**Supplementary Files**

**Supplementary File 1**

**1. The background of four study sites**

We selected four study sites based on their track record of effectively providing health services to local residents over the past few years and their willingness to participate in the study. In China, most provincial health care policies are adapted from national policies with minimal changes to suit the local context. This study aimed to identify the factors that play a role in managing NCD as part of the FDCS in primary health care settings. Health policies related to FDCS are largely consistent across provinces, and health care providers are required to adhere to these policies when implementing NCD prevention and management programs in primary health care settings.

**2. The sampling method**

We used a combination of purposive sampling and snowball sampling to recruit health service providers for our study. To ensure impartial recruitment, we created a list of potential participants for each study site based on our existing contacts and publicly available information from organizational websites. We then sent emails to all potential participants to confirm their willingness to take part. During the interviews, we also used snowball sampling to identify additional participants. Community-dwelling individuals were recruited through their local primary healthcare providers.

**Supplementary 2**

**Evaluation of the Implementation of NCD Management in the Family Physician Contracting Service Model Based on the RE-AIM Framework from the perspective of stakeholders.**

**Start by reviewing the information sheet and securing written informed consent.**

1. Introduction of the interviewer

2. Explain the purpose of the research

3. Specify the scope and duration of the interview

4. Clearly outline the rights of participants regarding withdrawing from the interview

5. Discuss confidentiality and the use of data

6. Obtain written informed consent from the participants

**Interview outline: (1) Health policy makers**

**Reach:** Do you believe that the measures related to NCD management, such as prioritizing the inclusion of NCD patients within the scope of contracted services provided by family doctors, expanding implementation of the National Essential Drugs System to achieve full coverage at the primary level, and improving the system of ensuring medicine supply adequately meet the actual demand for healthcare services? What is the coverage of these policies or measures? How can higher population coverage be achieved?

**Effectiveness:** How do you evaluate the evolution of existing policies related to chronic disease management from the central to the local level? What are the difficulties and obstacles encountered? What factors have contributed to regional differences in policy evolution? How effective have these policies been in their implementation? What factors influence their effectiveness? How does your primary healthcare organization assess and measure policy effectiveness?

**Achievement:** What is the local uptake of measures related to chronic disease management? How does your department ensure that these policies are well accepted and adopted by health service providers, patients with chronic diseases, and their families?

**Implementation:** Overall, how do you perceive the process of implementing measures related to chronic disease management on the ground? What are the facilitating and hindering factors? Is your current work related to chronic disease management? What is the reality of the implementation process of these policies? What factors affect the quality and effectiveness of policy implementation?

**Maintenance:** Do you think that the existing interventions related to chronic disease management under the contracted family doctor service model are sustainable? How do you ensure the long-term sustainability of these policies or interventions? What are the methods for long-term performance evaluation?

**Interview outline: (2) Health service providers**

**Reach:** Do you think that the measures related to chronic disease management—such as prioritizing the inclusion of chronic disease patients within the scope of contracted services provided by family doctors, expanding the implementation of the National Essential Drugs System to achieve full coverage at the primary care level, and improving the system of ensuring medicine supply—adequately meet the actual demand for healthcare services? What is the coverage of these policies or measures? How can higher population coverage be achieved?

**Effectiveness:** Based on your experience, do you find the existing chronic disease management effective? What difficulties or challenges do you encounter in its implementation?

**Achievement:** How do you evaluate the acceptance of the existing health management services for hypertensive and diabetic patients among the target audience? What is the level of acceptance of these interventions among health managers, patients with chronic diseases, and their families? What factors hinder or promote acceptance and adoption?

**Implementation:** Have you been involved in the implementation process of chronic disease management? Can you describe your specific role (e.g., prescribing medication, documentation, referrals and follow-ups, health education)? What is the reality of policy implementation? What factors affect the quality and effectiveness of implementation? What challenges or successes have you encountered during the implementation process?

**Maintenance:** What do you think is the best approach to ensure the sustainability of policies or interventions such as the family doctor contracted service, which has a long-term impact? If the implementation is not sustainable, what areas should be strengthened?

**Interview outline: (3) NCD Patients**

**Reach:** Do you think that the measures related to chronic disease management—such as prioritizing the inclusion of chronic disease patients within the scope of contracted services provided by family doctors, expanding the implementation of the National Essential Drugs System to achieve full coverage at the primary care level, and improving the system of ensuring medicine supply—adequately meet the actual demand for healthcare services? What is the coverage of these policies or measures? How can higher population coverage be achieved?

**Effectiveness:** Have you observed any improvement or change in your health after receiving chronic disease management services? Can you provide specific examples (e.g., blood glucose or blood pressure control, lifestyle improvements)? If there was no improvement, what do you think might be the cause?

**Achievement:** Do you support the chronic disease management measures provided by the contracted family doctor service? What factors have facilitated or hindered your or your family's acceptance of these measures?

**Implementation:** Did you encounter any problems or difficulties in implementing measures related to chronic disease management? What is the reality of the implementation process? Which aspects (e.g., human, material, financial resources) need to be strengthened to support the effective implementation of chronic disease prevention and control management?

**Maintenance:** Are you willing to renew policies or interventions that have a long-term impact, such as the contracted family doctor service? If not, what improvements should be considered to strengthen the family doctor team?