

Supplementary Material

Barriers and enablers to providing preventative and early intervention diabetes-related foot care: a qualitative study of primary care healthcare professionals' perceptions

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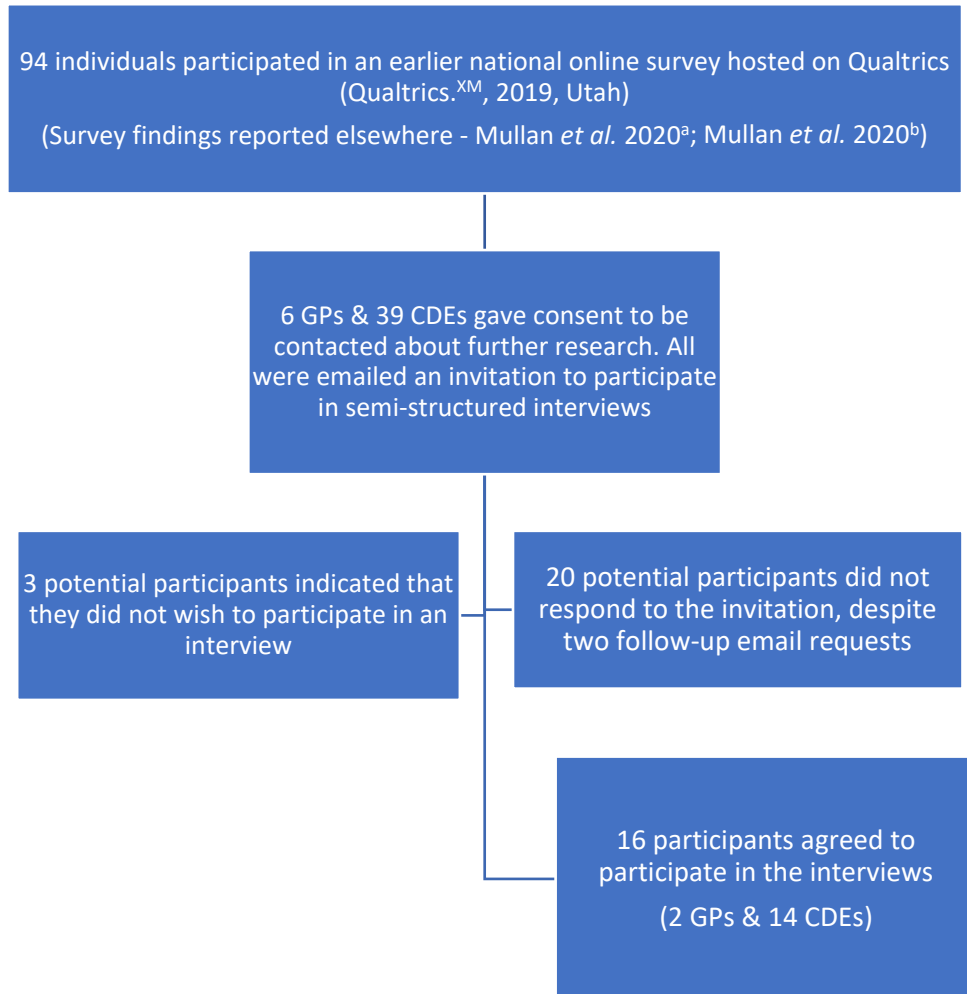
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Appendix S1. Recruitment Summary



Appendix S2. Interview Guide

Domain measured	Example question (to initiate discussion)	Example prompt (to encourage further discussion)
Closed questions	<p>Do you currently conduct foot assessments on people with diabetes? Y/N</p> <p>If Y – how do you do this? e.g. ask patient if they have problems with their feet, visual inspection, monofilament, palpable pulses</p> <p>Are you aware of any evidenced-based guidelines for diabetes-related foot care? Y/N</p> <p>Do you have a structured approach or routine for diabetic foot assessment? Y/N</p> <p>If Y – Can you tell me about it?</p>	
Perceived barriers / facilitators to foot care	<p>What factors, if any, make it easier for you to provide foot care for people with diabetes?</p> <p>What factors (if any) make it hard for you to provide foot care?</p> <p>What factors prompt you to escalate care – for example, referring a patient with diabetes to a multidisciplinary high risk foot service?</p> <p>What factors (if any) make it hard for you to escalate care?</p>	<p>Other diabetes educators / GPs have told me that certain things in their workplace stop them from conducting foot assessments. Is there anything in your workplace that makes it hard for you to provide foot care?</p> <p>Other diabetes educators / GPs have told me that certain things within the health system as a whole stop them from conducting foot assessments, for example funding, staffing, resources, availability of specialists, referral pathways. Is there anything within the health system as a whole that makes it hard for you to provide foot care?</p> <p>Can you tell me about any things that you or your practice currently use that make it easier for you to provide foot care? e.g. database system, education, reminders etc.</p>
Impact of Guidelines	<p>Can you tell me how current foot disease evidenced-based guidelines are incorporated into the care of your patients with diabetes?</p>	
Strategies to promote foot care	<p>What do you think could be changed that would make it easier for you to provide better foot care?</p> <p>What do you think could be changed to help alleviate the barriers you face when providing foot care?</p>	<p>Do you have any suggestions as to what would assist you to provide better foot care to people with diabetes? (refer to factors in their health service and in general Australian healthcare context)</p>

Appendix S3. Completed Node System

First-level node	Number of participants discussing theme	Total number of references	Second-level node	Number of participants discussing theme	Total number of references	Third-level node	Number of participants discussing theme	Total number of references
Access Factors	16	123	Access to high risk foot service	14	53	Barrier	10	30
						Enabler	12	31
			Access to nurses	8	30	Barrier	0	0
						Enabler	8	30
			Access to podiatry	16	61	Barrier	8	16
						Enabler	15	46
			Access to specialists	6	12	Barrier	3	6
						Enabler	5	6
			Access to telehealth	3	4	Barrier	1	1
						Enabler	2	3
			Access to tertiary support	4	8	Barrier	0	0
						Enabler	4	8
			Access to wound clinic	6	16	Barrier	1	1
						Enabler	6	16
Care Integration Factors	15	53	Communication and feedback	11	28	Barrier	4	12
						Enabler	9	16
			Relationships	4	7	Barrier	0	0
						Enabler	4	7
			Team work / multidisciplinary care	14	36	Barrier	5	7
						Enabler	13	30
Education Factors	16	112	Confidence	10	18	Barrier	5	8
						Enabler	8	13
			Education / knowledge	16	82	Barrier	12	37
						Enabler	16	52
			Experiences and awareness of consequences	8	15	Barrier	3	3
						Enabler	6	12
			Interest / motivation	8	25	Barrier	5	12
						Enabler	4	13
			Mentorship / shadowing	6	11	Barrier	0	0
						Enabler	6	11
Nurse training	5	7	Barrier	5	7			
			Enabler	0	0			

			Skill variability	7	19	Barrier	7	19
						Enabler	0	0
Process Factors	16	103	Assessment tools	13	28	Barrier	0	0
						Enabler	13	28
			Guidelines / pathways	15	36	Barrier	13	17
						Enabler	12	21
			Recall systems	12	17	Barrier	7	7
						Enabler	7	11
Resource Factors	16	133	Referral processes	10	27	Barrier	6	12
						Enabler	9	16
			Standardisation	4	10	Barrier	3	5
						Enabler	3	5
			Funding	16	68	Barrier	15	43
						Enabler	13	29
Resource Factors	16	133	Human resources	12	23	Barrier	9	16
						Enabler	8	8
			Physical resources / equipment / environment	13	35	Barrier	12	22
						Enabler	8	18
			Priorities of care	10	18	Barrier	10	17
						Enabler	1	1
Resource Factors	16	133	Time	12	40	Barrier	12	36
						Enabler	6	9

Appendix S4. Coding Rules

Node	Coding Rule	Example
Access factors	Any comment that discusses the accessibility of footcare, footcare services, footcare specialists, which may include distance to the service, ability for a person with diabetes to be seen, or access the service	NA
Access to high risk foot service (HRFS)	The accessibility of HRFS, which may include distance to the service, ability for a person with diabetes to be seen, or access to HRFS expertise	<i>“So essentially there isn't, there is no dedicated diabetic foot clinic within, if you ask me the question, well there isn't one. I mean you're not going to fly someone to XX to go to a wound clinic. So, the answer is there isn't one. XX is probably the closest. I've got no idea. The XX but that's a plane ride or a six hours drive.”</i>
Access to nurses	The accessibility of nurses, which may include primary care nurses, wound care nurses, district nurses	<i>“Well what makes it easy or essential is that we've got good adequate nursing staff.”</i>
Access to podiatry	The accessibility of podiatrists, which may include distance to podiatry, ability for a person with diabetes to be seen, access to podiatry expertise	<i>“One of the big issues is getting into a podiatrist because even though we have public and private, the waiting lists for both are quite long and can be up to say three months.”</i>
Access to specialists	The accessibility of specialists (orthopaedic, vascular, infectious diseases), which may include distance to specialists, ability for a person with diabetes to be seen, access to specialist expertise	<i>“The specialists, we don't have vascular surgeons or people like that coming out here, but we can certainly get them, get our patients to XX if they consent and are willing to go even though you do have that tyranny of distance. So, we can still do that.”</i>
Access to telehealth	The accessibility of telehealth services, which may include ability for a person with diabetes to utilise/access such services	<i>“And so, what we were doing was teleconferencing through into XX and photographing and measuring wounds, probe to bone, and really being guided by them, because if the patient isn't consenting to go anywhere you really gotta manage them here.”</i>
Access to tertiary support	The accessibility of tertiary support – which may include telephone, email or face to face support	<i>“having the people up there to support you too, maybe you're almost practicing outside of your scope in a way. But having them there just is absolutely key, just to, you know, to help you with your confidence to, to find</i>

Node	Coding Rule	Example
		<i>something that you're really not sure about and know that, that's paramount really”</i>
Access to wound clinic	The accessibility of a wound clinic, which may include distance to the service, ability for a person with diabetes to be seen, or access to wound clinic expertise	<i>“They've got a very good, the nurses who run the wound clinic are very good. So, they will, they're not specifically, they're a wound clinic who's wounds are general, not specifically for diabetic feet, but they will, they will assess the wound and if appropriate, you know, they will notify if we need to get into vascular surgery to have a look, etcetera.”</i>
Care integration factors	Any comment that discusses communication between individuals regarding footcare and/or feedback provided to the healthcare team, relationships between healthcare professionals which relates to footcare, team work, supportive work environments or multidisciplinary care	NA
Communication and feedback	Communication between individuals regarding footcare and/or feedback provided to the healthcare team	<i>“So, although we haven't got the absolute dedicated wound clinic, we do have better communication, well better communication cause it's a smaller community. There's the opportunity to get to know people.”</i>
Relationships	Relationships between healthcare professionals which relates to footcare	<i>“I'm also working in fairly small areas. There's quite a healthy relationship I think between the GPs in our service in general, but also having practiced in the area for over 10 years, you sort of get to know the different practitioners and you know, professionally and personally. So, if you need to contact someone, you know, you do either through the desk or you know, just ring them on their own mobile or something like that if you need to.”</i>
Team work / Multidisciplinary care	Team work, supportive work environments or multidisciplinary care	<i>“but I mean in some of the clinics I'm at there's already a pod sitting there, podiatrist sitting there, dietician and myself. So, we've sort of got quite a team care going on.”</i>
Education Factors	Any comment that discusses education and knowledge relative to diabetes-related footcare, confidence, experience, motivation,	NA

Node	Coding Rule	Example
	interest in footcare, mentorship/shadowing, training and/or skill variability	
Confidence	Confidence of a healthcare professional to provide preventative and early intervention diabetes-related footcare	<i>“Yeah, I think education and confidence has a big impact so. Yeah. The more education, the confident you are doing them, then yeah, that's it. Yeah. Huge.”</i>
Education / knowledge	Education and knowledge relative to diabetes-related footcare. This could include attending courses, face to face or online education, professional development	<i>“But yeah, in terms of I think education all around is the key really. Educating staff, you know, being able to access education for staff out in remote, our organization's fantastic. We get a lot of professional development and also educating the community.”</i>
Experience and awareness of consequences	Experiences the healthcare professional has had in managing diabetes-related footcare and their awareness of the consequences of diabetes-related foot disease	<i>“I probably err on the side of caution, simply because I have worked in these high risk foot clinic and the combined foot clinic and I have seen the ramifications of someone saying 'oh its gout' 'its cellulitis' when it wasn't, it was a Charcot, which could have been prevented or you know, not prevented, treated better.”</i>
Interest / motivation	Healthcare professionals' interest in feet or their motivation to provide diabetes-related footcare	<i>“not all podiatrists know about all the diabetes footcare, or actually are interested in it and provide that information so readily.”</i>
Mentorship / Shadowing	The role of mentorship or shadowing. This may include working alongside a footcare specialist or within a specialised foot clinic	<i>“So I have spent time at a podiatry clinic seeing podiatrists, seeing diabetes foot assessments being conducted, and I think that's so important for every person who is, every diabetes educator, anyone undergoing their CDE, to go a foot clinic and a high risk foot clinic.”</i>
Nursing training	Training received by nurses in their university/hospital-based training courses	<i>“when I initially started, as a DE, before, we were always told, as a hospital-based nurse, you never touch people with diabetes' feet, you know, and I think it took a little while to get that out of my head.”</i>
Skill variability	Variability in skills by healthcare professionals in relation to diabetes-related footcare	<i>“I'll tell you what I used to think. Well, if they're already seeing a podiatrist, I'll talk to them about it, But I let the podiatrist assess their feet. But I think there's, I've learnt over the years, there's too many variables in it. You know, there are podiatrists and podiatrists. Some people go to their podiatrists and come back and say, 'the podiatrist has said 'What are you doing here? You</i>

Node	Coding Rule	Example
		<i>don't need me". So that's what, that's the message they take home. Other people see the podiatrist and they might be seeing them every week, sort of eight weeks or so, so it's too variable."</i>
Process factors	Any comment that discusses care processes including care pathways, guidelines, assessment tools, referral pathways and/or standardisation	NA
Assessment tools	Use of or need for a diabetes foot assessment tool	<i>"Because if you've got the tool in front of you, it's easy to just pick up and run through from top to bottom."</i>
Guidelines / pathways	Diabetes-related footcare guidelines, care plans or health pathways in relation to preventative and early intervention footcare	<i>"It (guideline) helps me to understand, especially with a high-risk foot, to understand what is expected of the management of that. Not just from my role, but from like a GP role, dietetic role, podiatrist role, so it helps me to ensure that the patient's getting comprehensive and best practice management."</i>
Recall systems	Use or need for foot assessment recall systems (digital or otherwise)	<i>"We have an electronic health system so I've been using for many years. It's excellent. And in the right-hand corner we have a recall base database. And so, if I see a patient that I think is a high-risk foot, I just put a recall in and then it would notify"</i>
Referral processes	Diabetes-related footcare referral processes and pathways	<i>"And it took a while to find a telephone number. So, it's not intrinsically clear, so I think this is one of the issues is about, do high risk foot services like to have that sort of verbal intercommunication. What are the local areas services, a referral network built around? And just in my area, I think it took me, it wasn't intuitive on how to access it but once you do access it you won't forget"</i>
Standardisation	Standardisation of diabetes-related footcare. This may include standardisation of information, procedures, policy, education for example	<i>"So, you know, the interest is there, but yet for the uniform for that, not uniformity, but for the standardization approach, you need to be sure of what the patient's being told. And that's a big problem is inconsistent information. I think there's a difference between individualizing care and giving conflicting information."</i>

Node	Coding Rule	Example
Resource Factors	Any comment that discusses resourcing including, human resources, funding, time, equipment, environmental resources and/or care priorities	NA
Funding	Funding for preventative and early intervention footcare. This may include comments regarding Medicare payments, profitability, enhanced primary care (EPC) or chronic disease plans, funding for equipment or education for example	<i>“the barrier which we’ve been unendingly talking about, to require prolonged treatment so more than five treatments and the realities is it becomes quite expensive to look after them. The wounds. Okay.”</i>
Human Resources	Human resources involved in diabetes-related footcare. This may include the number of specialists, footcare healthcare professionals, human resource provision	<i>“I would say perhaps try to increase the podiatry hours, so that we can get those waiting lists down.”</i>
Physical Resources – equipment / environment	Physical resources involved in diabetes-related footcare. This may include footwear, specialised equipment, use of brochures/booklets, environmental factors such as chairs, lighting and physical space for example	<i>“I suppose, footwear’s a big thing too footwear, you know, access to good footwear, that basically comes back to financial access.”</i>
Priorities of Care	Priorities of care for a person with diabetes or the healthcare professional providing preventative and early intervention diabetes-related footcare	<i>“It just comes down to, mainly, trying to prioritise the feet at an appointment, but sometimes it’s hard when you’ve got to deal with you know rapid increase in a HbA1c or they feel unwell, or it could be anything.”</i>
Time	Time in relation to provided diabetes-related footcare. This may include time for appointments, time for education and training, travel time for example	<i>“Time probably is the biggest thing to provide foot care. So if you’ve got, you know, multiple other education points that you’re going at and only one visit or two visits, then time would be a big issue for me because I work in private practice as well and we bulk bill everyone.”</i>

*Third-level nodes

Barrier - Hinders preventative or early intervention footcare

Enabler - Supports or has the potential to support/assist preventative or early intervention footcare