

Enhancing the management of primary care with Primary Sense

Dr Lisa Beecham – Chair, Primary Sense Clinical Advisory Board and GP

As an early adopter of Primary Sense, and in my role as Chair of the Primary Sense National Clinical Advisory Group, I have witnessed Primary Sense's evolution from a tool used by more than 700 Gold Coast-based GPs, (representing almost 90 per cent of the region's population), to a scaled-up version that enables general practice staff across the country to access risk stratification, real time prompts and alerts, and on-demand reporting.

I have been using Primary Sense in my Gold Coast practice since 2018 and have experienced firsthand how it can significantly enhance the management of care, particularly for patients with complex, chronic conditions, and improve the efficiency and effectiveness of practice management.

A significant benefit of Primary Sense is illustrated by a case study from the Gold Coast where GPs were able to proactively target a specific group of their patients with an immunisation intervention. Primary Sense reduced the risk of hospitalisation from influenza when, during May and July 2022, GPs identified that 75% of their most high-risk patients were not vaccinated. In-consult prompts generated by Primary Sense resulted in 45% of these patients being vaccinated early in the flu season, giving them protection from the virus. I am confident that as more general practices use Primary Sense, we will see similar success stories.

The clinical benefits of Primary Sense were featured in the November 2022 edition of the [Australian Journal of General Practice](#). The article focuses on research that measured Gold Coast-based GPs' response rates to computer decision support alerts at the point of care over a period of 12 months. Key findings included:

- GPs acted on 40% of the suggested interventions from medication safety alerts. The top alerts were:
 1. Bisphosphonate medication for osteoporosis, where latest eGFR is <35 mL/min/1.73m² (**67% response rate**)
 2. Antiplatelet drug for patient with history of peptic ulcer or gastrointestinal bleed and no gastroprotection (**63% response rate**)
 3. Immunosuppressive drugs without relevant lab tests within the past six months (**50% response rate**)
- GPs acted on 20% of the suggested interventions from care prompts. The top prompts were:
 1. Due influenza vaccination: complexity 4 or 5 or pregnant (**72% response rate**)
 2. Due pertussis vaccination in pregnancy after 20 weeks (**47% response rate**)
 3. Missing CV risk medication (statin and antihypertensive) when CV score is >15% (**46% rate**)



It has been nine months since Primary Health Networks (PHNs) started rolling out Primary Sense to general practices across the country.

More than 1200 general practices across Australia are now using Primary Sense's comprehensive range of features and benefits, not previously available to general practice in a single software application, to assist with clinical decision making and continuous quality improvement.

So far, 10 PHNs have chosen to offer Primary Sense as their population management, clinical decision support and data extraction tool, and more are expected to transition to it in the new financial year.

I appreciate from my firsthand experience that, as with any new IT system, it can be challenging as practice staff familiarise themselves with the new features and functionality. The National Clinical Advisory Group, the Primary Sense team and WA Primary Health Alliance are here to support you, to listen and to learn from your experiences.

I encourage GPs and practice teams to provide feedback to their local PHN. It is only by working collaboratively with general practices across the country that we will enable Primary Sense's full potential to be realised.

Work is well underway to build on the first six months of Primary Sense's national rollout, and, excitingly, new reports, alerts and prompts are in the pipeline. I look forward to providing you with another update in the future. In the meantime, please find a snapshot of recent activity below.

Dr Lisa Beecham
Primary Sense National Clinical Advisory Group Chair

Primary Sense

Snapshot of Activity











Designed by GPs, data experts and researchers, Primary Sense extracts de-identified general practice data and uses evidence-based algorithms to provide GPs with real time medication alerts, reports and patient care prompts to help with clinical decisions.

Benefits

The Johns Hopkins University ACG® System	Real time alerts	On-demand reports
<ul style="list-style-type: none"> The world's leading population health analytics software is inbuilt into Primary Sense. It identifies high risk and complex patients and predicts future health needs to improve a patient's care plan. 	<ul style="list-style-type: none"> Medication alerts are delivered on screen at the time of the patient's appointment signalling to the GP when a particular medication could pose a risk to a patient. Primary Sense's medication alerts allow GPs to review and, potentially, adjust a patient's medication at the time of prescribing. Care prompts work similarly within the appointment, prompting the GP with actions to consider for the patient, providing evidence of the recommended care and giving the GP ways to record any actions taken. 	<ul style="list-style-type: none"> Primary Sense's sophisticated reporting allows general practice staff to target specific groups of patients with particular needs or for particular reasons. Reports can easily identify when patients are due for a health assessment or immunisations, allowing practice staff to follow up and book appointments for these important interventions. Primary Sense makes it easy to report on PIP QI improvement measures with one click reports that are sent directly to the Australian Institute of Health and Welfare. It can also assist in developing CQI Action Plans – making it easier for general practices to meet PIP QI requirements.

Data security

Primary Sense has been built on the premise of security and safeguarding health information. It uses the highest level of data security available and stringent security policies and practices to minimise the risk of data security breaches and complies with the Australian Privacy Principles and legislation.

How data is kept secure				
 <p>Leading edge cyber security</p> <p>Primary Sense provides leading edge data security and robust data governance to minimise the risk of data security breaches.</p>	 <p>Regular security reviews</p> <p>Annual external and internal security reviews and penetration tests – a simulated cyber-attack – check for exploitable vulnerabilities.</p>	 <p>De-identifying patient data</p> <p>No identifying information – such as a patient’s name, date of birth, post code or Medicare number – leaves the general practice.</p>	 <p>Use of Unique IDs</p> <p>Data is assigned a unique ID before it is extracted or transferred and is stored across multiple tables using reference numbers.</p>	 <p>Data encryption</p> <p>The identifier used to re-identify the patient back in the practice is encrypted, both during transfer and in storage.</p>
 <p>Data encoding on extraction</p> <p>Data is compressed and transferred as encoded data – adding a further layer of de-identification.</p>	 <p>Breaking patient records into portions</p> <p>De-identified data is extracted by table so a whole patient record is not transferred at once.</p>	 <p>Near real time extraction</p> <p>Primary Sense makes small data extractions every 3–5-minutes, which means in each extract, the data is meaningless should it be intercepted. This minimises the potential for any data to be identified in the unlikely event of a breach or if theft were to occur.</p>	 <p>Strict access control and multi-factor authentication of users</p> <p>Data governance standards control how, when and who can access and use data. The identity of all authorised users is established through multiple checks.</p>	 <p>24-hour monitoring of any abnormal activity</p> <p>Intrusion prevention and detection systems detect any suspicious activity before it can turn malicious.</p>

Usage*

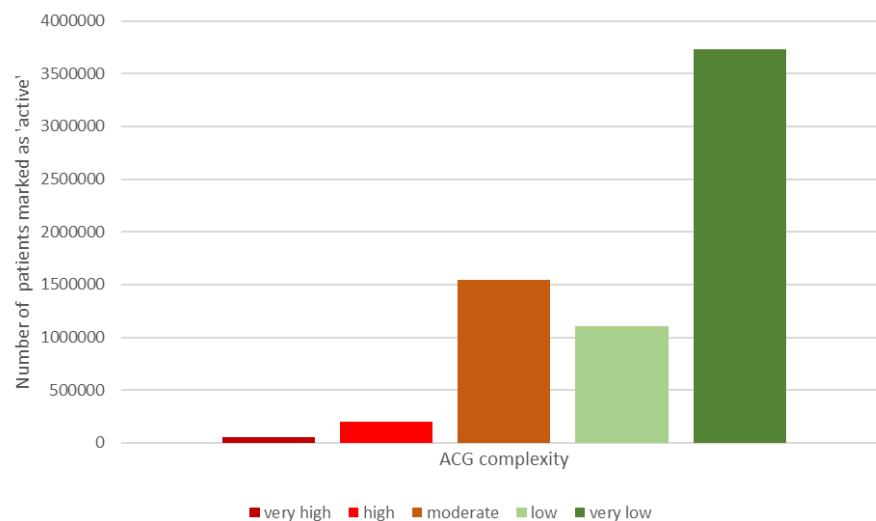
Measure	Primary Health Network							Total
	WA Primary Health Alliance#	Nepean Blue Mountains PHN	Sydney North PHN	Brisbane South PHN	Brisbane North PHN	Primary Health Tasmania	Gold Coast PHN	
Number of practices extracting data	314	24	74	174	177	13	24	800
GPs with access to a desktop app	381	71	140	326	347	27	25	1,317
Number of patients with ACG scores	2,710,120	226,972	595,528	1,364,455	1,495,456	93,477	146,262	6,632,270
Number of patients with >80% risk of hospitalisation in the next 12 months	18,564	1,923	4,040	10,049	10,401	1,405	1,441	47,823
Number of GPs getting medication alerts	167	40	61	149	189	12	14	632
Total medication alerts	624	164	160	509	603	34	83	2,177
Reports downloaded	342	77	215	232	412	33	67	1,378

* Data period reflective of 19 March – 18 April 2023. Northern Territory PHN is expected to onboard general practices this financial year.
#Perth North, Perth South and Country WA PHNs.

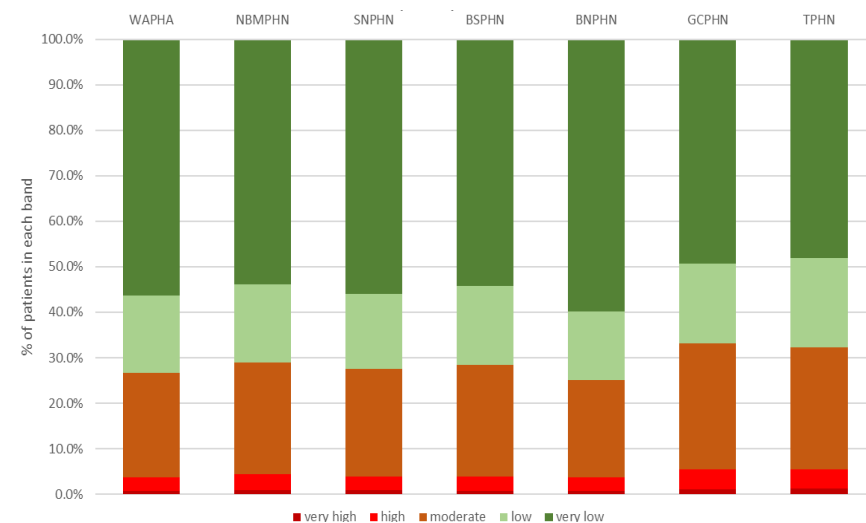
The Johns Hopkins ACG® System*

The Johns Hopkins ACG® System is an inbuilt feature of Primary Sense. It uses a 0-5 scale, with 5 indicating patients at the highest risk of poor health outcomes. This evidence-based information makes it easier for general practice staff to identify the patients who need the most urgent health care.

Patient ACG score complexity in all PHNs



ACG complexity across all PHNs

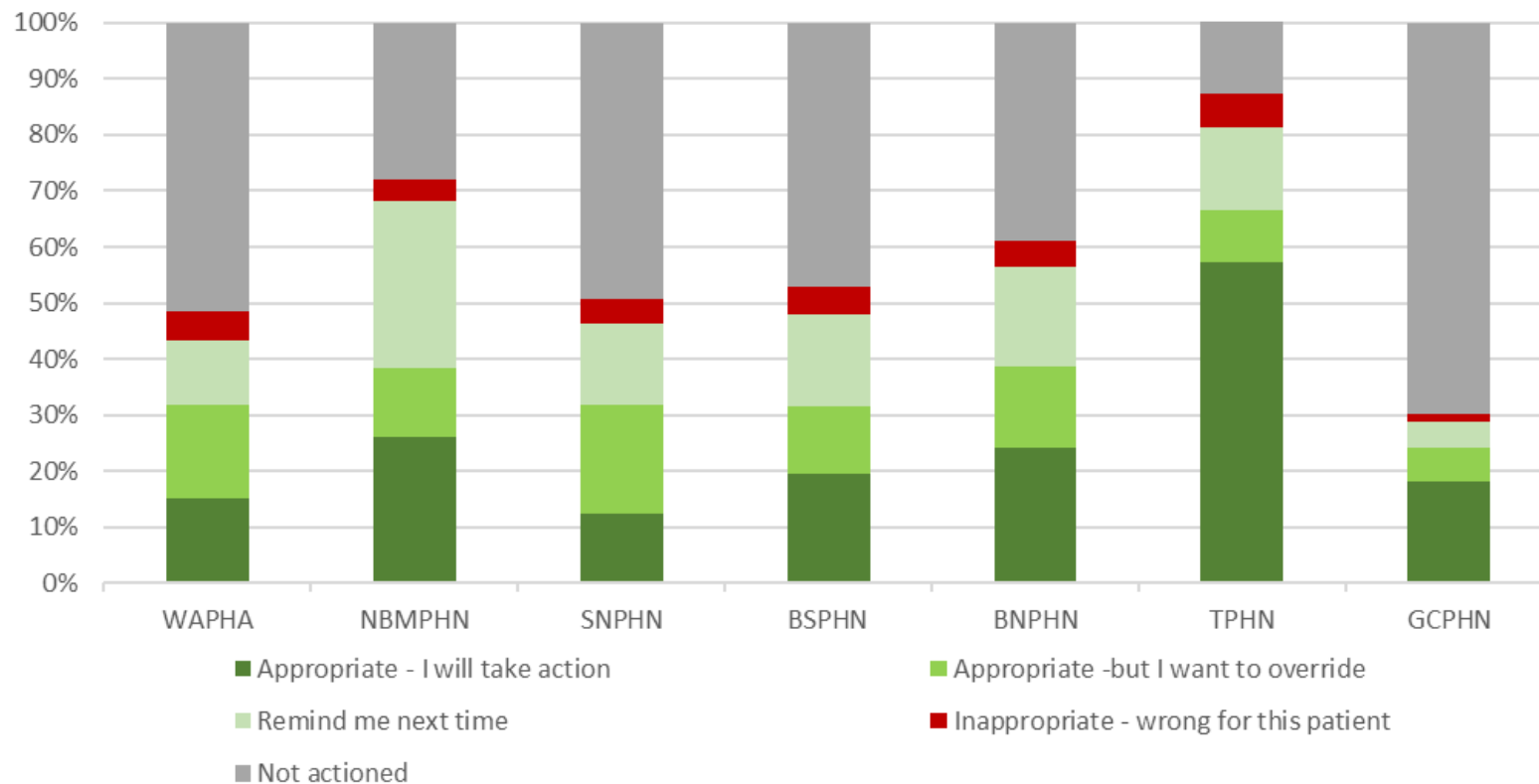


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Real time medication alerts*

Primary Sense medication alerts are delivered on screen at the time of the patient's appointment. They allow GPs to review and, potentially, adjust a patient's medication at the time of prescribing.

GP response rate to medication alerts



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Top five clinical descriptions across PHNs*

	WA Primary Health Alliance#	Nepean Blue Mountains PHN	Sydney North PHN	Brisbane South PHN	Brisbane North PHN	Primary Health Tasmania	Gold Coast PHN
1.	Influenza immunisation	Influenza immunisation	Influenza immunisation	Influenza immunisation	Influenza immunisation	Pain management	Influenza immunisation
2.	Hypertension	URTI	COVID-19 infection	Hypertension	Hypertension	Hypertension	Hypertension
3.	COVID-19 infection	Hypertension	Hypertension	URTI	COVID-19 infection	COVID-19 infection	COVID-19 infection
4.	Iron deficiency	Wound care	Asthma	COVID-19 infection	Asthma	Skin check	Wound care
5.	URTI	Asthma	URTI	Wound care	GORD	Sinusitis	Anxiety

* Data period reflective of 17 April 2023. Northern Territory PHN is expected to onboard general practices this financial year.
#Perth North, Perth South and Country WA PHNs.