review blood tests and tweak the dialysis treatment accordingly. We are even able to assess patients for early detection of depression and provide timely and appropriate interventions by referrals to medical specialists.”

Ms Lai Chooi Ngoh, who leads a team of nurses to provide holistic care to NKF's patients



together
we fulfil dreams



Not giving up on my dream

Samantha Loo was born with only 1 kidney and had to undergo numerous operations in her childhood and youth to preserve her kidney functions. Unfortunately, she had to start dialysis when she was 31 years old. Samantha was dealt with another blow when her mother passed on. She had wanted to give up but she fought her feelings of despair and pulled herself together for the sake of her beloved father and husband.

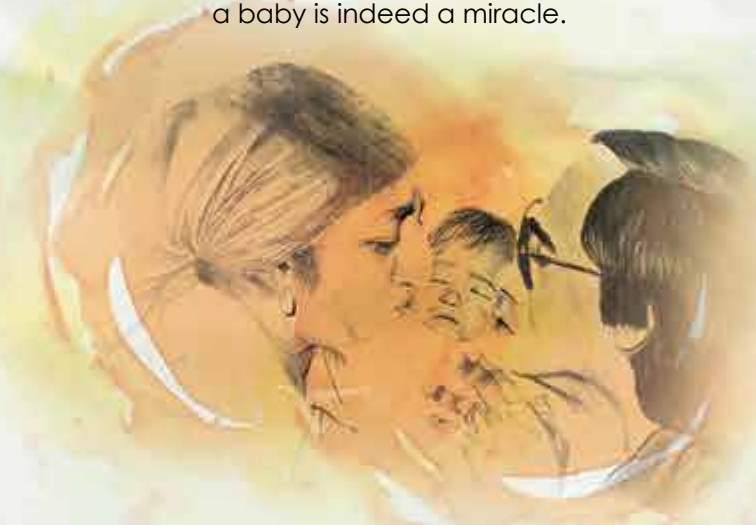
Samantha's husband, who supports her in everything that she does, is her pillar of strength. Knowing that Samantha had always wanted to run a business, the couple even ventured into setting up a food stall at a coffee shop.

"This journey is never easy. The road ahead may be filled with many challenges but once in a while you find a rainbow round the corner. I hope to encourage other patients to persevere despite the setbacks they may encounter."

Ms Samantha Loo, who believes in the power of never giving up on one's hopes and dreams

Miracle babies

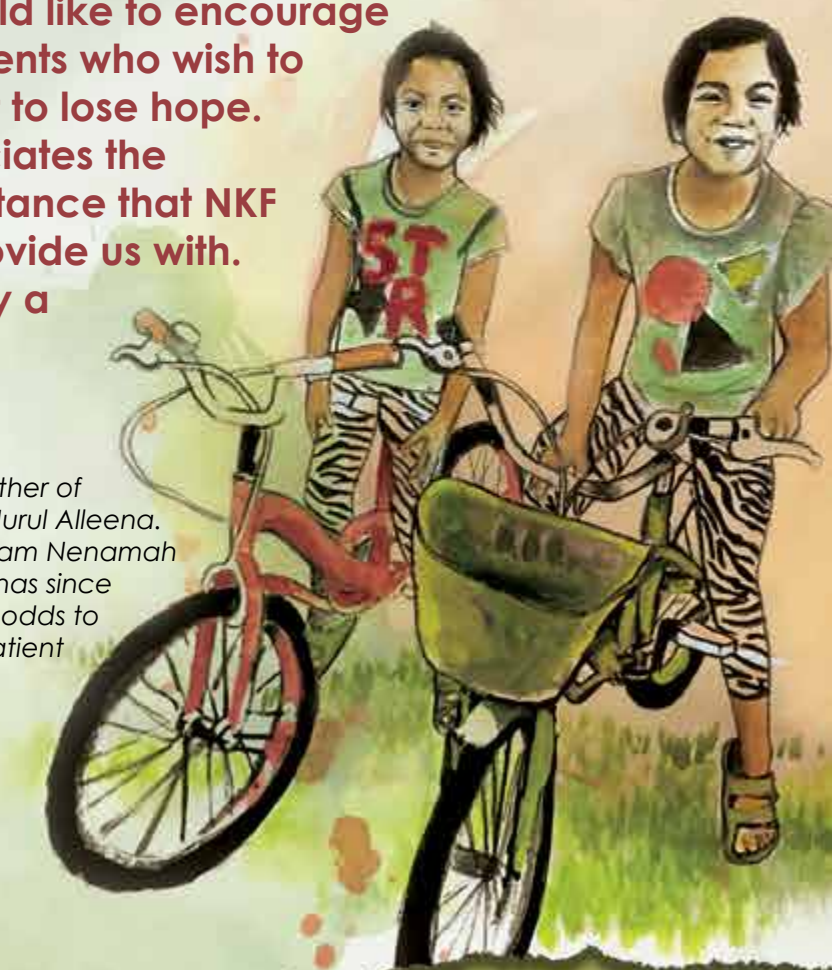
Only 1 in 200 women get pregnant every year while on dialysis and they carry a 50 per cent risk of miscarriage. So, for a kidney patient to give birth to a baby is indeed a miracle.



In 1992, Madam Nooraini gave birth to her "miracle baby" Nurhidaya, making her Singapore's first dialysis patient to have a successful pregnancy.

"The joy of seeing my twin sisters grow up to be happy and healthy makes everything worth it. I am glad NKF enabled my mother to undergo dialysis 6 times a week for free to increase the odds of their survival and even sponsored their milk powder till they were both 5 years old. I would like to encourage other kidney patients who wish to have children not to lose hope. My family appreciates the support and assistance that NKF so generously provide us with. My sisters are truly a blessing."

Mr Amirul Asyraf, elder brother of Ms Nurul Alleeya and Ms Nurul Alleena. In 2009, their mother, Madam Nenamah Woosin, then 44 and who has since passed on, overcame the odds to become the first kidney patient to give birth to twins.



I have my whole life in front of me

For as long as I can remember, the hospital has always been my second home. I was born underweight, at only 1.1kg. I never knew my birth parents. I was raised by a kind woman who already had 7 of her own and 3 foster children. She took me in and became a mother to me. It was her big-heartedness that blessed me with the warmth of a family.

Unfortunately, her love for me became a burden to the family. I was diagnosed with obstructive nephropathy, a condition where my urine flow was uncontrollable, which led to my kidneys not working well. I had to go through many surgeries to live.

I vividly remember 2 surgeries, one where the extra muscle in my kidneys had to be removed and another where part of my hip bone was removed to replace the bone loss in my upper gum. I asked myself, "Why me?". I never understood why I could not have a normal childhood like my friends. While I was in and out of hospital, my friends were studying, making friends and having fun. I had to go through so much pain and suffering.

When I turned 26, I received the worst news of my life. My kidneys failed and I had no choice but to go on dialysis to stay alive. I feared for my future. Who would employ me with my illness? How was I going to afford the expensive dialysis of \$2,000 every month? I was at an utter loss.

Luckily, my mother never gave up on me. In my darkest hours, her love, support and encouragement gave me the will to live. Thankfully, I got a place at NKF for subsidised

dialysis. It was a huge relief as the subsidy made dialysis affordable, easing much of my fear and anxiety. I am now able to focus on getting better. I now do part-time administrative work, so that my mother, who is already 83 years old, would not have to worry about me.

I am happy that there are caring people who give me a chance to live so that I can look to the future with hope.

Ms Nadia, patient who has been on dialysis since 2014



39 years on dialysis, I've beaten the odds

I was born with a blocked bladder and spent much of my time in hospital as a child. The problem could not be fixed which left me with little control over my bladder. Eventually, my kidneys became infected because of the urine flow-back.



At 19, I was told that I had to start dialysis. For 5 years, I was on Continuous Ambulatory Peritoneal Dialysis (CAPD) where a liquid called dialysate flows into the stomach through a catheter to remove the waste material, chemicals and extra fluid from the body. In 1985, when I was in my 20s, an episode of peritonitis (inflammation of the abdomen lining) forced me to go on Haemodialysis. Luckily, I managed to get a place at NKF's only dialysis centre at Kwong Wai Shiu Hospital.

In 1987, I moved to Toa Payoh when NKF's first satellite dialysis centre opened. During that time, I also helped my brother set up a medical equipment firm where I am now Director of Sales. Now at 58, having survived for 39 years as a kidney patient and spent more than 20,000 hours in a dialysis chair, I am amazed at how far medical progress has taken dialysis treatment.

In the early 1980s, we had to go to the hospital for dialysis which took 15 to 16 hours a day. Now, it's just 4 hours at a centre close to you. I recall asking my doctor how long I had to live when I was 19. I was told 10 to 20 years. I don't ask anymore. I don't have time to think about when I will die or how I will die. If you want to live longer, be positive and look on the bright side of life.

Mr Richard Tay, Singapore's longest surviving patient on dialysis

I'm making something out of my life

I suffered from urinary incontinence when I was seven years old and had kidney problems at 12. I was also born with spina bifida, a birth defect that affected my spinal cord, and had to undergo surgery at the age of 11. Following my recovery a year later, it was discovered that my kidneys were functioning at a mere 30%. The doctor's prognosis was that I would require dialysis by the time I was 18 years old. I defied this expectation by a good 10 years, only starting dialysis after my 28th birthday in 2015.

I undergo Peritoneal Dialysis (PD) when I sleep at night. The process is painless and does not disrupt my daytime activities. This is ideal for me as I lead an active life and dislike being idle.

When employers denied me of job opportunities, citing my illness as a reason, I did not despair. I believe that when there is a will, there is a way, so I became a getai singer and a part-time salesperson. Juggling both work and dialysis does not seem to be a problem for me. I also exercise regularly to keep fit. Singing is something I like to do, so it is not an effort for me.

NKF recommended me to Kaplan for the Bright Future Scholarship programme, given to disadvantaged students with a positive outlook to enhance themselves. I was awarded a full scholarship and received a Diploma in Business Administration in 2017. I am grateful for the opportunity as it widened my perspective and inspired me to make plans to have my own business in the future.

My family is what keeps me going. I am supporting myself financially as I do not want to burden them. Although it has not been easy, I am determined to be independent and not let my family worry about me. I do not view myself as a patient. I think my positive mindset pushes me to live life fully despite my condition.

Ms Wong Rui Jun, who refuses to let her condition hold her back from achieving her goals



together

we care

Little acts of kindness can bring positivity

“Very often, we tend to neglect what we already have and forget to appreciate the little things in life. Volunteering at NKF has helped me recentre myself and value the people and relationships around me more. To be able to see the smiles and share the joy of NKF patients when I do my bit for them truly warms my heart and motivates me to want to do more for them. The more helping hands, the better. So I have also rallied my group of friends to volunteer too. At the end of the day, it is not only the big gestures that matter but also the little acts of service that can bring positivity to the lives of others who have so little to indulge in.”

Mr Chan Wai Mun, who has committed 165 hours of his time to volunteering with NKF



Anyone can use their expertise to improve lives

“Eradicating pests and helping families have a clean and safe environment to live in are our company’s core values. We are happy to be able to partner NKF in providing a sanitary home environment for needy kidney patients to dialyse and live in. At Innovative Pest Management, we believe that anyone and everyone can use their expertise to help improve the lives of others. Together, we can create a positive impact to the lives of those in need.”

*Mr Fazly Ahmad
Director of Innovative Pest Management*



The more helping hands, the better

“Keppel is committed to nurturing communities wherever we operate. We are pleased to partner the NKF to subsidise the cost of treatment for needy patients and provide them with basic food provisions. Keppel volunteers bring cheer to the patients through regular visits to dialysis centres and patients’ homes, and have also benefitted from their interactions with the patients.”

*Mr Ho Tong Yen
CEO of Keppel Care Foundation*

Every drop in the ocean counts

I feel immense satisfaction knowing that my monthly contribution goes towards helping the needy patients of NKF. I understand the struggles of living with kidney failure as my father was a kidney patient for 5 years before he passed on. Not only is this an extremely costly disease, it also takes a huge emotional toll on both the patient and his or her loved ones. I am indebted to the doctors and nurses who attended to my father tirelessly. Hence, now I am giving back by paying forward the kindness that was shown to my father and our family.

I urge kidney patients not to give up on life. I know for sure that if I were able to ask my father today if the pain of dialysis was worth the extra 5 years he had with us, he would agree without hesitation. There will be good days and bad days, but what is important is that you do not lose hope. Keep your spirits up by spending time with your loved ones and continuing to engage in activities that bring you joy and satisfaction. Kidney failure is not the end. At the same time, I encourage others to contribute what they can to NKF's cause. Even a small gesture makes a difference. With your help, kidney patients are given the chance to lead a meaningful and purposeful life.

*Mr Jyotdeep (Joe) Singh Bhatia, donor
Zener Maritime Solutions Group*

Each one of us can help in our own ways

As long as I am healthy, I will continue to do volunteer work. I do what I can to help others who are in need. Over the years, I have forged close friendships with the kidney patients I visit. I look forward to my visits as I can check on the patients and find out how they are doing. Sometimes they tell me about their problems and I do my best to offer advice and help. I think they appreciate having someone offer a listening ear.

I encourage kidney patients to treasure their lives and to think of their loved ones when they are in despair. They must have a positive mindset in order to live well. I have observed the importance of family support in giving patients hope and confidence. However, not all kidney patients are as fortunate to have this pillar of support. There are those who need our help even more. I hope that more people will contribute to help these patients who are lonely and have no one to turn to.

Mr Toh Joo Huat, who has been a donor for more than 20 years and also volunteers with NKF



We can help because we've been through it

“We are all on a common journey together and have been through similar ups and downs. It is not easy being on dialysis but by staying positive, life can continue to be meaningful and purposeful. We have

been coming to NKF on a weekly basis for more than 2 years as we are committed to our roles as Patient Volunteers. Through the support we render to our fellow patients, we can help make their treatment journey a smoother one. We also hope that more of them would join us as Patient Volunteers as it is very encouraging to have a community of people with a shared experience to help each other out.”

From left: Mr Anthony Boey, Mr Ibrahim Khan, and Mr Joseph Chan, Patient Volunteers who provide emotional support to fellow patients



together
we empower people

We empower and partner people from all walks of life in the community, working hand in hand towards the prevention of kidney failure.

We aim to raise greater awareness of kidney failure, its leading causes and negative consequences, as well as share tips to slow down the progression of kidney diseases. Ultimately, we hope every Singaporean lives a life that is free from medical treatment and dialysis.



It's wonderful to receive kidney health education at our doorstep

“NKF’s Kidney Health Education Bus brings preventive healthcare services right to the doorstep of our school! The bus is equipped with engaging interactive games that educate us on kidney failure as well as highlight the importance of taking care of one’s kidneys in an accessible and engaging manner.

Our pupils have fun learning how to eat healthily and the importance of exercise to prevent the early onset of kidney diseases. I’ll definitely welcome the bus back to our school again next year as it has been beneficial for our pupils.”

*Mr Jason Chua
Subject Head Physical & Health Education
Xingnan Primary School*



“NKF has been a supportive partner of ASM Technology Singapore. Their outreach awareness programme effort in promoting education, early detection and prevention of kidney diseases through interactive health booth, and talks has greatly benefitted our employees. We are privileged to be part of this journey towards a healthier workforce.”

*Ms Angy Ang
Senior Learning Development Officer
ASM Technology Singapore Pte Ltd*



The multi-sensory journey is a great way to learn

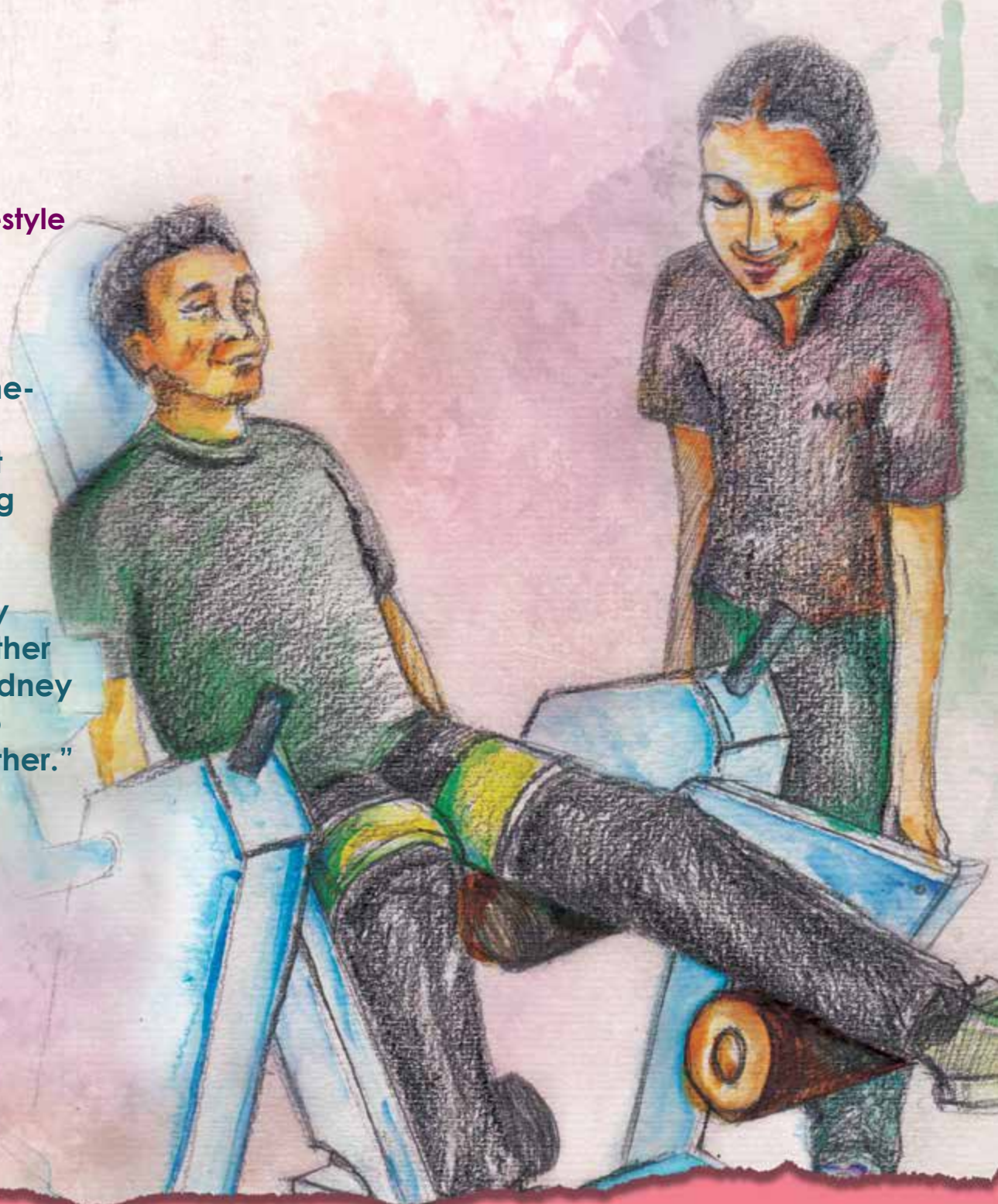
“Seniors from SilverCOVE are truly grateful for the opportunity to tour the Kidney Discovery Centre (KDC). Through the tour and exhibits with technology such as motion detectors and touch screens, they were given invaluable information about kidney failure and the work that NKF does. They have also learnt about the importance of taking good care of their health, particularly their diet, to prevent kidney diseases. Since visiting the KDC, they have religiously adapted what they’ve learnt to their daily lives by exercising and creating a healthier environment together. They also started sharing the information they’ve received with others.”

*Mr Abdul Razak Bin Osman
Centre Supervisor cum Trainer
SilverCOVE Marsiling*

I'm leading a healthier lifestyle
with modern technology

“Joining Gym Tonic has allowed me to be more active with its state-of-the-art gym machines and measuring equipment. It provides strength training in a structured, safe and effective way to benefit seniors in the community like me. Exercising together with my wife, who is a kidney patient, also allows us to spend quality time together.”

Mr Mohamed Kalip Bin Kamad,
caregiver of NKF patient

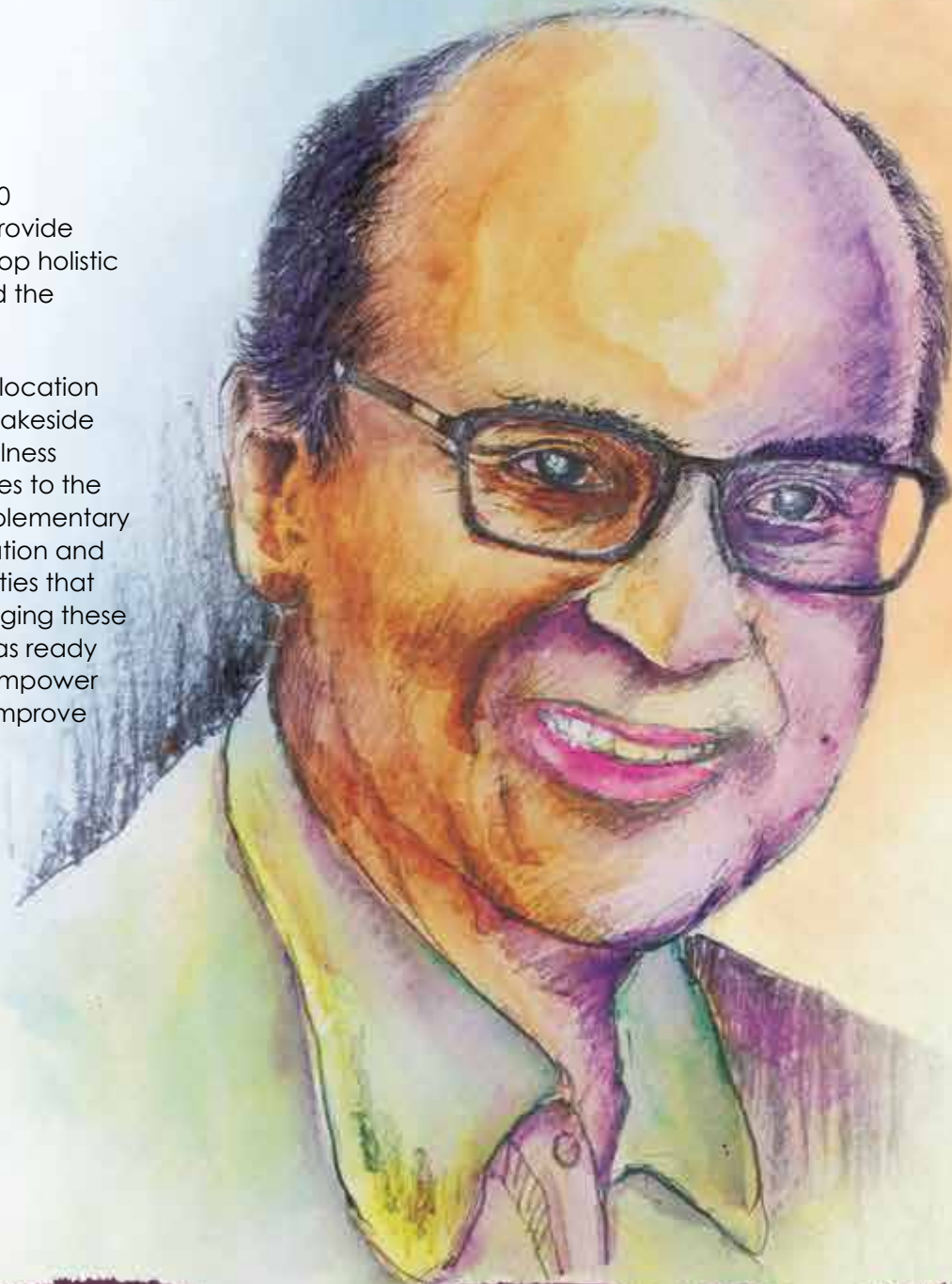


together
we move forward

One-stop holistic care

NKF's Integrated Renal Centre (IRC) at 500 Corporation Road was set up in 2018 to provide integrated and seamless care with one-stop holistic services to patients with kidney failure and the community.

As part of the integrated care model, co-location partners such as SATA CommHealth and Lakeside Family Services' Kaki Kampong Senior Wellness Centre also bring health and social services to the community by providing a range of complementary services such as health screenings, education and prevention initiatives, and outreach activities that are available to the public as well. By bringing these resources to the community, the public has ready access to information and services that empower them to take charge of their health and improve their overall quality of life.



“The NKF’s work demonstrates the value of partnerships in enhancing the scale, quality and impact of social services in Singapore. It involves partnerships between the Government, NKF as a charitable organisation, and donors. Each partner plays an essential role, and together, we weave a much stronger tapestry of social support for citizens in need.

With the opening of NKF’s IRC in Jurong, we have greatly enhanced our capacity to serve patients with kidney failure living or working in the west, as well as to provide for preventive care for the community here.

The Government will continue to work with public healthcare institutions, charitable organisations such as the NKF, and other community partners, to ensure that quality healthcare is accessible and affordable to all.”

*Mr Tharman Shanmugaratnam
Deputy Prime Minister and Coordinating Minister for Economic and Social Policies*

CEO's Message

The journey for NKF had been fraught with many challenges, but we have been able to overcome them and more only because of the unrelenting support from patients and supporters.

Always keeping the aim of "Giving Life & Hope" to patients with kidney failure as best as we can, everyone at NKF - along with our supporters and volunteers - have touched and made immeasurable difference to more than 10,000 lives.

We have been doing well in the "Life" aspect which is to sustain patients' lives by providing quality dialysis treatment. We need to do more on the "Hope" front and look after them in a holistic manner so they not only receive treatment for their kidneys but also receive emotional and psychosocial support to encourage them to find purpose and meaning in their lives. We will continue to do all we can to help them make the right treatment choice right from the beginning when they are first diagnosed with chronic kidney disease and providing the best support and care possible by stepping up on many care integration programmes.

In today's VUCA world, the speed of technological advances and disruptions has created more volatile, complex and challenging problems in the healthcare landscape. So, it is critical that we constantly sense our pulse and re-look at the way we run the Foundation as we steer ourselves towards a better future.

We need to prepare ourselves to meet the ever evolving care needs of our patients. When we first started setting up dialysis centres in the late 80s, patients were relatively young in their 40s and most did not have comorbidities such as diabetes

and hypertension. However, patient demographics have changed considerably since then. In tandem with the ageing population, more than half of our patients today are aged 60 years old and above. They are getting older, frailer and their needs continue to evolve and become more complex, compounded by multiple chronic conditions such as cardiovascular disease, diabetes, hypertension and obesity.

As the needs of our patients change, we have to explore renal care transformation and integration because one size does not fit all. We are currently exploring various models of care other than running dialysis centres at HDB void decks, one of them being one-stop, multiple care facilities. These facilities provide a range of excellent services and care, seamlessly under one roof, and are accessible island-wide. We should be integrated into every neighbourhood and not work in isolation.

We have initiated this model of care to bring dialysis services closer to kidney patients at our Integrated Renal Centre in Jurong, and plans are underway to offer dialysis services at Punggol Polyclinic and community centre. We are also considering plans to set up dialysis facilities in community hospitals and nursing homes for one-stop convenience dialysis services, as part of our integrated community care plan to meet the growing demand and multiple care needs for dialysis treatment.

To better empower patients, we are currently looking into piloting self-care where patients are enabled to carry out their treatment at the dialysis centre themselves with nursing support when necessary, as well as the feasibility of home

care where patients can do haemodialysis in a home environment setting. Studies have shown that the more patients are involved in carrying out their own treatment, the more likely they are to do better on dialysis.

Our other main emphasis will be to actively increase Singaporeans' awareness towards kidney failure. The average person's knowledge towards kidney disease is not sufficient. In fact, many are still mixing facts with myths. Diabetes and hypertension are the leading causes of kidney failure. However, many people are under the false impression that as long as they can manage the two diseases, they do not need to make any lifestyle changes and that they will not go down the path of kidney failure. There are others who believe that solely taking medication will keep these diseases under control. We need to continue our efforts to engage, enable and empower the community to make positive changes in their lives, so as to enable a better future that is free of kidney disease.

We especially need to reach out to family members of kidney failure patients as they are at a higher risk. This could be attributed to similar lifestyle choices or genetics. They also face greater financial stress, poor daily dietary choices and restricted holiday arrangements. We hope to provide them with greater knowledge on kidney diseases.

As we look forward to the next 50 years, we know that we can only continue to make an impact in the lives of patients and people in the community with your steadfast support. Together, let us continue to achieve more so that you, your children and future generations will benefit. Together, our journey continues.

*Mr Tim Oei
Chief Executive Officer*



Milestones

1969

Inaugurated on 7 April (World Health Day) thanks to our **Founder, Prof Khoo Oon Teik**, as he witnessed the plight of dying kidney patients

1970

Singapore's first kidney transplant done on a housewife, paving the way in promoting kidney transplant for a life free of dialysis

1987

Bringing affordable dialysis to the heartlands to sustain life with our first satellite dialysis centre in Toa Payoh

1997

Education and prevention of kidney diseases through a nationwide health screening campaign that set us on the way to empower the community to take charge of their health

2002

NKF Children's Kidney Centre gives a lifeline to children with kidney diseases

2007

Circle of Hearts where volunteers provide friendship and support to patients

2009

Kidney Live Donor Support Fund to ensure cost will not be an obstacle for the kidney donors' long-term medical follow-up

2012

Established the **Kidney Discovery Centre** to educate people from all walks of life to discover the wonders of the kidneys and learn about kidney disease prevention through experiential learning

2013

Support and enable patients on Peritoneal Dialysis (PD) to do well at home through a comprehensive PD Community Support Programme

2014

Launched the **Kidney Health Education Bus** with interactive exhibits to engage and empower people towards better kidney health

2016

Introducing nocturnal dialysis to benefit patients who require longer hours of dialysis and allowing them greater flexibility to their work schedules

2019

Providing **seamless and integrated community care** through multiple, one-stop services island-wide so that patients can get back on their feet

Together, our journey continues...



Special thanks to our volunteer sketch artists: Students from the School of the Arts (SOTA), Mr Law Peng Sam, Mr Lim Kian Seng, Mr Mokhtar Bin Bidin, Mr Raqib Farhan Bin Ramthan and Mr Zainudin Samsuri





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