

Lien Foundation launches IT initiative to enable person-centred care

With features such as Facebook-like personal profiles, collaborative workspaces and a family portal, the new IngoT PCC (Person-Centred Care) platform will increase communication and connectivity among disparate care providers, professionals and family caregivers.

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1. The **Lien Foundation** announced today a new IT initiative that aims to enable the practice of “person-centred care”, putting older people and their families at the heart of all care plans. At the same time, it will unite multiple providers on a common technology platform, irrespective of whether they provide care in a nursing home, in the community or at home.
2. For a start, the **IngoT PCC (Person-Centred Care)** system will be used by 11 voluntary welfare organisations, including some of Singapore’s largest care providers, and is expected to collectively serve 6,000 clients – or one in every four people currently receiving care through Ministry of Health-funded programmes in nursing homes, day care centres and at home.
3. Designed by local IT solution provider **Pulsesync**, IngoT PCC aims to de-medicalise care and increase collaboration, coordination and connectivity among disparate care providers, professionals and family caregivers.
4. Current IT systems in the long-term care sector largely capture medical, compliance, financial and administrative data, rather than information on an individual’s social or life story. Personal profiles tend to include only basic information, such as name, address, next of kin, languages spoken, drug allergies and medication history. Much of the personal information collected by staff is currently stored in electronic silos or on paper.
5. IngoT PCC is designed to empower care professionals – such as nurses, therapists and social workers – to “know” their client better, much like software in the hospitality, retail or private banking industry. The new system will enable providers to view their elderly clients as “persons”, rather than just “patients”, and build up Facebook-like profiles that capture

their social and life histories, interests, likes and dislikes, values and so forth. The system can also be used to record a client's daily activities – such as how much he ate, his exercise regime, his mood and behaviour, all of which can be charted to spot physical or psycho-social danger signs.

6. The updatable and continuously evolving electronic portraits thus created, will, in turn, better inform care, said the Lien Foundation's chief executive Mr Lee Poh Wah. "The practice and potential benefits of the PCC philosophy cannot be achieved without a flexible and responsive IT backbone," said Mr Lee. "That is exactly what the IngoT PCC aims to do."

Marrying Content with Context

7. The client's data will be collected, curated and customised in a smart manner to meet relevant care goals. A dietician, for instance, will be able to quickly access a page with the client's food preferences and intake history. A physiotherapist, on the other hand, will be able to easily pull out data on the person's mobility status, rehabilitation regimen or exercise history. Social care planners will be able to plan programmes better, armed with the knowledge of clients' shared interests.
8. In order to empower day care clients to be more independent and have a say in their own care plans, day care centres on IngoT PCC will also be equipped with self-service computer kiosks, where the elderly can choose activities they are interested in or outings they would like to take part in, for instance.

Collaborating in a circle of care

9. Different social and health professionals will collaborate with family members and, where possible, the clients themselves in this circle of care, updating the personal repository and sharing knowledge, preferences and progress reports. A family portal, for instance, will enable family members to log on from home and see photographs of activities their loved one has participated in at a nursing home or a day care centre. They can also see latest vital sign records, meals and recent activities such as excursions. A care manager at a day care centre, on the other hand, will be able to view information on relevant care or medical episodes that might have occurred when the client was at home.

10. IngoT PCC is designed to foster both online and offline collaboration amongst care providers.

The various organisations on the system have formed a “community of practice” and meet face-to-face regularly to share and align best practices on governance, care, and administrative issues, as well as discuss policy papers and future innovation.

Future-ready for ageing in place

11. Singapore is one of the fastest-ageing countries in the world and the demand for eldercare is expected to rise considerably over next decade. To meet this fast-rising need and provide care in the community rather than in nursing homes, the Ministry of Health plans to grow community-based services to 10,000 home care places and 6,200 day care places by 2020¹.
12. The IngoT PCC system is designed to support the Government’s overarching strategy to enable ageing in place. Having already included nursing homes, day care centres and home care, service providers can also extend access to the system to partners such as general physician clinics, social service offices and family service centres.

Machine-to-Machine connections

13. While currently care providers and caregivers will need to key in data and information, plans are afoot to eventually enable machine-to-machine connectivity. This is expected to reduce the need for manual input of data and increase the productivity of care staff.
14. IngoT PCC is the latest edition² of Lien Foundation’s IngoT system which provides a common IT platform for seven nursing homes. Its earlier version digitised over 140 forms and reports that nursing homes needed to fill in to meet care and regulatory needs which led to productivity gains of more than 10 per cent. It can also interface with other machines in the nursing home, such as vital sign monitors, bed sensors and location trackers. The new system will be able to eventually connect to home diagnostic tools such as vital sign monitors and wearable electronic devices.

PCC in action

15. So how exactly will IngoT PCC enable person-centred care? Providers who have already signed up say that knowing the personal history of residents can often inform and enhance

¹ MOH increasing home care, day care places for elderly: Amy Khor

² IngoT stands for IT Stretching the Capabilities of NGOs. It was coined to represent the opportunities and potential transformation the use of IT can have on nonprofits and non-government organisations (NGOs). It was launched in 2007. In 2013, IngoT II, an end-to-end nursing home web-based system that leverages on powerful Microsoft technologies was launched with 7 nursing homes.

care.

16. One of the nursing homes on IngoT, for instance, had a resident with dementia who kept smearing faeces over a decorative zinc sheet in a common area, despite repeated entreaties by staff members asking him to stop doing so. Frustrated, a care worker turned to his family to try to get to the root of his actions. It was only then that she found out the older man had grown up in a kampong that had a toilet made of zinc, which probably made him associate the zinc sheet with defecation. The sheet was then painted a different colour and his unusual behaviour stopped.
17. While it is impossible to enter every detail of a person's life into the system, the personal profiles are meant to provide clues to why a client might act in a certain way.
18. "It is very difficult to memorise the personal preferences, past stories, family links or important details we've learnt about our residents," said Mdm Low Mui Lang, Executive Director, The Salvation Army Peacehaven Nursing Home. "But including these finer details makes a big difference in helping us understand the residents better – so we can tailor their care, address certain issues or intervene when needed, to prevent any deterioration".
19. The new IngoT PCC system, she said, will allow easy retrieval of many crucial details. "To deliver person-centred care, we need an intimate knowledge of the person we are caring for."

Productivity and time savings

20. Detailed personal profiles are not the only feature that users are excited about. Improved productivity and time savings are another big draw.
21. Mr Tan Song Mong, Director, Senior Care Division, PAP Community Foundation (PCF) said, "We can save a lot of time and effort with a system that can help us group clients for their daily activities according to their needs and preferences."
22. Mr Tan and his team are also excited about features to 'know' and 'understand' the client better. "Currently, care plans and individual needs are recorded manually. So we have to sieve through lots of paper just to find a piece of information," said Mr Tan. "The care team

also spends a lot of time having to brief and remind one another about clients' backgrounds, likes and dislikes. With IngoT PCC, we expect productivity and work satisfaction to increase."

23. These improvements will be useful when PCF develops more Senior Care Centres in the future, he added.

Making PCC a daily reality

24. Ultimately, the initiative is about challenging the old culture of care and making PCC a daily reality, said Mr Lee, as he acknowledged the grounds-up coalition of progressive care providers who have come on board IngoT PCC. "We need to make care less about pathology and more about personhood. Our seniors are people, not just a collection of medical conditions," he said.

25. "So we must focus not just on medicine, but also connect those in the circle of care, build relationships and trust and, above all, maximise quality of life for our seniors."

Annex A Factsheet on IngoT PCC

Annex B Case scenario

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About Lien Foundation

www.lienfoundation.org

The Lien Foundation is a Singapore philanthropic house noted for its model of radical philanthropy. It breaks new ground by investing in innovative solutions, convening strategic partnerships and catalysing action on social and environmental challenges. The Foundation seeks to foster exemplary early childhood education, excellence in eldercare and effective environmental sustainability in water and sanitation. It supports innovative models of eldercare, advocates better care for the dying and greater attention on dementia care.

Since 2005, the Foundation has harnessed IT for capacity building and enhanced the quality of care in healthcare nonprofits like hospices and nursing homes. To advocate better nursing home care in Singapore, the Lien Foundation commissioned a study in 2016 on what a habilitative nursing home model for enhanced wellbeing would cost and also released an in-depth report featuring the voices of 50 nursing home and eldercare experts that revealed why Singapore's nursing homes need a new narrative. In 2017, the Foundation showed the reality of life in a nursing home with its social documentary, "Anita's Nursing Home Stay", highlighting the need for a review of current norms and practices.

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Annex A: Ingot PCC Factsheet

The Ingot PCC consortium comprises 11 VWO organisations that run 7 nursing homes, 14 day care centres and 4 home care services. This covers close to 1 in 4 elderly using residential and community-based services in Singapore.

1 TABLE A: INGOT PCC CONSORTIUM

	Residential Care	Community-Based Care		
		Day Care	Home Care	Others
1. Apex Harmony Lodge	✓	✓		
2. Kwong Wai Shiu Hospital	✓	✓	✓	✓ (Active aging hub)
3. Ling Kwang Home	✓	✓		
4. Man Fut Tong Nursing Home	✓	✓ (2)		
5. The Salvation Army Peacehaven Nursing Home	✓	✓ (2)	✓	
6. St Joseph's Home	✓			
7. St Andrew's Nursing Home	✓			
8. Code 4 Home Care			✓	
9. PAP Community Foundation Senior Care Services		✓ (2)		✓ (Rehab services)
10. TOUCH Home Care & Senior Cluster Network			✓	✓ (SAC, Cluster Support, Group Home)
11. St Hilda's Community Services		✓		✓ (Active aging hub with senior care, rehab ctr)

2 Why is Ingot PCC needed?

Ingot PCC was conceived as a result of the frustrations and aspirations of visionary eldercare providers who wished to move away from over-medicalisation, and to put the human touch in eldercare. This ground-up initiative reflects a readiness on the part of these providers to commit to the delivery of person-centred care. And with the redesign of their IT infrastructure, care staff will be better equipped in the delivery of person-centred care, starting from the moment a resident/ client record is created.

The benefits of a person-centred care approach has been recognised by Singapore's Social Service institute¹ since 2013, but to date, eldercare is still overmedicalised, with IT systems that are largely focused on helping eldercare service providers manage their operations, clinical care and regulatory reporting requirements.

¹ Human capital development arm of NCSS. Launched the first edition of their person centred approach toolkit in 2013 to advocate a way to deliver quality care services that respects and empowers seniors, enabling them to continue enjoying quality living in spite of their needs and disabilities.

With IngoT PCC, eldercare providers will be empowered through IT to care for each elderly person in a more personalised and habilitative way. This better supports aging in place, increases the quality of care, and enhances the wellbeing and autonomy of the elderly which leads to an improved quality of life.

To meet the fast-growing demand for eldercare services in Singapore, the Ministry of Health (MOH) aims to increase capacity of community-based services to 10,000 home care places and 6,200 day care places by 2020. With this big shift to community-based healthcare, and as more organisations offer multiple services, there is a need for IT systems to integrate different service types in a single platform.

With its all-in-one system, IngoT PCC will position eldercare providers for the future, allowing elderly clients to have a smooth care experience when they transit between or access multiple services at different stages.

3 IngoT PCC Philosophy of Care

Person-centred care is still an emerging and evolving area. If care is to be person-centred, then what it looks like will depend on the needs, circumstances and preferences of the individual receiving care. For this reason, the Health Foundation has identified a framework of four principles²:

1. Affording people dignity, compassion and respect.
2. Offering coordinated care, support or treatment.
3. Offering personalised care, support or treatment.
4. Supporting people to recognise and develop their own strengths and abilities to enable them to live an independent and fulfilling life.

4 Highlights of IngoT PCC

a) Main Application (for Care Staff):

- Workspace – a landing page for all staff which comprises bulletin board/ announcement board, calendar, to-do list, and many useful widgets such as weather forecast
- Care Board – a place for them to manage their list of clients. It also has a smart person finder to look for a person or group who can match the query criteria (e.g. “like Bingo”, diabetics, hospitalised etc)
- Person Profile Page – shows aggregated information of a client and covers information regarding Episodes, Medical, Health & Wellness, Diet, Social, etc.
- Dashboard & Quality Indicator – for staff (based on role) to view statistical information, KPIs and quality indicator (e.g. how a service provider fares as compared to their peers)
- Moments – a social media like page to allow the creation, sharing and commenting of photos and posts

b) Self-Service Kiosk (Day Care):

- A self-service kiosk for the day care clients to update their profile and preference, sign up for upcoming events, view outing photos, event history, etc.

c) Partner’s Portal:

- Allows partnering organisations such as General Practitioners, Family Service Centres etc. to log in and view care information (the information they have access to will depend on their role) such as:

² The Health Foundation <http://www.health.org.uk/sites/health/files/PersonCentredCareMadeSimple.pdf>

- Client's profile
- Medical/Clinical Information
- Social Information
- Progress Note

d) Family Portal:

- Allows family members to access, view and update/contribute the following:
 - Family Profile (family members, social, activities, etc.)
 - Care/ Health Summary (Activity Timeline, Meals, Vital Sign, etc.)
 - Share other care information/observations with service providers
 - Moments - a social-media like page to allow the creation, sharing and commenting on photos and posts

5 Investment & Schedule

Amount of investment by Lien Foundation	\$3.32 Million
Project deployment	To be deployed in community-based service providers from 1Q 2018 and nursing homes from 4Q 2018. Full deployment in all 11 VWOs by end 2019.

6 Current Eldercare Services Landscape

Service	Capacity	Target for 2020
Nursing Homes ³	12,830 beds	17,000 beds ⁴
Community Services ⁵		
Elderly Day Care Centres	3,500 places	6,200 places
Home Care Service Providers	6,900 places	10,000 places
Total	23,230	33,200

7 Capacity

	IngoT PCC consortium	Capacity	% of current sector capacity
Number of nursing homes	7	2,529	20%
Number of MOH-funded elderly day-care centres	11	805	23%
Number of home care service providers	4	2,836	42%
Total	22	6,170	27%

* The three Senior Activity Centres in the consortium are excluded as they are funded under MSF.

³ https://www.moh.gov.sg/content/moh_web/home/statistics/Health_Facts_Singapore/Health_Facilities.html

⁴ https://www.moh.gov.sg/content/moh_web/home/pressRoom/speeches_d/2017/speech-by-senior-minister-of-state-for-health--dr-amy-khor-at-th.html

⁵ <http://www.channelnewsasia.com/news/singapore/moh-increasing-home-care-day-care-places-for-elderly-amy-khor-8089316>

Annex B - Case Scenario

This hypothetical scenario illustrates how IngoT PCC will change the way care is delivered in an elderly day care centre.

79-year-old Mr Lim was recently discharged from hospital after a knee replacement surgery. He was referred to the Day Rehabilitation Centre near his home for twice-weekly step-down care and rehabilitation.

As Mr Lim and his wife had participated in the social programmes organised by the Centre's drop-in day facility before, their basic information was in the Centre's records.

With IngoT PCC, the care staff can now include new personal details about the couple, as well as Mr Lim's latest medical developments and rehabilitation needs into their system.

Using IngoT PCC's Care Board, the care staff and therapists open up Mr Lim's Personal Profile page and note that one of Mr Lim's hobbies was gardening. They plan his physiotherapy and rehab exercises, and design them to help him be able to squat and lift, so that he can get back to gardening soon.

Mr Lim is also placed on the Gym Tonic exercise regime. Gym Tonic is an evidence-based strength training programme that improves the functional abilities of the elderly using advanced gym machines. The care staff and therapists are able to monitor his progress with the exercise and assessment data from Gym Tonic that gets recorded seamlessly into IngoT PCC each time he exercises on the machines, ensuring that he is given the right intensity of exercise at the right time.

During Mr Lim's rehab sessions, the care staff take extra effort to engage Mrs Lim. Using the people finder function in Ingot PCC, they find a group of elderly persons who have similar interests in calligraphy and Chinese opera as Mrs Lim, and group them together for these activities.

Alerted by the IngoT PCC system on Mr Lim's upcoming birthday, the care staff plan a birthday surprise ahead of Mr Lim's 80th birthday. They surprise him with a special teatime snack – his favourite dish, fried radish cake with extra chives and extra chilli (but with less oil!!) A photo of the beaming Mr Lim and Mrs Lim taken during the celebration is uploaded to 'Moments' by care staff, where it can be viewed by their children through the family portal.

While Mr and Mrs Lim are currently still able to live relatively independently with minimal community support, should their needs escalate in future, IngoT PCC will help care staff efficiently monitor and plan the additional support they will need – e.g. daily day care, home therapy, home personal care, allowing them to age in place in the community they call home.