STRATEGIC DISCUSSIONS

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1. SUMMARY

Diabetes has a high prevalence in western Sydney, with 13% of adults suffering from the disease in the region. This document delves into the distinct model of care adopted by Western Sydney Diabetes (WSD) to tackle this pressing issue.

Comprising three sections, the document unfolds by laying down the foundational principles, progresses to an in-depth exploration of the existing model, and concludes with a visionary glimpse into potential future expansions.

WSD engages in a holistic approach to address diabetes. The central tenets of this strategy encompass early detection, the empowerment of high-risk communities, and bolstering the proficiencies of general practitioners (GPs) and community healthcare providers. A special emphasis is laid on elevating the health outcomes for the First Nations population and individuals coming from varied cultural backgrounds, who face an escalated risk of type 2 diabetes.

To extend its reach, WSD has adopted an outreach blueprint which comprises virtual symposiums, direct liaisons with GPs, and instructional masterclasses, placing preference on forging collaborations. As part of its public service mandate, WSD offers its services free of charge, even in the face of hurdles such as many last-minute cancellations.

A central component of WSD's initiative is the Diabetes Case Conference (DCC) model. It's a multifaceted approach entailing patient referrals, thorough preparations prior to the virtual DCC, and robust support following the conference. Flash Glucose Monitoring (FGM) is instrumental in the preparatory phase. Post-DCC endeavours, including nutritional guidance and tailored appointments with dietitians, have evidenced a positive impact, such as enhanced glycemic control and a decrease in hypoglycemia episodes. However, a lack of Exercise Physiologists and Psychologists points to areas ripe for development.

WSD harnesses the power of digital technology, with a rich repository of educational content, featuring 100 videos for patients and an additional 30 for health professionals. The judicious collection of data is paramount for the continuous appraisal and refinement of the care model, and strategic alliances are indispensable to its success.

Peering into the future, WSD is set on adopting a more dynamic stance on diabetes management, broadening its network of professionals, elevating digital communications, and probing into the potential of AI for anticipatory health care. In addition, WSD is focused on optimising data collection and archiving processes and is looking for investment opportunities to establish a trailblazing national standard in diabetes care which can be replicated elsewhere.

Your feedback is invaluable, especially in terms of the presented ideas and recommendations for their practical implementation or enhancement.

2. FOUNDATIONAL PRINCIPLES

Equity: is a significant concern, particularly given the high prevalence of type 2 diabetes (T2D) among First Nations people and individuals from South and East Asia, Pacific Islands, and Arabic cultures. Our work within the Priority Places and Culture initiative is building targeted engagement strategies for communities living in Toongabbie, Blacktown and Mt Druitt. Our strategy is community-centred, encouraging local experts (pharmacists, doctors, educators, and nurses) and leaders to design their programs.

T2D is more prevalent in lower socio-economic groups, prompting us to design our services accessibly and supportively. We offer a free public health service, involving and eliciting the support and expertise of various services within the Integrated and community care program, in particular health coaching, care navigation and care facilitators to assist with the complex health needs of some patients/clients.

However, this often leads to last-minute cancellations. Therefore, we are challenged with ensuring efficient service delivery despite capacity reductions and cost increases.

A whole of system approach for Diabetes and Pre-diabetes Management: Due to the high adult diabetes prevalence (13%) in the WSLHD region, we are dedicated to bolstering the capabilities of General Practices and Community Allied Health professionals, including Pharmacists, Diabetes Educators, Dietitians, Podiatrists, Optometrists and Psychologists. Our aim is to cultivate a collaborative environment for effective diabetes management.

Early detection and prevention: Our focus is on early detection of diabetes in patients attending hospitals and General Practices. Our efforts in implementing HbA1C tests for all adult patients at Emergency Departments have revealed the burden, with approximately 18% of patients having tests consistent with diabetes and 30% with pre-diabetes. In our region, GP practices report an average 8.6% of adult patients registered with their practice are known to have diabetes. By encouraging GPs to make more use of the MBS supported annual HbA1C detection for people at risk, we aim to reduce the proportion of people living undiagnosed. This includes lifestyle modification and first line medications for people identified with pre-diabetes.

Engagement and Education of GPs and community providers: WSD clinical staff will actively communicate with GPs and others, verbally and via correspondence, as patients come out of hospital or when patients are referred to hospital clinics.

WSD specialists staff visit GP practices often with PHN staff to educate and promote this service directly. There are 1200 GPs in our area and to date, 600 GPs have participated in a virtual DCC. We find that if they experience this once, they are more likely to keep using this service.

We have developed relationships with GPs by hiring GP VMOs for 6 to 12 months and intensive learning at our weekly Complex T2D Clinic at the Mt Druitt Community Health Centre. This service is led by a Nurse Practitioner based at the centre. Being geographically placed in Mt Druitt further strengthens the relationship and trust between the service and local patients and GPs. A review of this clinic and approach by the Agency of Clinical Innovation (ACI) validated the effectiveness and benefit of this approach.

Another capacity building activity is the WSD Masterclass series offered annually to comprehensively connect and build the capacity of GPs to better manage diabetes. This has over 48 hours of rich up-to-date presentations where on average 1000 community providers registered yearly, with about 600 GPs from across the state and wider.

Coalition of the willing - Demand for our services outpaces supply, leading us to focus on GP practices keen on collaboration. Once GPs are on board, we need to discharge patients promptly upon stabilisation to make room for other GP practices to join in. We find that whilst some practices engage exceptionally well, others have not, either due to being unavailable, or unwilling to engage. It takes considerable effort and organisation from the administration staff and clinical staff to facilitate the first diabetes case conference, but generally, once the process has been successful the first time, this leads to more referrals as GPs reach out for expert opinion delivered in a way that is acceptable and benefits both patient and GP.

We have worked hard to connect with GPs across our region. It is sometimes a balance between working with willing GPs and looking after patients in need of our help versus those who do not want to try our model of care. Nonetheless, our door is open as much as it can be.

It is hard to run a free public service which is often undervalued by those attending. High rates of cancellations and no shows increase the cost of running our service, and result in a reduced capacity to provide care to people who need it most.

People Matter - Cultivating a Positive and Productive Workplace - Our service's success hinges on our dedicated staff, and we prioritise creating an environment that nurtures their development and involvement in the design and implementation of our service. Here are some ways in which we've organised our commitment:

Individual Empowerment & Goal Setting: We involve each team member in our yearly planning cycle, including a year-in-review, which allows individuals to set personal goals aligned with our collective service objectives. Celebrating our accomplishments at the end of each year highlights how much we've collectively achieved and bolsters a sense of pride and purpose.

Collaboration & Recognition: We acknowledge that our work is a collaborative effort involving partners within WSLHD and beyond. Celebrating our successes together fosters a sense of community and shared achievement.

Professional Development & Innovation: Encouraging staff to pursue their professional aspirations is vital to maintaining an innovative and energized workforce. We actively support research initiatives, as evidenced by two of our core staff undertaking PhD studies in 2023. We also support staff attendance and presentations at local, national, and international events and conferences, contributing to their growth and maintaining WSD's position at the forefront of innovation.

Workplace Flexibility & Kindness: We allow flexible work arrangements, including working from home when beneficial to the individual and the team. Additionally, we cultivate a culture of kindness, contributing to a positive workplace environment that promotes high staff retention and productivity.

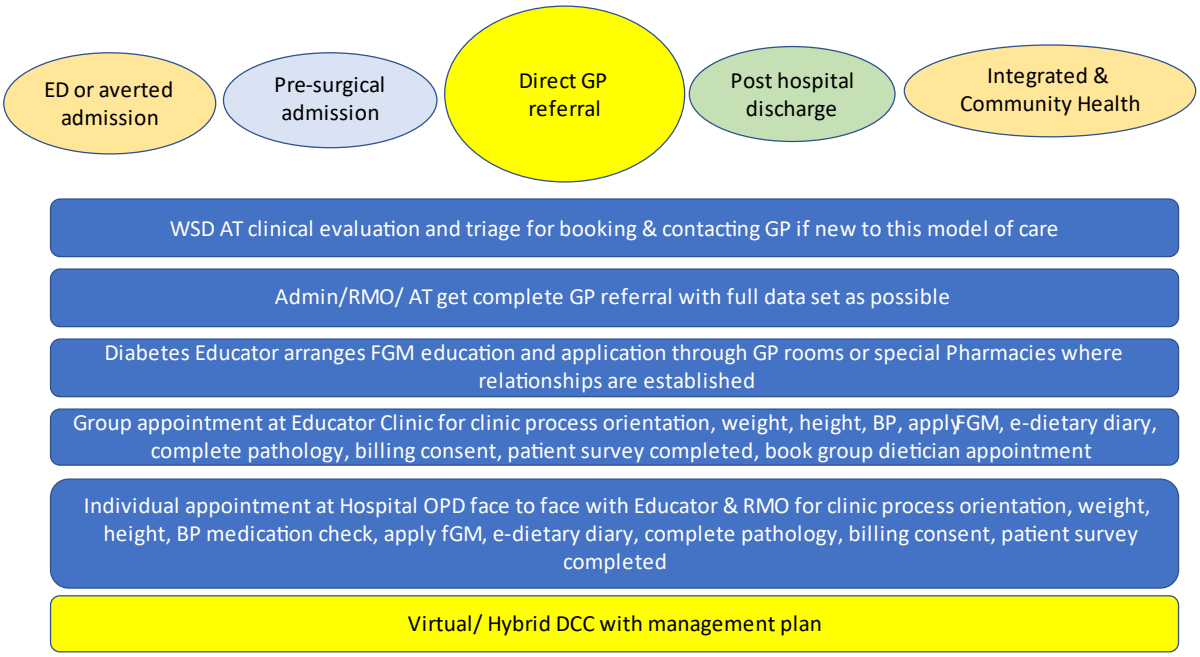
Effective Communication: Consistent communication, whether within the team or during planning meetings with our groups like prevention and clinical services, is key. Regular patient discussions help to unify our approach and enhance team collaboration. Our website, myINTERACT library, WSD Masterclass Series, WSD Executive Management Team meetings, and Leaders Alliances events are just some of the platforms facilitating effective team interaction.

Project-Based Collaboration: A prime example of our multi-disciplinary teamwork is our detection project at one of Workers Lifestyle Group's Blacktown clubs. This project has seen Prevention, Management, and Enablers come together for unified planning and implementation.

Solidarity: As a team we reflect and move forward together on better actions. We encourage multiple perspectives and remain thoughtful and solution focused.

Reflective practice: We reflect on our practice so that we ensure our work is in the best interests of our patients and we build our team and individual capacity and confidence at the same time.

In conclusion, these factors significantly contribute to the positive working environment at WSD, highlighting why we continue to be a preferred employer, thriving on team synergy and shared successes.



3. MODEL OF CARE CENTERED AROUND DIABETES CASE CONFERENCE (DCC)

Our care model involves GP participation in a virtual DCC, which facilitates GP-Specialist team exchange and offers support to the GP's ongoing care.

a. **Sources of Referral -** Our main referral sources are GPs in our district, a relationship built on trust over the years. WSPHN has been instrumental in promoting our services to GPs.

   Additionally, referrals are received from hospital diabetes staff and other medical specialties for post-discharge clinic. Approximately 20% of hospital patients have diabetes, necessitating careful patient selection for referrals. The surgical pre-admission team also refers patients.

b. **Processing Referrals -** For urgent issues, the WSD Advanced Trainee (AT) Registrar can directly receive a call from the GP support line, Anaesthetic AT and others, enabling rapid patient consultations within a day or two. In less urgent scenarios, the Administration team input the referral into the system, as the AT triages referrals almost daily.

   WSD maintains a registry of GP practices and GPs who have previously engaged our model of care. Patients with complex conditions are accepted, while simpler cases are discussed with the referring GP, who usually receives phone advice for management.

   If a GP is referring for the first time, the AT initiates a discussion about the service and invites them to join a DCC. Should the GP decline, their patient is scheduled

after priority appointments, possibly resulting in extended wait times. This is communicated to the GP, allowing them to consider alternative options. On average, the wait from referral receipt to initial appointment, often a pre-DCC assessment is under three weeks, with an additional 4-6 weeks to the DCC. This is drastically shorter than the average wait time for an outpatient endocrinologist appointment in NSW and is only possible due to our integrated and comprehensive service.

The Administration team functions as a concierge service, assisting patients with their devices and virtual waiting room access for their DCC. This service extends to GPs and their practices. DCCs function remarkably well barring technical glitches, facilitating efficient and timely interactions. A dedicated administrative team is crucial for the success of WSD services.

However, contacting patients and GPs to arrange appointments demands ongoing considerable effort from the WSD clinical team, including Administration Officers. Patients frequently do not answer their phone or respond to messages, prompting mail communication, which can take a week and often goes unanswered. Despite reminders sent to phones, many request appointment rescheduling, oblivious to the significant resources utilised to set appointments and the potential wasted time slot.

Once a patient is accepted for the service, pre-DCC activities are arranged to maximise the efficiency and benefits of the DCC for all involved.

c. **Applying Flash Glucose Monitoring (FGM) and Pre-DCC Work-up -** FGM has been an effective healthcare intervention that provides real time learning opportunities for patients and assisting the healthcare team to make a precise decision with medications based on evidence-based practice.

The primary challenge lies in the application of FGM. Fortunately, WSD collaborates with three community pharmacists who support this process, a valuable service established during COVID.

WSD has partnered with Abbott, which aids GP practices in FGM setup. They offer a program in which any insulin-dependent person living with diabetes and has not used FGM previously can experience a free trial supported by Abbott. WSD then finances FGM applications which are not covered by this program. Nevertheless, logistical challenges persist in delivering sensors or readers to practices.

Our Diabetes Educators have initiated two group sessions every Monday in the outpatient clinic, where new patients are welcomed and introduced to the service and assisted with FGM application. Through reflective practice and understanding data this clinic is continually evolving into a hub where extensive preparations for the DCC can be made for efficiency and to achieve person-centred care.

The preparation includes reviewing referral information, examining relevant clinical data, latest pathology test results, FGM application, administering a patient survey,

and collecting diet history during the FGM period, providing consent for MBS billing and granting access to our educational videos.

A physical appointment appears to work best to schedule these preparation activities. Some patients fail to attend these group sessions therefore, individual appointments are arranged during peak clinic hours to accommodate them.

Prior to the DCC the Specialty team meets to discuss the case and consider what additional information should be sought and what the main recommendations for management may be. These are always subject to change based on the DCC.

d. **Diabetes Case Conference (DCC) -** DCC are conducted virtually on the NSW Health myVirtualCare platform. The patient and carer are usually sitting with the GP but can be at home or in the clinic with the Specialty team. This is a video link to enable better communications than just audio and allow everyone to view the FGM report. The Specialty team involves an Endocrinologist or AT Endocrine Register along with a Diabetes Educator. Sometime the WSD dietitian is also invited as required and available. There is a new MBS item listing for community allied health such as a private dietitian to join at the request of the GP but this is yet to be activated.

   Although DCCs are typically scheduled for 45 minutes, the actual duration is usually about 30 minutes, factoring in waiting time for all participants to join. Nevertheless, these sessions are productive, allowing for thorough examination of FGM reports and agreement on patient-centred management plans, including precise medication adjustments and meaningful lifestyle changes.

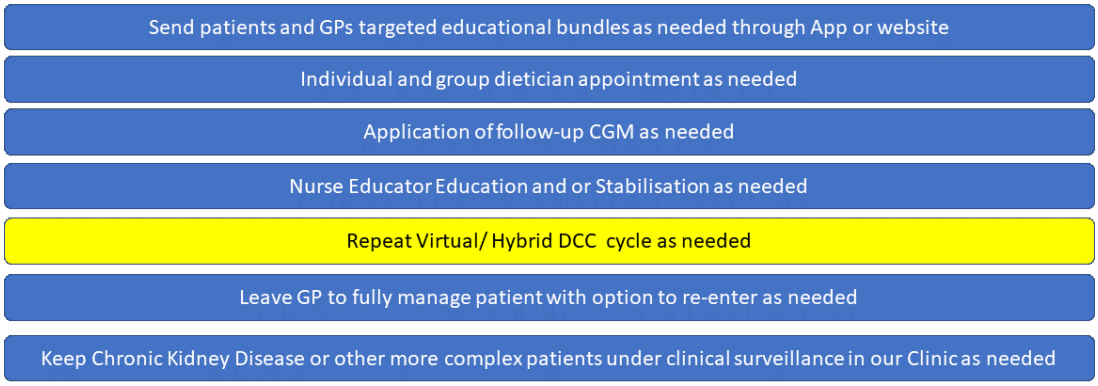
   Preliminary results using an audit in 2023 where FGM was included indicate a significant improvement after which the patient can be managed just by the GP again. There was an average HbA1C reduction from 10.1% to 8.5%, a mean glucose management indicator decreases from 8.8% to 6.8%, and an enhanced mean time in range from 39.4% to 74.7%.

Furthermore, incidences of overnight hypoglycaemia and other times with very low blood glucose episodes dropped by 3% and 16% respectively. The average total daily insulin dose also decreased.

Comparing the pre-COVID, face-to-face DCCs without the benefit of FGM the average HbA1C drop was 0.8% and lasted more than 3 years. The current DCC with all enhancements appears to be better with an average drop of HbA1C of 1.6%.

In the WSD 2022 Year in Review we reported across the six types of clinical sessions provided by WSD almost 1600 encounters. GPs were present 45% of the time and included 1597 clinic encounters. Since the WSD DCC has been available it has included over 600 GPs.

In a celebration dinner at the Workers Lifestyle Group's Workers Blacktown club over 100 people gathered to recognise 45 GP practices that were considered strong users of this model of care. Over 60 GPs who attended endorsed our model of care and spoke strongly about the virtues of this approach. The challenge remains on reaching those who have not committed to trying it.



e. **Post-DCC Support** - Not all tasks can be accomplished during a DCC, so patients are offered individual or group follow-up sessions. We provide Diabetes Dietary group education sessions both pre-DCC and post-DCC. Individual patient sessions with Diabetes Educators and personalised dietician appointments are also available as required. However, these are limited due to the availability of Dietitians. Moreover, we lack an Exercise Physiologist or Psychologist, leading to the gaps in these services.

Our Diabetes Educators can help a limited number of patients stabilize their blood sugar levels over a specific period, facilitating Blood Sugar Level (BSL) stabilisation and insulin dose adjustments using the Health2Sync app.

f. **Digital Delivery of Diabetes Education** - In recent years, WSD identified a shortage of Diabetes Educators to provide either individual or group education to all people with T2D in our region. In response, we developed professional education videos on 100 topics pertinent to individuals with diabetes.

Our team, with input from Sydney University's School of Public Health and Health Literacy Hub, scripted these videos to best suit our local population's needs. Healthily produced and filmed the videos, which are available on our website, and the GoShare and myINTERACT platforms. These videos come with fact sheets from partner organisations and are used extensively by our Diabetes Educators before and after a DCC session.

We ensure a high engagement rate by alerting individuals that these videos, tailored to their clinical discussions, are forthcoming. During the COVID-19 pandemic, these resources were greatly valued as it allows easy access to evidenced-based educational videos anytime anywhere, and consequently made available Australia-wide via the Patient Education Resource Library (PERL) from the National Association of Diabetes Centers (NADC), as well as the NSW Health Agency for Clinical Innovation (ACI).

In addition to the patient-targeted videos, WSD also developed 30 educational videos for healthcare providers during the pandemic. These videos can be delivered following a DCC to reinforce discussion points. All these educational materials are now accessible to community providers on our website and the myINTERACT WSD library.

The myINTERACT WSD Library hosts presentations from the past three years of Masterclasses for GPs and other community providers. These resources can be streamed and reviewed at any time and are being extensively utilised.

g. **Data Collection and Evaluation -** Recognising the need for a robust data management system, we prioritise data collection both pre- and post-DCC. This information is not only vital for managing clinical care but also for creating correspondence for GPs and dietitians and evaluating the effectiveness of our model. We strive to optimise data collection processes and streamline data usage to enhance patient outcomes and increase operational efficiency. This system currently is not granular data and is managed using word documents that convert to PDF for recording in the patients Cerner medical record. We have plans to streamline this in see this in the latter section.

h. **Collaboration and Partnerships** - Our model highly values collaboration, emphasising strong cooperation among administrative, nursing, and doctor teams. Our partnership with Abbott is an essential aspect of our operation, aiding in expanding the education offered to General Practice for familiarisation with the FGM program and use of Affinion analysers for point of care HbA1c testing in the community.

i. **Translational Research and Evaluation** - To ensure continuous improvement of our care model, we incorporate translational research and evaluation into our operations. This approach allows us to keep adapting and modifying our practices based on the most recent findings and patient feedback, ensuring our care model stays relevant and effective. We strive to turn research into real-world solutions,

enhancing our ability to provide quality care to our patients. This contributes to our strong research that is well captured in the WSD YIRs.

4. FUTURE VISION: CHALLENGES AND OPPORTUNITIES

a. **Proactive Approach to Prevention** - What sets WSD apart is our holistic philosophy towards diabetes prevention and management. It is widely accepted that the equilibrium between proactive prevention and managing the complications of the illness, which heavily consume hospital resources, needs redressing. With the knowledge that 80% of diabetes cases are preventable even before the transition from pre-diabetes, we have an opportunity to make a significant impact. When diabetes is diagnosed, there are numerous actions we can take to impede its progression and the onset of severe comorbidities. The existing early detection methods, however, are neither timely nor comprehensive enough to effect substantial change.

   WSD is committed to empowering GPs and community providers, transforming them into advocates and mentors for their patients with an emphasis on prevention. This is not merely about identification and guidance; we are invested in equipping these professionals with the tools necessary to foster meaningful behavioural changes among their patients.

   To further this goal, WSD is involved in opportunistic testing for HbA1c in the community setting such as local clubs and various cultural festivities. In addition, we launched a public engagement and awareness initiative, *Lose 2kg and Beat Diabetes Together*. Though the specifics of this program are outlined in a separate brief, unique interventions are being tailored to support our clinical partners in this endeavour.

b. **Building a Wider Team and Network approach** – Fostering partnership and teamwork is vital, as the management of diabetes is not just the doctor's job. It really is a team that makes the difference. This model of care emphasis the benefits of a specialty service joining the general practice team to help them better manage their patients with diabetes.

   Practice Nurse: The other part of the General Practice team is the practice nurse who can be skilled-up to offer education, encouragement, help with developing management plans and in skills like a 60-second foot check or applying a FGM.

   Enrolled Nurse: We have a similar need for an Enrolled Nurse level to help our Diabetes Educators who are doing much of the basic observations for clinics and especially the heavy load of applying FGMs. It may be possible to train up a new cohort of nursing staff to work at the top of their profession and then free up our Credentialed Diabetes Educators to work at the top of their professional skills.

   Dietitian: Allied Health professionals we can now target this year are dietitians. Dietitians caring for diabetes are a very limited resource considering a main component of the disease is about being mindful and fully informed with eating and

drinking choices. Especially now with the insight and benefit of FGM there are new opportunities to contribute to better outcomes even more meaningfully. Our full-time dietitian has a large workload with individual consultations, group consultations, developing resources that can be shared with patients as food diaries, making educational bundles and connecting with Dietitians in the community to build a more connected and informed workforce to share the workload with General Practice.

Pharmacist: We have formed a Pharmacy working group to support diabetes management in the WSLHD catchment. This has resulted in a couple of very important wins. We have had a few selected Pharmacists with a strong training in diabetes volunteer to fit FGM on our patients. This has saved us hundreds of hours of work, foster relationship with their local pharmacist, as well as convenience for the patients to access FGM in their local area.

There is much more we can do with Pharmacies as they are often the source for health education widely for the public. Some pharmacies are offering metabolic profiles with SiSU Health Station™ weight, height, body mass, BP, and diabetes screening opportunities, and this may become even more important in our *Lose 2kg - Beat Diabetes Together* campaign. They are also the supplier of medication, blood glucose devices, needles and test strips and a whole raft of weight reduction products including very low-calorie meal replacements.

Exercise Physiologist: Physical activity and exercise are another pillar in the better management of diabetes, and we could do more to engage with Exercise Physiologists either with our specialised service or GP with their everyday management of diabetes. Having one within our team would help bridge that gap of engagement.

Psychologist: Mental Illness and Diabetes are very intertwined and mutually reinforcing. Unless we are detecting the levels of diabetes distress present in over 60% of our patients, we are often offering solutions that are simply not used effectively. There is a huge mental health workforce in our WSLHD patch, and we are barely scratching the surface in sharing management with them.

This closer look at the workforce requirements would allow WSD and this model of care to be even more effective. We can see when we hired a Dietitian, this not only greatly enhances our team ability to manage patients' dietary choices, weight and glycaemic control, it also provides a wide window to engage with all the Dietitians in the community and magnify our impact. Clearly, we should be looking at adding an Enrolled Nurse, an Exercise Physiologist and Psychologist to our team.

c. **Incorporating the Patient's Perspective** - The patient's viewpoint is vital for effective tailored clinical management. This has been recognised and numerous approaches are being developed by NSW Health and other organisations. Perhaps the most crucial question for a patient referred to the WSD service is: "What do you hope to achieve from this service and how can we assist you most effectively?"

It's important to understand the patient's knowledge about their disease management, which includes self-monitoring, medications, and potential complications. Additionally, we conduct screenings for mental health issues and diabetes distress.

WSD is currently testing a patient survey that can be delivered via phone or email for patients to complete or filled out during the pre-DCC clinic. A WSD PhD student, in collaboration with Sydney University's School of Public Health and Health Literacy Hub, is working to involve patients in co-designing this survey to enhance its value.

Furthermore, WSD is committed to evaluating both the patient's and provider's experiences and outcomes from our care model, particularly regarding DCC, through behavioural research.

d. **Enhancing Digital Solutions** - Effective diabetes management involves the patient's self-management, support from GPs and community providers, and specialised diabetes services as required. Over the past years, WSD has been working on a unified platform to facilitate information exchange and coordinated management among these stakeholders.

   Initially, we developed *Diabetes Together*, a patient-centred app that collected data from fitness trackers or Apple Health and Google Health. It allowed patients to sync their glucose monitoring devices or manually input data such as blood sugar, blood pressure, weight, height, pathology test results, and medication details. This app facilitated a two-way communication channel between patients and WSD Diabetes Educators through a provider portal, allowing educators to assist patients in stabilising their diabetes.

   Patients could also receive personalised text messages based on their health metrics, such as blood sugar levels. For example, if a patient had a hypoglycaemic level, the app would send immediate follow-up instructions along with an educational bundle consisting of a video and a fact sheet.

   However, this solution didn't fully integrate GPs. Thus, we shifted to a new platform, *CareMonitor*, supported by WSPHN and designed for all GPs in our district. Although this transition was partially successful, it was limited due to the platform's low adoption rate. This remains a work-in-progress initiative.

   Simultaneously, WSLHD's Digital Health Service, along with the Diabetes Services at Westmead and Blacktown hospitals, are exploring another platform – *Health2Sync* (H2S), particularly for managing Diabetes in pregnancy. Despite initial limitations due to overseas data storage, H2S is promising, with patient-friendly features and compatibility with FGM devices.

   A crucial missing link is data sharing with GP practices, including receiving detailed patient referrals from GP's clinical systems. This data would streamline the pre-DCC process and facilitate communication back to the GP.

NSW eHealth team is developing an electronic referral system, integrated with a patient appointment system and data storage within the Cerner System. We're closely involved with the build team at Blacktown hospital, anticipating the potential of this initiative.

The goal of a fully integrated service, linking patients, GPs, community providers, and specialised services like WSD, remains elusive. However, we're committed to remaining at the forefront of this effort.

e. **Utilisation of Artificial Intelligence in the Management of Type 2 Diabetes -** Recent advancements in Artificial Intelligence (AI) offer promising avenues to streamline and enhance diabetes care.

One of the primary ways AI can assist is through real-time glucose monitoring and prediction. Predictive analytics in AI uses machine learning algorithms to analyse historical data and forecast future trends, such as blood glucose levels. For example, integrating AI with CGM systems allows for the analysis of patterns and trends in glucose levels, which can anticipate hyperglycemia or hypoglycemia episodes. This predictive capability empowers patients to make proactive lifestyle and medication adjustments to prevent such episodes, improving their glycemic control and quality of life.

In the realm of dietary management, AI can assist individuals with T2D in making healthier food choices. Several AI-powered applications can recognise and quantify food items through image recognition technology, providing instant nutritional information. These apps can alert individuals about high glycemic index foods or meals that could potentially spike their blood sugar levels, assisting them in adhering to a balanced, diabetes-friendly diet.

Furthermore, AI can play a critical role in medication adherence and personalised medicine. Machine learning algorithms can analyse patient-specific factors, including genetics, age, lifestyle, and disease progression, to tailor treatments. This capability can help identify individuals who may benefit from a specific type of medication, reducing the trial-and-error approach that is often part of diabetes management.

AI also shows promise in diabetes education and engagement. AI-powered chatbots can provide ongoing patient education, answer queries, and provide reminders for medication or appointments. This use of AI facilitates greater patient engagement and disease understanding, empowering patients to take more active roles in their care.

AI can assist in early detection and prevention of T2D complications. Machine learning algorithms can analyse vast amounts of data, including laboratory results, comorbidity information, and even retinal scans, to predict the risk of complications like kidney disease, heart disease, or retinopathy. Early detection of such complications can enable timely interventions, thus improving the prognosis.

In conclusion, AI, with its predictive capabilities, real-time monitoring, and personalised approaches, access to complication screening and healthcare interventions in remote areas where specialised services are limited has the potential to revolutionize the management of T2D. However, it's crucial to remember that while AI can enhance diabetes care, it should complement, not replace, regular healthcare provider interactions. As AI continues to evolve, its incorporation into diabetes management can provide substantial benefits to patients, healthcare providers, and the broader healthcare system.

f. **Enhancing Data Capture, Storage, and Use for Management and Research** - WSD is dedicated to using data for decision-making and translational research projects. We employ innovative care models but evaluating these often requires us to manually enter results from clinical documentation into spreadsheets. We consolidate patient information, GP referrals, and FGM data into a pre-DCC summary. After the DCC, management changes are documented in a letter back to GPs. We're exploring ways to capture data in a detailed format from the outset to streamline documentation and facilitate evaluation and research.

g. **Exploring Investment Opportunities to Impact Diabetes -** In 2016, with PwC's support, we estimated the annual total cost of T2D in our region to be about $1.4 billion. We modeled scenarios demonstrating that evidence-based interventions could yield a 4:1 benefit-cost ratio in primary prevention and secondary prevention and management. With recent commitments of about $1 million over five years from the Workers Lifestyle Group and Novo Nordisk, we're reevaluating prevention investment opportunities. We're also examining secondary prevention and management opportunities to estimate their potential impact on the WSLHD budget.

   Diabetes is Western Sydney's most significant health burden. With both Labor state and federal Governments in power, we're exploring the possibility of setting aside the typical federal and state health investment divide. Our aim is to secure substantial investment to change the tides in the tsunami of diabetes in Western Sydney, serving as an exemplar model that can be replicated and utilised for the rest of the country.

   In pursuit of equitable healthcare and recognising the challenge of diabetes management in rural and remote populations, we've sought grants to adapt our model for use in Western and Southern NSW LHDs. Though unsuccessful last year, we plan to continue this pursuit, aligning with the state-wide Diabetes Management Initiative.