What happens in general practitioner consultations?

A study of video-recorded Australian general practitioner consultations

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Background and objective
Highlighting the complexity of general practice is essential for capturing the comprehensive nature of whole-person care. Our aim is to highlight complexity in the general practitioner consultation by identifying the number of items mentioned or discussed.

Methods
Secondary analysis of video-recorded consultations was undertaken. Two researchers coded items using the body systems in International Classification of Primary Care, Version 2 (ICPC-2) codes. Items were categorised as 'mentioned' or 'discussed'.

Results
In the 54 consultations, most patients were aged over 45 years and were women (51.9%). On average, consultations lasted 19 minutes (range 03:35–39:59 minutes), five items were discussed (range 1–14), and three were mentioned (range 0–8). Half of consultations included cardiovascular items, half included musculoskeletal items and one-third included psychological items.

Discussion
Recordings are a useful research method for capturing the complexity of general practice. Highlighting this complexity might be useful for discussions with policymakers and funders to describe the comprehensiveness of general practice care.

GENERAL PRACTICE CONSULTATIONS are complex. Patients usually present with a number of items for discussion, and the general practitioner (GP) will also have items to cover under prevention, screening and follow-up. Often, research does not capture the complexity of a consultation when the research question is narrow or only focuses on a specific disease or health item. Part of the challenge of general practice research is to capture the complexity in a way that can be conveyed to other researchers, policymakers, funders and the community.

The Bettering the Evaluation and Care of Health (BEACH)[1] program was a long-term study that captured the complexity of general practice by real-time data entry by GPs as they saw a patient. This approach meant that it was possible to understand what was happening within a consultation across thousands of general practices. Currently, big data sets tend to look at the whole population[2] or subsets of patients and examine specific clinical tasks (eg prescribing)[3] or diseases (eg diabetes).[4] It is rare for big data to examine the consultation as the unit of analysis.

Video and/or audio recording allows for us to witness what happens in a consultation as an observer. There are repositories of consultations in a number of places in the world with the largest in the Netherlands, one in the UK, and a corpus in New Zealand.[5–7] These repositories have been used to examine the tasks, communication and outputs of general practice consultations with the bonus of removing recall bias. Recordings alone cannot answer questions about the experience of providing or receiving care, which need the perspectives of the GP and patient through complementary qualitative methods.[8]

There are high levels of GP burnout, with strained workloads and shortages of incoming medical trainees reported both worldwide and in Australia.[9–11] It is important to explore the complex workload that GPs experience on a daily basis to better inform policy and practice changes to identify ways to support our current and future GP health workforce. Our aim is to identify complexity in the GP consultation by recording the number of items mentioned or discussed per consultation.

Methods

For this project, we undertook a secondary analysis of video recordings held with the Digital Library repository of in-person GP consultations. The Digital Library, held with the National Centre for Healthy Ageing at Monash University in Australia, is a secure digitised collection of real-world consultations between GPs and their adult patients, plus related data: including anonymised transcripts, patient survey logs and participant demographic data.[12] This repository holds video data from many primary, secondary and allied health settings, and is used for research and educational purposes. For this research, we were interested in the general practice context. At the time of this study, the Digital Library held 54 adult GP–patient consultation recordings, which were used as data for this project, that had been collected between August 2021 and June 2024. Most of the recordings were collected during Melbourne's COVID-19 lockdown conditions. The survey logs included a patient pre-consultation survey (consisting of demographic information and reasons for consultation) and a post-consultation survey that aimed to rate the experience of their consultation with their GP. The research team comprised a practising rural GP and an urban GP who are both GP–academic researchers, plus early and mid-career primary care researchers.

Digital Library: General practice collection

GPs were recruited on a voluntary basis from practices across Melbourne, Australia. GPs with teaching and/or training responsibilities were identified from public profiles, existing databases of GPs interested in research or previous GP participants (snowballing strategy). GPs were sent information about the project and followed up twice, as per the Dillman method of recruitment.[13] Explanatory forms were given to participants and informed consent was obtained from GPs prior to the first recording day. Only GPs were offered an honorarium of AUD 120 per day in recognition of their time to contribute to research.

A research assistant attended and collected the video data in the general practice settings. Patients seeing the participating GP on the recording day were informed of the project and given explanatory forms, had their questions answered and signed consent forms if they wished to participate. Patients who did not consent did not have their consultation recorded. Patients completed a pre-consultation survey and post-consultation survey that included demographic information and patient satisfaction with how their consultation went. Participant demographic data and video recordings were transferred to a secure hard drive at Monash University. All participants (GPs and patients) provided formal written informed consent for the recording, indefinite storage and future use of their consultation in the Digital Library for education and research purposes only. No images of participants will ever be used. As the video recordings are identifiable, they can only be accessed via one of four secure terminals within the main office of the Digital Library. No remote access is possible. Any researchers planning secondary analysis of the video recordings must first discuss this project with the Digital Library team and subsequently submit an application for access, with evidence of ethical approval for their study, to the Digital Library lead and advisory group for consideration.

Ethical approval for recording consultations (#37638) and secondary analysis for this study (#39605) was granted by the Monash University Human Ethics Committee (2023).

Analysis

This qualitative study used descriptive content analysis[14,15] of secondary data and focused on capturing all the health items that were raised during a GP–patient consultation. A qualitative approach was best suited for answering our research question as it enabled organic conversations between patient and clinician to be explored in depth. Descriptive content analysis was deemed most appropriate as the research aimed to observe and describe communication nuances while also using a list of pre-defined health item concepts from the International Classification of Primary Care, Version 2 (ICPC-2). We included all GP–patient recordings in the Digital Library as data. We excluded telehealth consultations because there were recording difficulties in the early stages of the repository and we could not accurately analyse the interaction as we were unable to hear the patient's voice. A Microsoft Excel (Microsoft Corporation, Redmond, WA, USA) spreadsheet was used to record the length of each consultation (from when the patient enters the consultation room until the patient exits and verbal exchange is concluded, excluding extra time the GP might spend on notes after the patient leaves the room), patient age, gender, socioeconomic status (from survey logs) and type of health item that was raised (either discussed or mentioned). Health item categorisation was guided by the ICPC-2[16] categorisation process. The ICPC-2 is a comprehensive coding system that enables healthcare professionals to document symptoms, diagnoses (problem labels), previous health issues and processes (such as procedures, counselling and referrals) right at the point of care. This study used the ICPC-2 as this is endorsed by the World Health Organization and aligns with the World Organization of Family Doctor practices at the time of this publication. Two researchers viewed all 54 (in-person only) consultations together. We recorded health items that were mentioned (raised but not discussed in detail, often in relation to another health issue or items that are earmarked for a future consultation) and discussed (items that were talked about in depth or treated, or if a care plan was arranged). This included conditions that were diagnosed during the consultation as well as ones diagnosed previously that were being followed-up in these consultations. Two experienced qualitative researchers (KN, NG) viewed each video at least once, then collaboratively discussed and agreed on which ICPC-2 category each health item raised (mentioned or discussed in depth) should be coded under. These were aggregated up to the 17 body systems represented in the ICPC-2 categories. Any health items where categorisation was unclear were brought to the wider team, which included practising GP–academic researchers (KW, ES), for discussion and resolution. A random 10% sample of videos (n=5) was independently coded by a GP researcher to ensure validity.[17] The finalised list of items forms the findings of this study (Table 1).

Reflexivity statement

The study team consisted of a balance of clinical (KW and ES) and non-clinical (NG and KN) experienced qualitative

Table 1. Total number of items discussed and rate per 100 consultations

	Digital Library dataset	
	Number of instances ICPC-2 chapter or component is discussed or mentioned across all consultations (total)	Rate per 100 encounters (n=54)
ICPC-2 chapter		
General and unspecified	10	18.5
Respiratory	13	24.1
Musculoskeletal	30	55.6
Skin	12	22.2
Digestive	11	20.4
Psychological	16	29.6
Cardiovascular	30	55.6
Endocrine and metabolic	6	11.1
Female genital system	10	18.5
Neurological	9	16.7
Ear	4	7.4
Pregnancy and family planning	1	1.9
Urology	2	3.7
Eye	4	7.4
Blood and blood-forming organs	2	3.7
Male genital system	1	1.9
Social	6	11.1
ICPC-2 component		
Symptoms and complaints	–	–
Diagnosis, diseases	12	22.2
Infections	9	16.7
Injuries	2	3.7
Neoplasms	1	1.9
Congenital anomalies	–	–
Other diagnoses	–	–
Diagnostic and preventative procedures	12	22.2
Medications (including review and prescriptions)	53	98.1
Test results	24	44.4
Referrals	22	40.7
Administrative	45	83.3
Counselling type		
Alcohol	2	3.7
Exercise	6	11.1
Lifestyle	2	3.7
Nutrition and weight	27	50.0
Environment	1	1.9
Financial	1	1.9

–, no data; ICPC-2, International Classification of Primary Care, Version 2.

researchers. We view this as a strength as our team members represent both key relevant stakeholders in these observed interactions and are clinical (GP) and non-clinical (patient). All researchers identify as female, with a mix of Australian and non-Australian researchers. The research team consists of early- to mid-career academics and GPs. None of the researchers were present on recording days of these videos in the Digital Library. A Standards for Reporting Qualitative Research (SRQR) checklist was used.[18]

Table 2. Demographic characteristics of patient participants (n=54)

Demographic	n (proportion; %)
Gender	
Male	9 (16.7)
Female	28 (51.9)
Non-binary	0 (0)
Other, self-described	0 (0)
Prefer not to say	0 (0)
Missing	17 (31.5)
Age (years)	
18–24	1 (1.9)
25–34	3 (5.6)
35–44	2 (3.7)
45–54	8 (14.8)
55–64	7 (13.0)
65–74	6 (11.1)
75–84	8 (14.8)
85+	3 (5.6)
Missing	16 (29.6)
Socioeconomic status	
U: unemployed	3 (7.3)
P: received government pension	17 (41.5)
H: healthcare card holder	5 (12.2)
L: low-income household	4 (9.8)
NS: prefer not to say	14 (34.1)
Missing	17 (41.5)

Results

In total, 54 in-person-only consultations with four different GPs were analysed. Table 2 highlights the patient demographics as self-reported in the patient survey. Participants were able to select multiple socioeconomic status descriptors. Seventeen patients did not complete the survey, and these have been marked as missing. GP practices were based in urban areas of Melbourne, Australia. Two GPs were female; two were male. One GP was aged in the 45- to 55-year bracket, and three were in the >55-year age bracket. All GPs had over 20 years of clinical experience. One practice is private billing and three offer limited bulk billing (eg for children or patients aged >65 years); however, Medicare rebates are available.

The mean length of these consultations was 19 minutes and 19 seconds (19:19), with a range from 3 minutes and 35 seconds (03:35) to 39 minutes and 59 seconds (39:59). During these consultations, the mean number of items discussed or mentioned was eight, with a range from 1 to 14 items (Table 3).

This study found that the most frequently discussed or mentioned conditions within the Digital Library sample were cardiovascular (55.6 per 100 encounters), musculoskeletal (55.6 per 100 encounters), psychological (29.6 per 100 encounters), respiratory (24.1 per 100 encounters), skin (22.2 per 100 encounters) and digestive (20.4 per 100 encounters) (Table 1). There were also differences in frequency of reported conditions, with general and unspecified (46.3 per 100 encounters) most often given as the reason for the encounter, followed by respiratory (20.2 per 100 encounters), musculoskeletal (15.3 per 100 encounters), skin (15.3 per 100 encounters) and digestive (9.3 per 100 encounters).

In our sample, GPs discussed medications with almost every patient (98.1 per 100 encounters). They also shoulder a significant administrative burden (83.3 per 100 encounters). Some examples of activities include: creating pathology and imaging requests, providing medical certificates, calling the pharmacy to organise an authority script, making follow-up GP and practice nurse appointments, printing off copies of test results/imaging for the patient to take to other care team members (specialists, allied health professionals), and assisting with social security and insurance paperwork. We considered these activities separately to referrals to other healthcare providers (40.7 per 100 encounters).

We also measured lifestyle counselling and found that patients often seek advice on nutrition and weight (50 per 100 consultations) from their GPs. Excerpt quotations are detailed in Table 4, highlighting the ICPC chapter or component coded.

Discussion

Summary of findings

Patients in our sample were mostly female (55.8%) and aged >45 years (47.1%). They were often on a low or limited income (55.5% were healthcare card holders, or on a pension or low income, or unemployed). GPs and patients mentioned or discussed, on average, eight items during a 19-minute consultation. The most frequently mentioned or discussed health problems were musculoskeletal, cardiovascular, psychological, skin and digestive. Nutrition and weight counselling also occurred in 50% of consultations.

Comparison to existing literature

This study indicated that GP–patient consultations are complex. On average, GPs deal with eight different health items per consult with each patient (range of 1–14 items) across a range of different body systems. These study findings are aligned

Table 3. Mean number of health items discussed and mentioned per consultation

Items per consultation	Mean (to nearest whole number; range)
Discussed	5 (1–14)
Mentioned	3 (0–8)

Table 4. Excerpt quotations from consultations

	ICPC-2 code/s	Aggregated code
Mentioned items		
When did you last do a set of bloods in urine well, been a while it has hasn't it? (GP 01)	A 34 – Blood A 34 – Urine	A 34 – Blood test
Ah. Iron levels? Do you have enough meat in your diet? (GP 04) *Ah, okay, yeah.* (P 35)	B 34 – Blood test	B 34 – Blood test
One last quick thing. I think you're due for one of those sort of bowel kit tests. I don't know if you've got one? You should have got one in the mail when you turned 58 in June. (GP 02) *Haven't, oh, no, I didn't get it.* (P 19) *Can I give you one on the way out? Because they should be done every two years.* (Looks at historical notes on computer) *You'd asked him* (previous GP) *when. Exactly two years ago.* (GP 02) *Good, of course.* (P 19)	D 49 – Other preventive procedures (bowel cancer)	D 36 – Faeces test
Discussed items		
Context: GP going through a health management plan with their patient *That's great. Where did we get to with lovely* (Dietitian name redacted) *did we organise for you to see her?* (GP 01) *Yeah, but no.* (P 05) *You don't need it?* (GP 01) *No.* (P 05) *You know what you're doing don't you?* (GP 01) *I'm cutting down. My weights coming down. I eat fine.* (P 05) *Exactly.* (GP 01) *But nah, nah I don't need that.* (P 05)	T45010 – Weight management T 08 – Weight loss	T 45 – Weight management
Context: GP is reviewing mental health test results *Depression was on the lower side but previously been severe. If something's severe, severe or the depress – on the um sorry, anxiety and stress …* (GP 04) *Yep.* (P 47) *Depression was kinda moderate, then it came down a notch.* (GP 04) *Okay*. (P 47) *To, you know, moderate, moderate* (mild) *with medication, I presume?* (GP 04) *Yep.* (P 47) *So the medication you think might be helping?* (GP 04) *I definitely think it's helped me.* (P 47)	P 01 – Feeling anxious P 03 – Feeling depressed P 50 – Medicat-Script/Reqst/Renew/Inject	P 31 – (Psychological) Medical examination/health evaluation – partial/pre-op check
Context: GP checking cardiovascular complaints from a patient. *When I smoke at home. I don't blow the smoke in the air, I smoke out through the window so it doesn't come out and get* (partner) *and y'know, the house.* (P 06) *Hmm, so it could well be the cough that's setting off the vomiting.* (GP 01) *That's what I'm thinking. Yeah. No. The phlegm. It's really thick mate. It's really thick. It's thick. The phlegm is really like, it's not like just some …* (P 06) *If I have a look down – so you can organise that* (hands paper to patient) *ultrasound and a CAT scan of your chest.* (GP 01) *Yep. Cool man.* (P 06) *So if I have a look at your throat.* (Examines throat). (GP 01)	K 22 – Risk factor for cardiovascular disease (smoking) R 05 – Cough D 10 – Vomiting L 04 – Chest symptom/complaint R 41 – Diagnostic radiology/imaging	L 04 – Chest symptom/complaint R 41 – Diagnostic radiology/imaging

CAT, computed axial tomography; GP, general practitioner; P, patient.

with Australian[19] and international[20] evidence that suggests cardiovascular, musculoskeletal and psychological health concerns dominate primary care consultations. We note these studies report high presentation rates for respiratory and other infections, which were not observed in our study.

The complexity of a single consultation should be considered in the context of a possible 144 consultations per week per full-time GP.[19] These study findings are consistent with existing literature on the consistently evolving and complex nature of GP–patient interactions.[21] This study work offers further insights on the intense cognitive load that GPs and medical students experience as part of this vocation.[22–26] It is unsurprising then that the Australian primary healthcare sector is experiencing the dual crisis of high GP burnout and low medical student recruitment.[10,22–25] We, and others, anticipate widespread future workforce issues[9–11] if no substantive action is taken by policymakers to address these concerns.

Often, general practice is investigated from the perspective of one condition with a vertical approach to analysis; however, this disease-specific approach can forget the embedded nature of many GP consultations, with issues raised in conjunction with conditions or as part of preventative care.[27] General practice is a generalist specialty that values non-fragmented, whole-person care as an efficient and effective approach to healthcare.[28] This study of recorded consultations allows us to see the whole-person care that is delivered by general practice that often crosses multiple body systems. When we only look at primary care as a series of tasks, we risk fragmenting healthcare to a point that it becomes less efficient, takes more of the patient's time and is less effective as the patient is seen in parts and not as a whole.

Strengths and limitations

These study findings are based on real-life video-recorded GP consultations from the Digital Library at Monash University. The strength of this method means that we eliminate recall bias and social desirability bias, which are problematic when asking GPs and patients what happened in a consultation. As qualitative researchers, we understand that we perceive phenomena relative to our individual lived experiences and worldviews. The collective experiences of our team have shaped our coding, and it is a strength that our team includes both an urban and rural GP.

Overall, 17 patient surveys were missing, and we were unable to record demographic information about these patients. We did not assume the gender or age of any patient on the basis of their physical appearance. We also acknowledge that our findings are based on a small sample of established GPs working in a metropolitan setting during the COVID-19 pandemic and that they might not fully reflect the diversity of Australian general practice, including rural and urgent care settings. However, this first tranche of recordings offers useful, early insights into the complexity of GP consultations.

Implications for research and/or practice

Understanding the day-to-day GP consultation is important for planning GP training, workforce needs and how the health system can support general practice. General practice research must include explorations of the consultation process so that we can better communicate to policymakers the complexity of the specialty of general practice. This exploratory study confirms that GP consultations usually include the management of multiple conditions that span multiple health systems. General practice is founded on generalism and comprehensive whole-person care, and it is essential that this is reflected in our understanding of the complex GP consultation process.

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