

The Role of the Primary Care Physician in the Assessment and Management of Polycystic Ovary Syndrome

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Abstract

Polycystic ovary syndrome (PCOS) is a complex and heterogeneous female endocrine disorder with manifestations that span the hormonal, reproductive, metabolic, and psychological. Primary care physicians (PCPs), also known as family physicians or general practitioners, play a key role in the diagnosis, assessment, and management of PCOS. This article outlines the role of the PCP in the timely and accurate diagnosis, provision of information and education, lifestyle and weight management, and management of key features such as hyperandrogenism, irregular cycles, infertility, emotional well-being, and cardiometabolic risk. PCPs play an essential role as the point of first contact for women and adolescents with or at high risk of PCOS, providers of whole-person care and continuity of care, and coordinators of care within a multidisciplinary team. Optimal management of PCOS requires equitable access to primary care. There is a need for systemic approaches to addressing barriers to provision of quality primary care, such as poor remuneration of longer consultations and low awareness of evidence-based guidelines, to women and adolescents with PCOS.

Keywords

- ▶ polycystic ovary syndrome
- ▶ primary care
- ▶ general practice

Primary care is the cornerstone of healthcare systems¹ and is defined by the American Academy of Family Physicians (AAFP) as “the provision of integrated, accessible health care services by physicians and their health care teams who are accountable for addressing a large majority of personal healthcare needs, developing a sustained partnership with patients, and practicing in the context of family and community. The care is person-centered, team-based, community-aligned, and designed to achieve better health, better care, and lower costs.”² Primary care physicians (PCPs), also known as general practitioners (GPs), are trained for comprehensive care, first contact, and continuity of care for “undifferentiated” patients without limitation to organ system or diagnosis. The AAFP also includes health promotion, disease prevention, health maintenance, counseling, patient education, and diagnosis and treatment of acute and chronic illnesses as primary care. Similarly, in Australia, the Royal

Australian College of General Practitioners (RACGP) identifies the following as key characteristics of the discipline of general practice: person-centeredness; continuity of care; comprehensive care; whole-person care; diagnostic and therapeutic skills in managing uncertainty, undifferentiated illness, and complexity; coordination and clinical teamwork.³

The benefits of a well-supported and sustainable primary care system have been confirmed in multiple systematic reviews across the globe for decades.^{1,4} Chronic disease management interventions in primary care report improvements in patient outcomes, especially for the management of diabetes and hypertension.⁵ Primary care also reduces overall healthcare burden with lower rates of inpatient admissions and better medication adherence at a significantly lower cost.^{4,6,7} Government policies that provide financial support to PCPs to provide structured chronic disease

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management improve survival in chronic disease such as stroke and transient ischemic attack.⁸ Improved outcomes in primary care are associated with a greater per capita supply of PCPs,¹ and support for structured management of chronic disease, data-driven quality improvement with computerized decision support, and a gatekeeping role to facilitate care coordination and reduce fragmentation are factors that improve health outcomes. Strengthening primary care and increasing access to a PCP also improves outcomes and reduces hospitalization in marginalized populations indicating that primary care is an effective strategy to optimize health equity.⁹

Polycystic ovary syndrome (PCOS) is a common endocrine disorder affecting women of reproductive age. About 8 to 13% of women are diagnosed with PCOS according to the Rotterdam criteria which includes hyperandrogenism, oligo- or anovulation, or polycystic ovary morphology.¹⁰ Apart from the reproductive features included in the diagnostic criteria, women with PCOS also have a greater prevalence of metabolic disorders such as type 2 diabetes and impaired glucose tolerance, and psychological comorbidities including anxiety, depression, body dissatisfaction, and lower quality of life.¹¹ PCOS is a heterogeneous syndrome which varies across individuals and across the life span. The syndrome manifests in a wide range of symptoms and signs, affecting several systems and organs and is a complex and lifelong disorder requiring self-management and long-term care. The evidence-based guideline for the assessment and management of PCOS 2023 provides best practice guidance for clinical decision-making and optimal care to improve health outcomes in individuals with PCOS.¹¹

Because PCOS is a syndrome that results in multiple clinical symptoms across different systems (endocrine, reproductive, metabolic, psychological) that requires accurate and timely diagnosis and long-term management in a multidisciplinary setting, PCPs are ideally placed to diagnose and manage PCOS. Additionally, by definition, primary care is the first point of contact for patients experiencing a health issue, and therefore PCPs play a key role in detecting symptoms of PCOS and making timely diagnoses. Primary care is also accessible. GPs were the most common health professionals seen in Australia in 2021 to 2022, with 83.6% of Australians consulting a GP compared with 38.9% who saw a medical specialist.¹² People in the United Kingdom saw their GP a median of 8.3 times per year in 2018 to 2019¹³ and 50% of physician office visits in the United States in 2019 were with PCPs.¹⁴

With the rise of chronic disease and the increasing presence of comorbidities, a generalist approach to management is becoming more critical, and new models of care must emerge to reflect the realities of multimorbidity and the need for close coordination between generalists and specialists.¹⁵ The generalist physician approach in primary care is conceptualized as exhibiting compassion, tolerance, trust, empathy, and respect; recognizing complexity of clinical interactions and acknowledging prejudices and being fully engaged with each patient; drawing information from biopsychosocial as well as cultural domains rather than focusing

only on physical symptoms and signs. Generalist physicians balance biotechnical aspects (evidence-based guidelines and knowledge) with biographical, understanding individual priorities and challenges and their influence on health.¹⁶ These unique aspects of primary care bring extensive benefits to the patient with PCOS.

The aim of this article is to discuss the role of the PCP in the diagnosis and management of women and adolescents with PCOS.

Diagnosis

PCPs play a crucial role in the diagnosis of PCOS. The mean age of diagnosis of PCOS is 25 years^{17,18} with the majority of cases in age decile 20 to 29 years.¹⁷ In Australia, 72% of people aged 15 to 24 years saw a GP in 12 months indicating significant opportunity for GPs to provide timely diagnosis.¹²

However, there is evidence of delays in the diagnosis of PCOS in primary care which appear to be driven by low awareness of diagnostic criteria and resources available to support timely diagnosis.¹⁹ Time to diagnosis has been reported as up to 17 years²⁰ with one-third of women in a sample from Canada reporting time to diagnosis of greater than 2 years.²¹ Women and adolescents with PCOS have reported that the biggest barrier to a prompt and accurate diagnosis of PCOS was PCPs who lacked sufficient knowledge about PCOS^{21,22} and this is consistent with surveys of PCPs indicating a lack of adherence to diagnostic criteria¹⁸: for example, the aberrant use of ultrasonography for diagnosis, being unable to identify correct PCOS clinical features, and not following any specific diagnostic criteria.²³ Correspondingly, PCPs report lack of confidence in making a diagnosis of PCOS²⁴ and challenges such as the wide spectrum of presentations.²⁵ Despite this, the majority of women with PCOS will be diagnosed in primary care.¹⁸

There is a need to prioritize PCPs' education and awareness of guidelines and diagnostic criteria to facilitate timely diagnosis. There is evidence that PCPs would welcome standardized educational materials on the diagnosis and management of PCOS.²³ Additionally, barriers to the use of guidelines on PCOS in primary care need to be addressed including the length of guidelines, complexity and amount of information provided, and the fact that generalists have to remain current with an overwhelming number of clinical conditions.²⁶ PCPs can address the diagnosis needs of women and adolescents at risk of PCOS by being aware of the high prevalence of the disorder, adhering to standard diagnostic criteria, and use of tools such as algorithms to assist with diagnosis. There is a particular need to raise awareness about the revised Rotterdam criteria recommended in the 2023 guideline which now include the option to use anti-müllerian hormone as an alternative to ultrasonography for defining polycystic ovarian morphology as part of establishing diagnosis.

Management

Following diagnosis, PCPs play a key role in providing initial management including education, lifestyle advice, and first-line pharmacological therapy (if required). Pharmacological

treatment of PCOS features includes the combined oral contraceptive pill for hyperandrogenism, irregular cycles, and hirsutism and metformin for anthropometric and metabolic outcomes in adults with BMI ≥ 25 kg/m². These treatments are regularly prescribed in primary care, and PCPs therefore have the capacity to readily initiate evidence-based management. Management of PCOS is tailored to individual needs, characteristics, values, and preferences, and shared decision-making is required. Given the multiple aspects of PCOS that need to be considered (metabolic, reproductive, hormonal, and psychological), a generalist approach is highly appropriate with the PCP acting as a coordinator of care and taking a whole-person approach. The management needs of women with PCOS are well met by the features of primary care which include a focus on health promotion, disease prevention, and health maintenance. PCPs also play an important role in conducting diagnostic assessments and referring to multidisciplinary team members as needed.

PCPs play an essential role in creating a lifelong reproductive plan with women and adolescents including provision of preconception care and early referral of women with PCOS and anovulatory infertility for the consideration of ovulation induction. PCPs should be aware of the increased risk of pregnancy complications (including miscarriage, gestational diabetes, and preterm delivery) in women with PCOS and ensure that PCOS is identified as a risk factor during antenatal care. PCPs also play an important role in the assessment and management of cardiovascular risk and glycemic status, as the risk of cardiovascular disease and type 2 diabetes/impaired glucose tolerance is raised in women with PCOS, and these are now considered core features of PCOS. PCPs should also screen for obstructive sleep apnea.

Managing PCOS in primary care is challenging because women and adolescents are likely to present with multiple concerns. Evidence from the United Kingdom suggests that the number of reasons per visit is correlated with greater negative impact on patients' estimation of patient-centeredness.²⁷ Another study reported that GPs manage an average of 2.1 concerns within a 10-minute consultation. Brief interventions such as training on positively soliciting additional concerns may assist PCPs with effectively managing multiple concerns within limited time.²⁸

Education and Information Provision after Diagnosis

Provision of health promotion, counseling, and patient education are key characteristics of primary care.² PCOS requires a high level of health literacy to successfully self-manage and PCPs can play an important role in facilitating this. However, a key theme in diagnosis experiences of women and adolescents with PCOS has been the lack of provision of adequate information at the time of diagnosis^{20,22,29,30} and negative interactions with health care practitioners, particularly with delivery of a diagnosis with low levels of empathy.¹⁹ Women want information on the cause and complications of PCOS,³⁰ medical therapy options, and provision of emotional support and counseling.²¹ Avery et al described women wanting information to participate in shared decision-making.²⁰ On the other hand, some women described positive experiences

with diagnosis which were characterized by being taken seriously and being listened to²² by a proactive, empathetic, and knowledgeable PCP.²⁹ Women specifically wanted credible information to be provided by their doctors and age-specific support.²⁹ When health care practitioners took the time to obtain more information to assist patients at diagnosis, this was perceived positively.¹⁹

Shared decision-making is a fundamental component of successful management of PCOS, which includes the facilitation of patient agency in decision-making. All women and adolescents with PCOS should be viewed as experts with lived experience, and individual experiences, preferences, and values need to be acknowledged and incorporated into management.¹¹ This highlights the enormous potential role to be played by PCPs when given the right support and education, as a core aspect of primary care is the provision of person-centered care. PCPs can also refer patients with PCOS to the AskPCOS app (<https://www.askpcos.org>), a comprehensive evidence-based information resource which includes a personalized data dashboard, discussion forum, and expert advice.

Given that a key barrier to facilitation of shared decision-making is lack of time,¹⁹ there is a need for policy makers to consider system-wide changes that assist PCPs in taking the time to provide quality care, by adequately remunerating and rewarding longer consultations. Lack of training of health care providers in shared decision-making has also been identified as a challenge to its widespread use,³¹ and it is likely that this barrier needs to be addressed alongside increasing consultation length.

Lifestyle and Weight Management

Although management of weight is a high priority for many women with PCOS and lifestyle interventions are a key component of first-line management,¹¹ GPs in Australia have identified that addressing weight and lifestyle issues in PCOS is professionally unrewarding due to lack of time and inadequate remuneration.²⁶ Lifestyle counseling for weight management in women with PCOS is perceived as taking too much time to show results, with the impact relatively small and difficult to appreciate. GPs identified patients' lack of motivation to change and desire for a "quick fix" as barriers to successful weight management. Another Australian study of clinicians and women with PCOS identified challenges with achieving weight loss such as affordability. It has also been reported that some women with PCOS have seen their care as symptom-driven rather than preventive management of a long-term condition.²⁵

Australian evidence from the general population suggests that most patients (78%) feel that their GPs play a role in weight management.³² However, there are few lifestyle or weight management programs that are specifically designed for delivery in primary care with involvement by a GP.³³ The proportion of patients with overweight/obesity who were offered an intervention in a United Kingdom primary care study varied from 10% (overweight) to >40% (morbid obesity).³⁴ A meta-analysis of behavioral weight loss interventions delivered in a primary care setting reported small

reductions in body weight,³⁵ while another meta-analysis of PCP-delivered treatment of obesity reported that low- to moderate-intensity physician counseling alone did not achieve clinically meaningful weight loss but may have weight loss benefits when combined with pharmacotherapy.³⁶ Yet, there is evidence that weight loss programs delivered in primary care can result in a positive impact on non-weight-related health outcomes such as health and functional status and quality of life.³⁷

Strategies to improve effectiveness and adoption of self-management interventions in chronic disease in primary care include ongoing patient follow-up, patient feedback, individualized care plans, recording of lifestyle goals in the patient medical record, and booster training. Low uptake of patient interventions such as goal-setting and action-planning and poor patient motivation are barriers to adoption and effectiveness.³⁸ There is a need for collaboration between PCPs and patients on lifestyle management in PCOS including clear goal-setting and recording of lifestyle goals, regular follow-up by the PCP, and engagement in behavioral strategies such as problem solving.

Lifestyle recommendations in the 2023 guideline now align more closely to advancing understanding of environmental and systems drivers of weight gain and acknowledging the limitations of reliance on individual lifestyle interventions for sustainable weight loss. Lifestyle interventions are recommended with a focus on overall health benefits and prevention of weight gain, with a lack of evidence supporting one type of diet composition over another. A new recommendation is the incorporation of a weight-inclusive approach and avoidance of weight stigmatization. Weight stigma perpetrated by medical doctors has been described by women with PCOS.²⁹ There is also evidence that 20%³⁹ of people with overweight and obesity reported weight stigma from their PCP, and this was associated with erosion of trust in PCPs. PCPs should practice weight-inclusiveness with acceptance of and respect for body size diversity and focus on health at every size. These approaches can include asking permission to discuss and measure weight, using de-stigmatizing terms such as “higher weight” instead of “overweight” or “obesity” and ensuring appropriate equipment is available for women of all sizes. Weight stigma in primary care can be addressed through training, self-awareness, organizational support, and cross-sector working to address social determinants of health.⁴⁰

Assessment and Management of Emotional Well-Being

PCPs play a vital role in assessing and managing psychological features of PCOS, and should be aware of the substantial need to detect and manage these in women and adolescents with PCOS. The importance of addressing emotional well-being in women and adolescents with PCOS is highlighted in the 2023 guideline, with anxiety and depression considered to be core features of PCOS. Women with PCOS are at significantly higher risk of moderate to severe anxiety and depressive symptoms, lower quality of life, negative body image, and eating disorders/disordered eating. However,

although depression and anxiety are some of the most commonly treated disorders in primary care,^{41,42} a survey of women with PCOS in the United Kingdom reported that many women with psychological features had not discussed these with their PCP.²² This may reflect a general lack of awareness of the association between PCOS and poorer mental health with few PCPs selecting mood disorders as a key feature of PCOS in one study.⁴³

There is a need to increase awareness among PCPs about the importance of assessing women and adolescents with PCOS for psychological comorbidities. Multilevel barriers to effective primary care management of depression in the general population include limited time to manage psychological conditions and lack of access to mental health specialists, as well as the stigma of mental health.⁴⁴ There is evidence that longer consultations in general practice are associated with improved quality of care of people with psychological problems.⁴⁵ Optimizing the management of psychological features in PCOS in primary care will require increased awareness about the importance of assessment of emotional well-being, access to tools and training to assist with management, and systemic and policy changes that facilitate longer consultations and increased access to mental health clinicians.

Multidisciplinary Teams

Equitable access to evidence-based primary care with pathways to escalation to integrated specialist and multidisciplinary services are required for optimal management of PCOS.¹¹ PCPs play a vital role as coordinators of care within a multidisciplinary team, and providers of continuity of care, therefore reducing the risk of fragmentation of care. In many countries, GPs are “gatekeepers” to access to other services and are responsible for ensuring appropriate referrals to other team members. Patients and carers should be central to care, with allied health (psychologists, dietitians, exercise physiologists and nurses) and other medical specialists (endocrinologists, gynecologists, fertility specialists, psychiatrists, and dermatologists) contributing to team-based care as required. Care of the woman or adolescent with PCOS must focus on patient empowerment, education and provision of adequate information, and each patient’s individual priorities.

Multidisciplinary approaches are seen as facilitators of optimal management of PCOS by PCPs.^{25,26} Yet, there is little research on the barriers to accessing multidisciplinary care of women with PCOS. Cost and availability of allied health/non-GP medical specialists have been cited as key barriers, which may be more pronounced in rural or remote areas or in certain sociodemographic groups.²⁶ In chronic disease management in general, practice nurses may play a role in supporting GPs in care coordination and case management.

Effective communication is a key factor in successful multidisciplinary teams, and there is evidence that physicians prefer face-to-face communication over non face to face.⁴⁶ However, face-to-face communication is often not possible or feasible, and the use of established systems for team

communication can assist communication, and sharing of contemporaneous clinical data is essential. Other strategies for successful team collaboration on chronic disease management include shared consultations/case conferencing, shared goals,⁴⁶ and clarity of team roles.⁴⁷ Empowering PCPs so that they can carry out their defined tasks is vital to avoid confusion about roles and tasks. Policies supporting multidisciplinary care and attention to the complex implementation needs of such policies are needed to ensure optimal care.⁴⁷

Conclusion

Primary care physicians play an essential role as the point of first contact for women and adolescents with suspected PCOS, providers of whole-person care and continuity of care, and coordinators of care within a multidisciplinary team. Optimal management of PCOS requires equitable access to primary care. There is a need for systemic approaches to addressing barriers to provision of quality primary care, such as poor remuneration of longer consultations and low awareness of evidence-based guidelines, to women and adolescents with PCOS.

Conflict of Interest

C.E. declares that she is a member of the Royal Australian College of General Practitioners Expert Committee – Research and receives a sitting fee for committee meetings; deputy chair of the RACGP Specific Interests Council (unpaid); and guideline development group member, International Evidence-Based Guideline on the Assessment and Management of PCOS 2023 (received support to attend meetings but otherwise unpaid). As a medical research institute, NICM Health Research Institute receives research grants and donations from foundations, universities, government agencies, and industry. Sponsors and donors provide untied and tied funding for work to advance the vision and mission of the institute.

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References

- Starfield B, Shi L, Macinko J. Contribution of primary care to health systems and health. *Milbank Q* 2005;83(03):457–502
- American Academy of Family Physicians. Primary Care. Accessed August 7, 2023 at: <https://www.aafp.org/about/policies/all/primary-care.html>
- Royal Australian College of General Practitioners. What is General Practice? Accessed August 7, 2023 at: <https://www.racgp.org.au/education/students/a-career-in-general-practice/what-is-general-practice>
- Sawicki OA, Mueller A, Klaaßen-Mielke R, et al. Strong and sustainable primary healthcare is associated with a lower risk of hospitalization in high risk patients. *Sci Rep* 2021;11(01):4349
- Reynolds R, Dennis S, Hasan I, et al. A systematic review of chronic disease management interventions in primary care. *BMC Fam Pract* 2018;19(01):11
- Ding H, Chen Y, Yu M, et al. The effects of chronic disease management in primary health care: evidence from rural China. *J Health Econ* 2021;80:102539
- Zhao Y, Thomas SL, Guthridge SL, Wakerman J. Better health outcomes at lower costs: the benefits of primary care utilisation for chronic disease management in remote Indigenous communities in Australia's Northern Territory. *BMC Health Serv Res* 2014;14(01):463
- Andrew NE, Ung D, Olaiya MT, et al. The population effect of a national policy to incentivize chronic disease management in primary care in stroke: a population-based cohort study using an emulated target trial approach. *Lancet Reg Health West Pac* 2023;34:100723
- Hone T, Macinko J, Trajman A, et al. Expansion of primary health-care and emergency hospital admissions among the urban poor in Rio de Janeiro Brazil: a cohort analysis. *Lancet Reg Health Am* 2022;15:100363
- Bozdag G, Mumusoglu S, Zengin D, Karabulut E, Yildiz BO. The prevalence and phenotypic features of polycystic ovary syndrome: a systematic review and meta-analysis. *Hum Reprod* 2016;31(12):2841–2855
- Teede H, et al. International evidence-based guideline for the assessment and management of polycystic ovary syndrome 2023. Monash University. Available at: <https://doi.org/10.26180/24003834.v1>. Accessed October 23, 2023
- Australian Bureau of Statistics. Patient Experiences. Accessed August 7, 2023 at: <https://www.abs.gov.au/statistics/health/health-services/patient-experiences/latest-release#cite-window1>
- Kontopantelis E, Panagioti M, Farragher T, et al. Consultation patterns and frequent attenders in UK primary care from 2000 to 2019: a retrospective cohort analysis of consultation events across 845 general practices. *BMJ Open* 2021;11(12):e054666
- National Center for Health Statistics. National Ambulatory Medical Care Survey: 2019 National Summary Tables. 2019. Accessed August 7, 2023 at: https://www.cdc.gov/nchs/data/ahcd/namcs_summary/2019-namcs-web-tables-508.pdf
- Starfield B, Lemke KW, Bernhardt T, Foldes SS, Forrest CB, Weiner JP. Comorbidity: implications for the importance of primary care in 'case' management. *Ann Fam Med* 2003;1(01):8–14
- Gunn JM, Palmer VJ, Naccarella L, et al. The promise and pitfalls of generalism in achieving the Alma-Ata vision of health for all. *Med J Aust* 2008;189(02):110–112
- Heald AH, Livingston M, Holland D, et al. Polycystic ovarian syndrome: assessment of approaches to diagnosis and cardiometabolic monitoring in UK primary care. *Int J Clin Pract* 2018;72(01):.. Doi: 10.1111/ijcp.13046
- Lawrenson R, Gibbons V, Nair P, et al. Polycystic ovary syndrome: a review of cases from general practice. *J Prim Health Care* 2014;6(04):328–330
- Mousa A, Tay CT, Teede H. Technical Report for the International Evidence-based Guideline for the Assessment and Management of Polycystic Ovary Syndrome. 2023. Accessed October 13, 2023 at: https://www.monash.edu/_data/assets/pdf_file/0010/3379591/TechnicalReport-2023.pdf
- Avery JC, Braunack-Mayer AJ. The information needs of women diagnosed with polycystic ovarian syndrome – implications for treatment and health outcomes. *BMC Womens Health* 2007;7:9
- Ismayilova M, Yaya S. "I felt like she didn't take me seriously": a multi-methods study examining patient satisfaction and experiences with polycystic ovary syndrome (PCOS) in Canada. *BMC Womens Health* 2022;22(01):47
- Hillman SC, Bryce C, Caleyachetty R, Dale J. Women's experiences of diagnosis and management of polycystic ovary syndrome: a mixed-methods study in general practice. *Br J Gen Pract* 2020;70(694):e322–e329
- Teoh WS, Ramu D, Indran IR, Chua MWJ, Thu WPP, Yong EL. Diagnosis and management of polycystic ovary syndrome:

- perspectives of clinicians in Singapore. *Ann Acad Med Singap* 2022;51(04):204–212
- 24 Sherif K, Coborn J, Hoovler A, Gill L. Medical journey of patients with polycystic ovary syndrome and obesity: a cross-sectional survey of patients and primary care physicians. *Postgrad Med* 2023;135(03):312–320
 - 25 Copp T, Muscat DM, Hersch J, et al. The challenges with managing polycystic ovary syndrome: a qualitative study of women's and clinicians' experiences. *Patient Educ Couns* 2022;105(03):719–725
 - 26 Arasu A, Moran LJ, Robinson T, Boyle J, Lim S. Barriers and facilitators to weight and lifestyle management in women with polycystic ovary syndrome: general practitioners' perspectives. *Nutrients* 2019;11(05):1024
 - 27 Bodegård H, Helgesson G, Juth N, Olsson D, Lynøe N. Challenges to patient centredness - a comparison of patient and doctor experiences from primary care. *BMC Fam Pract* 2019;20(01):83
 - 28 Stuart B, Leydon G, Woods C, et al. The elicitation and management of multiple health concerns in GP consultations. *Patient Educ Couns* 2019;102(04):687–693
 - 29 Ismayilova M, Yaya S. What can be done to improve polycystic ovary syndrome (PCOS) healthcare? Insights from semi-structured interviews with women in Canada. *BMC Womens Health* 2022;22(01):157
 - 30 Ee C, Smith C, Moran L, et al. "The whole package deal": experiences of overweight/obese women living with polycystic ovary syndrome. *BMC Womens Health* 2020;20(01):221
 - 31 Hoffmann TC, Légaré F, Simmons MB, et al. Shared decision making: what do clinicians need to know and why should they bother? *Med J Aust* 2014;201(01):35–39
 - 32 Tan D, Zwar NA, Dennis SM, Vagholkar S. Weight management in general practice: what do patients want? *Med J Aust* 2006;185(02):73–75
 - 33 Sturgiss EA, Douglas K. A collaborative process for developing a weight management toolkit for general practitioners in Australia - an intervention development study using the Knowledge To Action framework. *Pilot Feasibility Stud* 2016;2:20
 - 34 McLaughlin JC, Hamilton K, Kipping R. Epidemiology of adult overweight recording and management by UK GPs: a systematic review. *Br J Gen Pract* 2017;67(663):e676–e683
 - 35 Booth HP, Prevost TA, Wright AJ, Gulliford MC. Effectiveness of behavioural weight loss interventions delivered in a primary care setting: a systematic review and meta-analysis. *Fam Pract* 2014;31(06):643–653
 - 36 Tsai AG, Wadden TA. Treatment of obesity in primary care practice in the United States: a systematic review. *J Gen Intern Med* 2009;24(09):1073–1079
 - 37 Harding C, Seal A, Mills N. Evaluation of a lifestyle and weight management program within rural general practice. *J Prim Care Community Health* 2022;13:21501319221084166
 - 38 Collins C, Doran G, Patton P, Fitzgerald R, Rochfort A. Does education of primary care professionals promote patient self-management and improve outcomes in chronic disease? An updated systematic review. *BJGP Open* 2021;5(03):BJGPO.2020.0186
 - 39 Gudzone KA, Bennett WL, Cooper LA, Bleich SN. Patients who feel judged about their weight have lower trust in their primary care providers. *Patient Educ Couns* 2014;97(01):128–131
 - 40 Emily H, Allison N, Joanne C, Erica G, Emily H. How can primary care help to reduce weight stigma? *Br J Gen Pract* 2018;68(01):18
 - 41 Brody DS, Hahn SR, Spitzer RL, et al. Identifying patients with depression in the primary care setting: a more efficient method. *Arch Intern Med* 1998;158(22):2469–2475
 - 42 Combs H, Markman J. Anxiety disorders in primary care. *Med Clin North Am* 2014;98(05):1007–1023
 - 43 Teede H, Gibson-Helm M, Norman RJ, Boyle J. Polycystic ovary syndrome: perceptions and attitudes of women and primary health care physicians on features of PCOS and renaming the syndrome. *J Clin Endocrinol Metab* 2014;99(01):E107–E111
 - 44 Chen S, Conwell Y, Cerulli C, Xue J, Chiu HFK. Primary care physicians' perceived barriers on the management of depression in China primary care settings. *Asian J Psychiatr* 2018;36:54–59
 - 45 Hutton C, Gunn J. Do longer consultations improve the management of psychological problems in general practice? A systematic literature review. *BMC Health Serv Res* 2007;7(01):71
 - 46 Saint-Pierre C, Herskovic V, Sepúlveda M. Multidisciplinary collaboration in primary care: a systematic review. *Fam Pract* 2018;35(02):132–141
 - 47 Mitchell GK, Tieman JJ, Shelby-James TM. Multidisciplinary care planning and teamwork in primary care. *Med J Aust* 2008;188(S8):S61–S64