GOVERNMENT OF WESTERN AUSTRALIA

Sustainable Health Review

Submissions Response Field

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27 October 2017

Sustainable Health Review Secretariat
189 Royal Street
EAST PERTH, WA 6004

Dear Panel Members,

Silver Chain Group appreciates the opportunity afforded by the WA Department of Health to contribute to the Sustainable Health Review.

For over three decades, Silver Chain has worked in partnership with WA Health to deliver comprehensive community-based health and social care services across the state. The most enduring of these partnerships has been the Hospice Care Service, which provides a home-based, multidisciplinary, 24/7 service across metropolitan Perth for those individuals who have reached the end of life, and wish to die in their own homes.

The following submission provides Silver Chain's perspective on potential areas for change which may support the development of a more sustainable, patient centred health system in WA, including:

- Exploring alternatives to the current mix of services provided across the public and non-government sectors, including taking a cohort-based approach to reduce pressure on hospitals.
- The use of data, including opening up and sharing data across providers, to support patient centred care and improve performance.
- The adoption of digital innovations and technologies to both enhance and change current service delivery models.
- Opportunities to drive partnerships across sectors and all levels of government through alternative procurement and funding methods.

Aside from this submission, we look forward to supporting the work of the Review in the coming months, and contributing to the development of the future vision for health in WA.

Yours sincerely

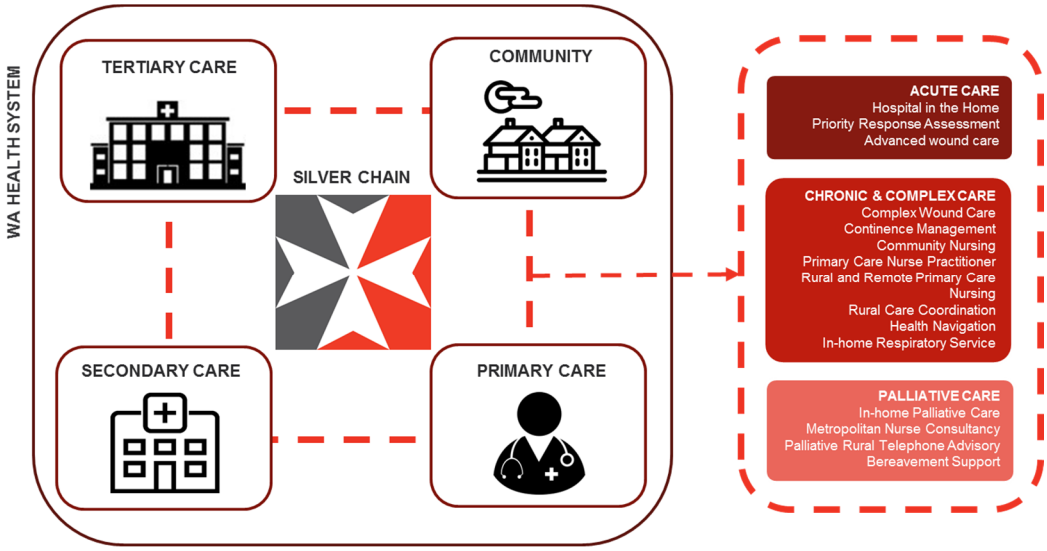
Dr Christopher H McGowan
Chief Executive Officer

SUSTAINABLE HEALTH REVIEW: SILVER CHAIN GROUP SUBMISSION

1 INTRODUCTION

Silver Chain Group (Silver Chain) is a not-for-profit organisation which delivers services to over 84,000 clients annually in Western Australia, South Australia, Queensland, New South Wales and Victoria, making it one of the largest providers of in-home health and community care in Australia. Founded in 1905, Silver Chain is a values-based organisation which is committed to its purpose and mission of delivering high value care to enable people to remain in their own homes. Focussing on the health care services provided by Silver Chain's Health Care Division in WA (see Diagram 1 below), the organisation's objective is to provide a system of care throughout the community occupying the space between the hospital and primary care settings, encouraging transfer of clinically appropriate activity from hospitals into the community system, freeing capacity within the hospital system to focus on high-end, complex acute care.

Diagram 1: Silver Chain's system of care in WA



Services provided within Silver Chain's system of care incorporate all elements of an integrated client journey, spanning acute care, chronic and complex care; through to end of life palliative care. These services, with a common focus of minimising hospital utilisation, provide individuals with outcomes-based alternatives for managing their health journey. Silver Chain has positioned itself to transfer activity from the hospital setting to the community, thereby liberating capacity within hospitals via the movement of activity to a lower cost setting, supported by existing community infrastructure. Key enablers in this objective include enhanced workforce capability, increased capacity for community-based medical governance, together with utilising advances in technology such as remote monitoring as a core component of service delivery. This positioning aligns with changing public expectations, with the vast majority of people wanting to be cared for at home.

Silver Chain and WA Health have a long history of working in partnership to develop and deliver innovative health care programs and services throughout WA. The following services are examples of how a community organisation can support WA Health with liberating bed capacity within public hospitals. This substitution of activity to the community reduces pressure on the hospital system, enabling a focus on a greater number and more complex profile of cases. Examples include:

- Silver Chain's hospital in the home (HITH) service, the result of collaboration and partnership with WA Health and the WA hospital system, provides a multidisciplinary, hospital substitution service targeting the treatment of approximately 50 Diagnostic Related Groups (DRGs) at the equivalent volume of **180 hospital beds per day**. The effectiveness of the service can be highlighted by hospital readmission rate of just 8%.

- Following a hospital separation, Silver Chain's post-acute care service provides short term nursing services to clients, both as an alternative to an extended hospital stay and as a means of earlier discharge. This service, which has the equivalent volume of **350 hospital beds per day,** assists clients with their recovery immediately following discharge from hospital in the comfort of their own home.

- A cornerstone of Silver Chain's operations is our clinical nursing team, including the organisation's specialist wound care nurses. Chronic wounds[1] pose a significant burden to the Australian health system with total costs estimated at $2.85 billion annually. The majority of these costs are incurred in the hospital system[2].The organisation has invested significantly in wound care management to both meet community demand and improve wound healing rates, including adopting innovative practices and technologies, including the use of low frequency ultrasonic debridement to accelerate healing in clients with chronic wounds in their own homes.

Perhaps the most enduring and successful partnership between WA Health and Silver Chain has been the Hospice Care Service (see Diagram 2).

Diagram 2: Silver Chain's Hospice Care Service.

In 1982, the WA government funded a pilot program was funded to provide hospice and palliative care, in response to research conducted by Silver Chain; and a report by David Frey of Cancer Council WA. After six months, the evaluation of the pilot revealed that the percentage of people who died at home increased from 10% to 81%. As a result, in 1983 the service was expanded, and grief counselling and bereavement services came and remain an integral part of the hospice service. In 1984 full control of the domiciliary hospice program was handed to Silver Chain, and by the end of 1985, the whole metropolitan Perth area was covered by the program, with over 100 nurses offering 24 hour care for the terminally ill who chose to die in their own homes, or to stay there as long as they could.

Since this time, the service has evolved through a process of research, quality improvement, innovation, collaboration and through strong clinical leadership. This evolution has been sustained by continued support and funding, and by the genuine mutual and enduring relationship that has been established with the WA government and the WA Department of Health. Palliative care services require such relationships in order to be able to meet the needs of the community over time.

The outcomes achieved and evolution of service has enabled consecutive WA governments to continue a policy position in regards to primary investment in community for palliative care. This investment has supported an outcome where it remains the case that WA has the lowest number of publicly funded inpatient palliative care beds per head of population, and the lowest number of public palliative care-related separations (6.0 per 10,000 in WA, compared with 19.2 per 10,000 nationally)[1] . This is furthermore exemplified by WA also having nationally the lowest number of employed Palliative Medicine Specialists per head of population, at a rate which is significantly lower than that of the national average (0.7 FTE per 100,000, compared 0.5 FTE per 100,000 in WA)[2].

1 Australian Institute of Health and Welfare (2014). *Palliative Care Services in Australia 2014.* Retrieved from http://www.aihw.gov.au/publication-detail/?id=60129548894
2 Ibid

[1] The Wound Healing Society (WHS) defines a chronic wound as one that has failed to proceed through an orderly and timely reparative process to produce anatomic and functional integrity within an expected time frame.

[2] Graves, N. and Zheng, H. (2014). Modelling the direct health care costs of chronic wounds in Australia. *Wounds Australia Journal*, Vol. 22 (1), p. 20-33.

2 A POTENTIAL SOLUTION: ADOPTING A COHORT-BASED APPROACH

Through its work to date, the Panel no doubt has a comprehensive understanding of the issues and challenges facing the WA health system. Factors such as increased demand, greater competition for limited resources across the system, nurse, doctor and allied health professional wages that are higher than the national average wage, major infrastructure spends, population growth, increased incidence of chronic diseases and lower access to primary care services are but a few issues driving the current inefficiencies in the health system, and making it difficult to achieve sustainability in the long term.

An additional challenge for health care in WA comes from users themselves. Consumers of health care increasingly want increased involvement, improved access, and simplicity; and where possible, a more prompt and individualised experience. This is difficult to achieve in an environment where 71% of the available budget for health is allocated to hospital services[3]. Historically, the technical delivery of care and patient compliance were seen as priorities over patient expectations and empowerment[4]. This has led to typical models of service delivery, particularly within hospitals, adopting a one-size-fits-all approach in order to optimise the effective use of resources. While the one-size-fits-all may work for the majority of individuals to some degree, treating all users of health services as homogenous may have the opposite effect, and will miss the mark with a small but significant percentage of patients, potentially resulting in costly inefficiencies, service duplication, high levels of waste and suboptimal patient outcomes. Segmenting users of health services in WA, recognising and focussing on the heterogeneous priorities, needs and supports required by each of the various cohorts, may be a solution for the long-term sustainability of the WA health system.

Greater consumer health and lifestyle awareness underpins the emergence of the patient/ healthcare consumer as an active and responsible partner. This presents opportunities for WA Health to review its current mix of services and shift existing models of practice. Using segmentation as part of this review would provide a view of gaps in service provision from both a system and user perspective, resulting in a shift in focus from volumes to value, ensuring resources were directed to the most appropriate setting, and would maximise health outcomes and value to the WA public.

Ultimately, this could result in hospitals becoming the health system's last line of defence for the most complex of health care cases, with the majority of services, and potentially beds, being relocated and delivered in out-of-hospital settings.

This view is in line with the research around unnecessary hospitalisations. A 2010 paper by Dr Ian Scott citied surveys of hospital bed use based on validated appropriateness criteria in Australia and Canada, which indicated that approximately 70% of acute hospital bed-days are inappropriate[5], and stemmed from reduced access to appropriate community-based services. In the same paper, it is suggested that within the hospital sector throughput could be substantially improved in part by, where appropriate, shifting public hospital clinical services to the non-government sector[6]. Silver Chain and WA Health current work together, applying a cohort approach, to a community-based service which has been demonstrated to reduce hospital bed-days – the Hospice Care Service.

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[3] Government of Western Australia (2017). WA State Budget 2017-18: Budget Paper No. 2. Retrieved from https://www.ourstatebudget.wa.gov.au/Budget-Papers/

[4] Taylor, M. and Hill, S. (2014). *Consumer expectations and healthcare in Australia.* Deeble Institute. Retrieved from http://ahha.asn.au/publication/issue-briefs/consumer-expectations-and-healthcare-australia

[5] Due to impaired access to residential and palliative care, rehabilitation services, domiciliary care, community services and family support.

[6] Scott, I.A. (2010). Public hospital bed crisis: too few or too misused? *Australian Health Review*. 34 (3), pp. 317 – 324. Retrieved from http://www.publish.csiro.au/?act=view_file&file_id=AH09821.pdf

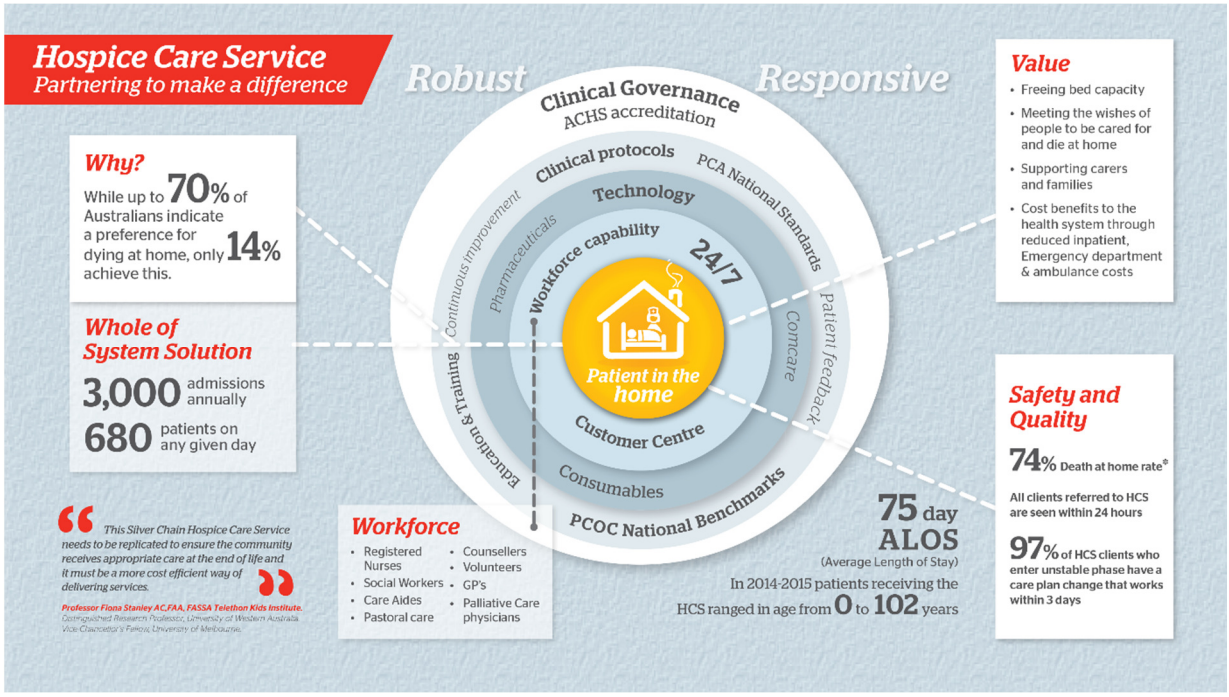
2.1 Palliative care in WA

As highlighted above, for over three decades the Hospice Care Service (HCS) has provided home-based, multidisciplinary, 24/7 support across metropolitan Perth for a cohort of individuals who have reached the end-of-life, and who wish to die in their own homes.

The HCS (see Diagram 3) provides care for an average of 680 clients per day, with the service supporting approximately 74% of these clients to die in their own homes if they choose. To put this in perspective, in Australia while 70% of people indicate that they would like to die at home, only 14% actually achieve this[7]. In 2014, Silver Chain commenced evaluating the impact of its palliative care service in WA using person-level linked data comprised of those dying of cancer between 2001-11 in metropolitan Perth. Comparing HCS clients with those who did not access the service, this research identified:

- **Significant reductions in hospital-based care:** HCS clients had on average 8% fewer ED presentations and spent five days less in hospital over the last year of life. The total effect of was a reduction of approximately 90,900 bed days over the 10 year period (~9,000 per year).
- **Significant reductions on length of stay:** HCS clients had on average 3.37 fewer bed days per hospital separation over the last three months of life.
- **Increased likelihood of dying out of hospital**: HCS clients were three times more likely to die out of hospital. The impact was significantly modified by age at death with those aged under the age of 50 years eight times more likely to die out of hospital.
- **Reduction of 7 bed days per individual utilising HCS in WA**: The HCS was responsible for a reduction of 39,684 bed days, or 13,228 bed days per annum. The average number of cancer decedents receiving Silver Chain's HCS over this period was 1,984. Average bed days saved per individual totalled 6.67. During the same period, the death at home rate increased by 22%, from 59% to 72%.

Diagram 3: Silver Chain's HCS



[7] Swerissen, H. and Duckett, S. (2014). *Dying Well*. Grattan Institute. Melbourne, Australia.

2.2 Integrum Aged Care+:

Silver Chain is taking a similar segmentation approach with its newest service, Integrum Aged Care+. Currently in a pre-trial phase, Integrum is a holistic, community-based model of primary care specifically aimed at supporting people in their last few years of life to stay at home for as long as they choose. This service has been designed for clients over 65, who live in the community, reside in metropolitan Perth, have more than two chronic diseases and have had between two and five unplanned hospital admissions in a year. Integrum is based around a dedicated practice in the community, specialising in a more integrated management of this cohort. Following the trial phase, the clinic will offer:

- General practice, in a shared care approach with a patient's own GP.
- In-clinic visits by medical specialities, such as cardiology.
- Allied health, including physiotherapy, occupational therapy, social workers and podiatry.
- Social care services, including personal care, social activities and domestic assistance.
- Individualised case management, including hospital liaison for admission and discharge co-ordination, goal setting, ongoing monitoring and personal follow-up.
- Remote monitoring and other technologies.
- Home nursing and rapid response nursing / medical care
- Psychosocial support, including counselling.

The dedicated practice intends to integrate medical and non-medical health and social care services to deliver care in the community as opposed to within the hospital setting. Many of the clients will be receiving home care packages, which will be coordinated for eligible clients in an integrated way through this practice. To further enhance this integration, for the next phase of Integrum's trial, Silver Chain intends to advocate to the Commonwealth Government for the introduction of a MBS item number for the service, aimed at allowing and rewarding GPs to deliver on outcomes, as opposed to volume of encounters. This new item number would enable:

- GPs to design care processes optimised around their patients, as opposed to rewarding high volumes of time-limited encounters.
- Co-ordinated interaction in a team care arrangement allowing GPs, nurses, allied health and aged care workers to collectively assess the current holistic needs of their patient, encouraging a seamless journey across multiple settings.
- The use of video and remote diagnostic technology for elderly patients who find it difficult to visit their GP, and who are then vulnerable to their condition deteriorating.

3 LEVERAGING TECHNOLOGY AND DATA TO DELIVER BETTER OUTCOMES

The traditional claim that Australia's growing and ageing population is responsible for increased health spending is being questioned. Together, population growth and the ageing population structure accounted for only a quarter of Government expenditure growth above CPI since 2002-2003[8]. The remainder of the increase in health spending is being driven by both changing consumer expectations, and by changes in technologies. People are utilising more, and more expensive health services per person, driven in part by increased access to health information and the availability of different forms of health care, such as telehealth, eHealth and mHealth. Capitalising on these changes in technology and consumer expectations can result in improvements to health productivity, provided they are accompanied by appropriate changes in practice. Accountability and transparency (in value, costs and outcomes) will be key to success, supported by technological innovation.

3.1 From data and information to analytics and knowledge

A major barrier to achieving changes in practice for WA Health will come from the inability or unwillingness to share patient data across government and non-government providers of health care, which hampers the transition and seamless movement of patients across the health system. The achievement of a seamless client journey is a key strategic pillar for Silver Chain, and an area which the organisation would be particularly interested in working with WA Health to achieve.

Beyond the collection of patient data, is the translation of this data into knowledge. For decades, many industries, such as financial services, have used data analytics to determine their strategies for everything from marketing to maintenance scheduling. But the healthcare sector as a whole has lagged in using analytics to learn about its customers' behaviour and how to influence it. Australian hospitals still rely heavily on paper-based processes for everything from patient records to staff rosters and supply orders. Low levels of digitisation results in higher levels of clinical and administrative resources directed to working on manual processes. This is compounded by a lack of electronic information and connectivity between different physical sites and different providers.

Application programming interfaces (APIs) are becoming increasingly important across the public and private sectors in a range of industries. In an "API economy", government and organisations work together to create more value than either of them could independently through opening up and sharing of information and capabilities. A 2017 Productivity Commission report[9] stated that "*improved data access and use can enable new products and services that transform everyday life, drive efficiency and safety, create productivity gains and allow better decision making*", but that Australia has yet to participate in the global growth in data generation and usability. Full realisation of this API economy will require governments to assemble a community of partners, both public and private, to create a thriving ecosystem

Currently, all providers working within the health sector collect a huge volume of data on their patients, processes and systems. These "data estates" exist largely in isolation, due to barriers relating connectivity, compatibility and/ or privacy. WA Health could encourage the providers, through funding arrangements, to share their "data estates" in order to move towards an API economy for the WA health system. This could lead to the more effective and efficient translation of data into knowledge, for example via the use of predictive modelling to simulate and predict the behaviour of large and diverse populations of consumers, scenario planning and testing the impact of future trends and the development of disruptive new technologies, innovations, product and services. This would also result in truly networked care, with the capacity to offer individuals a clear and seamless journey through the various separate parts of the health system.

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[8] Grattan Institute. (2013). *Budget pressures on Australian Governments*. Retrieved from http://grattan.edu.au/static/files/assets/ff6f7fe2/187_budget_pressures_report.pdf

[9] Productivity Commission (2017). *Data availability and use: Overview and recommendations, Inquiry report*. Retrieved from https://www.pc.gov.au/inquiries/completed/data-access#report

Silver Chain is currently undertaking work to improve and manage its own data estate. For example, alongside expanding Silver chain's current capabilities around client management systems and business intelligence, the organisation is also working towards increasing its capacity in casemix-based decision making and benchmarking. This work is scheduled for completion in early 2018, and will allow Silver Chain to better understand the mix and complexity of care the organisation provides, clarify service priorities and cost drivers, thereby leading to a more detailed understanding of the care provided, with subsequent opportunities for improvements in service planning and delivery. This work will also provide Silver Chain with the ability to speak in the same language as government, and allow for easier comparison between government and non-government services.

3.2 Enhancing and changing service delivery using technology

A 2012 report by Bain and Company suggests that the focus of innovation in the health care space will shift from product development (i.e. technology, pharmacology) to the delivery of health care. The authors of this report state that the anticipated increase in demand for health care services in the context of an environment of economic constraint and slower product innovation will "*create a climate that favours investment in new ways of delivering care, in part by applying the power of information technology - long overdue in healthcare, relative to other sectors*"[10].

Silver Chain currently utilises a range of different technologies in its service delivery as a means to add value to current services and facilitate a more person-centred approach to healthcare provision. These technologies range from the use of smartphones and tablets for accessing the organisation's shared client management system, client portals, telehealth to connect clients with GPs and specialists and for remote monitoring (see section 3.1), fall detectors and alarms; through to more advanced technologies such as low frequency ultrasonic debridement for wound care, and the organisation's most recent innovation, the Enhanced Medical Mixed Reality (EMMR) interface (see section 3.2).

3.2.1 Silver Chain's Respiratory Service

Silver Chain recently implemented an innovative Respiratory Service model which provides comprehensive, out-of-hospital care for oxygen dependent individuals, underpinned by telehealth technology. The service is delivered by a multidisciplinary team of registered nurses, respiratory liaison nurses, respiratory physician, dietician, social worker and physiotherapist. The service utilises remote telehealth technology to monitor clinical symptoms, encouraging self-management, and provides ongoing assessment, monitoring and management of symptoms. Inherent within the service is an integrated journey for the client across both acute and palliative care, supporting a reduction in unplanned hospital admission frequency and severity. The evaluation of the model's trial phase looked at hospital utilisation and quality of life for participants. The results demonstrated the model's significant potential, including a 25% reduction in inpatient bed days, 31% reduction in respiratory specific beds days, decreased ED attendances, and an improvement in Quality of Life.

3.2.2 EMMR

Launched in September 2017, Silver Chain's EMMR is being developed in conjunction with Saab Australia using Microsoft HoloLens technology. EMMR is a centred around an augmented reality headset, to be used by Silver Chain nurses visiting clients in their homes. EMMR will enable nurses at the bedside to work hands-free while accessing clinical information, and also document new biometric readings that can be accessed immediately by doctors and other clinicians working remotely (see Diagram 3).

[10] Eliades,G., Retterath, M., Hueltenschmidt, N. and Singh, K. (2012). *Bain and Company Brief: Healthcare 2020*. Retrieved from http://www.bain.com/Images/BAIN_BRIEF_Healthcare_2020.pdf

Using EMMR, doctors are able to see through the lens of what the nurse is doing – creating a seamless and integrated client or clinician experience of patient care doctors will be able to holoport in via EMMR. The clinician can talk to the patient, family members and the nurse as if they were in the same room, enabling expert decisions about patient care to be made in real time. This effectively extends the clinical contribution of doctors beyond hospitals and consulting rooms, creating a more effective and efficient health system while sustainably increasing community access to primary care.

Diagram 3: Representation of EMMR's visualisations

4 DRIVING PARTNERSHIPS FOR SUSTAINABLE SERVICE DELIVERY

As part of the Review, there is an opportunity for WA Health to rethink whether its current procurement and funding arrangements are delivering their intended outcomes, and whether the way they are currently structured will be able to deliver sustainable deliver integrated and coordinated care.

For example, competitive tendering has a number of advantages. Tendering can promote competition, provide transparency, keep prices down and offer all providers an equal opportunity to win a contract. However, tendering may also reduce prices to the point quality is affected, sets up a funder and contractor relationship which may limit the opportunities for joint development and provider input in service development, doesn't allow for much scope in regard to research, development and innovation, may result in inferior services if leading providers do not tender; and is often a process which needs to be repeated regularly, with the outcome of tenders being short-term contracts. Depending on the type, complexity and approximate costs, WA Health could consider the potential benefits of alternative models of procurement and funding that would result in long-term, open partnerships based on delivering value and system change. An example of this type of partnership currently exists between Silver Chain and WA Health with the Hospice Care Service (HCS).

Originally funded as a pilot program (see Diagram 2), this value of this partnership has been outlined in section 2.1 above. In addition, this partnership has also created demonstrated system change, to the point where WA has the lowest number of publicly funded inpatient palliative care beds per head of population, and the lowest number of public palliative care-related separations (6.0 per 10,000 in WA, compared with 19.2 per 10,000 nationally)[11].

[11] Australian Institute of Health and Welfare (2014). *Palliative Care Services in Australia 2014.* Retrieved from http://www.aihw.gov.au/publication-detail/?id=60129548894

This is further exemplified by WA also having the lowest number of employed Palliative Medicine Specialists per head of population nationally, at a rate which is significantly lower than that of the national average (0.7 FTE per 100,000, compared 0.5 FTE per 100,000 in WA)[12]. If the HCS had been a product of a traditional competitive tender process, with a regular need to re-tender for a contract, and outcomes and conditions that may differ between tenders, it is unlikely the service would have been able to achieve the same degree of value and system change.

An alternative procurement approach used in other states, which could be successful in driving partnerships across sectors and all levels of government to reduce duplication and to deliver integrated and coordinated care, is social impact investment (SII)[13]. SII, which includes social benefit bodes, layered investment, outcomes-founded grants and payment-by-results contracts, can bring together capital and expertise from the public, private and not-for-profit sectors to achieve a social objective[14], and generally feature:

- Ensure a focus on outcomes, with success and payments to providers being dependent on the achievement of a set of agreed-upon outcomes, and enhanced performance monitoring.
- Foster innovation, through setting incentives and removing controls on service delivery.
- Create long-term partnerships where risks and benefits are shared.
- Shift spend away from high-cost acute services through supporting system change which targets prevention.

5 DEVELOPING A MORE SUSTAINABLE, PATIENT CENTRED HEALTH SYSTEM FOR WA

Silver Chain appreciates this opportunity to provide its perspective as a community-based, non-government partner around potential ways WA Health can move towards developing a more a more sustainable, patient centred health system that allows for:

- More out-of-hospital, cohort-based services aimed at relieving pressure on hospitals.
- Open sharing of data across providers to facilitate patient centred care and improve performance.
- Space to innovate and adopt technologies which both enhance and change current service delivery models
- Procurement and funding methods that foster long-term partnerships.

Silver Chain looks forward to further supporting and contributing to the work of the Sustainable Health Review in the coming months.

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[12] Australian Institute of Health and Welfare (2014). *Palliative Care Services in Australia 2014*. Retrieved from http://www.aihw.gov.au/publication-detail/?id=60129548894

[13] Silver Chain is currently working with Western Sydney Local Health District to deliver a community palliative care service, modelled on WA's HCS. This partnership arose through Silver Chain's successful bid to the NSW Office of Social Impact Investing in its request for SII proposals around managing chronic health conditions. The service launched in July 2016, after a ten month period of joint delveopment and negotiation. Longer term outcomes of the service impact are still to be evaluated, but referrals have already exceed expectations.

[14] NSW Office of Social Impact Investing (2017). *What is social impact investing?* Accessed 29 September 2017 at https://www.osii.nsw.gov.au/what-is-social-impact-investing/