مرکز تحقیقات سیاستگذاری سلامت
Health Policy Research Center

برنامه پزشکی خانواده شهری در طی یک دهه اخیر در ایران:
چالش‌ها و راهکارها

مجریان:
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فهرست

مقدمه

پزشکان خانواده همواره به عنوان نخستین خط ارائه خدمات مراقبت سلامت به عموم جامعه در نظر گرفته می‌شوند. بر اساس گزارش سازمان بهداشت جهانی، ارائه خدمات سلامت در قالب پزشک خانواده رویکردی مطلوب در مسیر ارتقای کیفیت خدمات مراقبت سلامت و نیز هزینه‌اثربخش معرفی شده است (1). در واقع، برنامه پزشک خانواده با تقویت نظام ارجاع باعث می‌شود تا پاسخگویی نظام سلامت و دسترسی به خدمات سلامت افزایش یافته و درکنار کاهش هزینه‌های غیرضروری، پوشش خدمات نیز افزایش قابل توجهی داشته باشد (2). بر اساس تعریف ارائه شده از سوی آکادمی اروپایی مدرسان پزشکان خانواده، پزشک خانواده اولین نقطه ارتباط مردم با نظام سلامت بوده و ارائه دهنده طیفی از خدمات از هنگام تولد تا مرگ دریافت‌کننده خدمت می‌باشد (3). بر اساس شواهد موجود، بسیاری از کشورها دریافته‌اند که داشتن برنامه پزشک خانواده مناسب‌ترین راهبرد در مسیر دستیابی به عدالت، کارآیی و اثربخشی می‌باشد (4).

برنامه پزشکی خانواده در ایران برای نخستین بار در سال ۱۳۸۳ و در برنامه چهارم توسعه (بند ب ماده ۹۱) مورد تأکید قرار گرفت و در سال ۱۳۸۴، برنامه عملیاتی آن با هدف اصلاح و تقویت نظام ارجاع طراحی شد (5). به دنبال این طرح، ظرف مدت شش ماه تعدادی متعددی پزشک عمومی و ماما به منظور اشتغال در پایگاه‌های سلامت در راستای ارائه خدمات مراقبت سلامت در مناطق روستایی، عشایرنشین و شهری زیر ۲۰ هزار نفر استخدام شدند. در واقع، تلاش بر این بود تا با اجرای برنامه پزشک خانواده، ضمن کاهش هزینه‌های نظام مراقبت سلامت، گام‌های مستحکم‌تری به منظور بهره‌مندی به موقع افراد از خدمات سلامت، پیشگیری از بسیاری از بیماری‌ها و نیز ارتقای کیفیت خدمات برداشته شود (6). در برنامه پزشک خانواده، پزشک عمومی و تیم وی، مسئولیت کامل پایش وضعیت سلامتی افراد و نیز پیگیری وی پس از ارجاع به سطوح تخصصی‌تر را بر عهده دارند.

در گام بعدی و در سال ۱۳۸۹، برنامه پزشک خانواده شهری بصورت پایلوت در ۱۷ شهر با جمعیت بین ۲۰ تا ۵۰ هزار نفر در سه استان خوزستان، سیستان و بلوچستان و چهارمحال و بختیاری به اجراء درآمد و مشکلات مربوطه شناسایی شدند. سپس، در سال ۱۳۹۱ و بر طرف نمودن چالش‌های یافت شده، برنامه پزشک خانواده شهری در دو استان فارس و مازندران به اجراء درآمد (7).

بر اساس قانون برنامه چهارم توسعه، وزارت بهداشت، درمان و آموزش پزشکی مکلف شده بود که تا پایان برنامه چهارم توسعه، برنامه پزشک خانواده را در سراسر کشور به اجراء دربیاورد. با این حال، وجود چالش‌های مختلف تأمین مالی، تولیتی، ساختاری و اجرایی باعث شد تا این هدف محقق نگردد (8). در پاسخ به چنین شرایطی، این مطالعه کیفی که از سوی مرکز تحقیقات سیاستگذاری سلامت وابسته به دانشگاه علوم پزشکی شیراز به انجام رسیده است، تلاش نموده است تا با انجام یک مطالعه ترکیبی (مروری بر مطالعات پیشین و انجام مطالعه کیفی با مدیران، تصمیم‌گیرندگان، سیاستگذاران (ملی و استانی)، تیم پزشکی خانواده و نیز ساکنین استان فارس) چالش‌های برنامه پزشکی خانواده را مورد بررسی قرار داده و راهکارهایی به منظور بهبود آن ارائه می‌گردد.

روش کار

مطالعه حاضر تلاش کرده است تا در ارتباط با چالش‌های برنامه پزشکی خانواده شهری در ایران در طی یک دهه اخیر، با انجام مصاحبه‌های کیفی به شناخت دیدگاه‌های متخصصان و سیاستگذاران مربوطه در ارتباط با برنامه پزشکی خانواده شهری بپردازد. همچنین، در بخش دوم این مطالعه، مروری انجام شده است بر تمامی شواهد علمی منتشر شده در ارتباط با برنامه پزشکی خانواده شهری در ایران. این مطالعه با حمایت دانشگاه علوم پزشکی شیراز در مرکز تحقیقات سیاستگذاری سلامت این دانشگاه به انجام رسیده است (9).

یافته‌ها

یافته‌های این مطالعه بر اساس اجزای چارچوب Six building blocks (شامل: تولیت، تأمین مالی، ارائه خدمات، نیروی انسانی، نظام اطلاعاتی و تجهیزات و فناری‌های پزشکی) در ادامه ارائه خواهند شد.

چالش‌های مرتبط با تولیت برنامه پزشکی خانواده

در ارتباط با تولیت (رهبری بین‌بخشی و حاکمیت درون‌بخشی) این برنامه چالش‌های متعددی در این مطالعه یافت شد که به اختصار در ادامه به آنها اشاره می‌کنیم:

- عدم وجود یک ستاد ملی به منظور تسهیل هماهنگی‌های بین‌بخشی
- برنامه‌ریزی متمرکز
- عدم بهره‌گیری از نتایج برنامه‌های پایلوت در اجرای برنامه اصلی
- عدم وجود یک زمانبندی منطقی در انجام اقدامات مربوطه (با اینکه برنامه پزشکی خانواده روستایی در سال ۱۳۸۳ شروع شد، اما ۱۰ سال هیچ خبری از آن نشد تا سال ۱۳۹۱ که برنامه شهری شروع شد!)
- نبود نظام ارزشیابی اثربخش
- عدم اجرای برنامه بصورت پایلوت پیش از اجرای کامل آن
- عدم توجه به مشکلات موجود بیمه‌های سلامت
- عدم فرهنگ‌سازی مناسب
- نبود الزامات قانونی برای اجرای این برنامه
- عدم وجود عوامل تسهیل‌کننده در قوانین
- تأخیر در ابلاغ تفاهم‌نامه‌ها
- عدم اجرای سیاست وضع شده مطابق با مفاد دستورالعمل‌ها و قوانین
- عدم اجرای کامل پرونده الکترونیک سلامت
- عدم توجه به فرابخش‌بودن طرح پزشکی خانواده
- ضعف در آموزش همگانی در زمینه پزشکی خانواده

راهکارهای بالقوه به منظور تقویت تولیت برنامه پزشکی خانواده

کوتاه مدت

- تقویت نقش دولت در برنامه
- برنامه‌ریزی چند جانبه
- اجرای گام به گام برنامه
- در نظر گرفتن شاخص‌های عملکردی دقیق برای
- ارتقای کیفیت خدمات ارائه شده
- تفویض اختیار و برنامه‌ریزی غیرمتمرکز با توجه به شرایط و نیازهای هر منطقه

میان مدت

- حمایت‌طلبی از گروه‌های سیاسی
- مرور و روزآمد نمودن مستمر قوانین و مقررات مربوطه
- ایجاد نظام‌های پایش و ارزشیابی اثربخش
- ایجاد نهاد ناظر با همکاری وزارت بهداشت، بیمه‌ها و شوراهای اسلامی به منظور
- امکان‌پذیر نمودن نظارت ۳۶۰ درجه
- وضع قوانین و مقرارت الزام‌آور
- مرور و بازبینی مستمر قوانین و مقررات
- آموزش پزشکان و سایر ارائه‌دهندگان متناسب با برنامه پزشکی خانواده
- لزوم وضع به موقع قوانین
- جلب حمایت رسانه‌ها جهت اطلاع‌رسانی صحیح و جامع

بلند مدت

- توسعه زیرساخت‌های فیزیکی و اطلاعاتی
- اتصال سامانه‌های داده به وزارت بهداشت
- اجرای کامل پرونده الکترونیک سلامت
- ارتقاء سطح سرمایه اجتماعی و نیز جلب حمایت عمومی از طریق رسانه‌های جمعی

چالش‌های مرتبط با تأمین مالی برنامه پزشکی خانواده

راهکارهای بالقوه به منظور تقویت تأمین مالی برنامه پزشکی خانواده

کوتاه مدت	دریافت هم‌پردازی از دریافت‌کنندگان خدمات به منظور کاهش تقاضای کاذب	الزام همه بیمه‌ها برای پایبندی به برنامه پزشکی خانواده	پرداخت مبتنی برپیامد (outcome-based payment) براساس شاخص‌های دقیق
میان مدت	پرداخت ترکیبی به پزشکان خانواده (سرانه، کارانه برای ویزیت موارد خاص و پرداخت مبتنی برپیامد)	در نظرگرفتن منابع مالی پایدار	افزایش منابع اختصاص یافته از سوی دولت
	لزوم جداکردن ارائه‌دهنده و خریدار خدمت در این برنامه	لزوم ستاره دارشدن بودجه‌های در نظرگرفته شده به منظور جلوگیری از هزینه‌کرد آنها در سایر برنامه‌ها	بهره‌گیری از نهادهای غیردولتی و نیز خیریه‌ها به منظور تأمین مالی برنامه
بلند مدت	تطبیق روش‌های پرداخت براساس جمعیت تحت پوشش، بسته خدمتی، تعداد افراد سالمند و کودک و زنان باردار تحت پوشش.	واقعی کردن تعرفه خدمات تخصصی و فوق تخصصی به منظور به حداقل رساندن تقاضای القایی	
	یکپارچه‌سازی و تجمیع صندوق‌های بیمه‌ای	تجمیع منابع اختصاص یافته برای برنامه پزشکی خانواده	

چالش‌های مرتبط با ارائه خدمت در برنامه پزشکی خانواده

بر اساس یافته‌های این مطالعه، فرآیند ارائه خدمات برنامه پزشکی خانواده با چالش‌هایی همراه می‌باشد که از آن جمله می‌توان به موارد زیر اشاره کرد:

- نظام ارجاع ضعیف
- عدم استفاده کافی از ظرفیت بالقوه بخش خصوصی در ارائه خدمات
- تداخلات درمیان وظایف اعضای مختلف کادر برنامه پزشکی خانواده
- ناکافی بودن زمان معاینه
- عدم امکان انتخاب متخصص توسط خود بیمار
- عدم الزام مردم برای مراجعه به موقع به پزشک خانواده
- عدم همراهی و همکاری مناسب متخصصان پزشکی (Egoistic manner of medical specialties)
- عدم اعتماد عموم نسبت به خدمات ارائه شده از سوی پزشک خانواده و سایر اعضای کادر برنامه
- ابهام و کثرت در وظایف تیم پزشکی خانواده
- برخورد نامناسب برخی از مراجعه‌کنندگان با ارائه‌دهندگان خدمات برنامه پزشکی خانواده
- محدود بودن زمان دسترسی به پزشک
- افزایش ظرفیت پذیرش هر پزشک خانواده و بیکار شدن سایر پزشکان
- فقدان تجهیزات و وسایل کافی در مناطق کمتر توسعه یافته

از همین رو، می‌توان از راهکارهای بالقوه زیر به منظور مرتفع ساختن چالش‌های مذکور استفاده نمود:

کوتاه مدت

- در نظر گرفتن دوره‌های آموزشی جامع برای ارائه‌دهندگان خدمات
- بهره‌گیری از فناوری‌های نوین نظیر خدمات آنلاین برای ارائه خدمات بویژه در مناطق محروم
- روش نمودن نقش و حیطه عملکردی هر حرفه در برنامه
- آماده سازی پروتکل‌ها و گایدلاین بالینی دقیق

میان مدت

- تقویت نظام ارجاع
- فراهم نمودن بستر امکان توسعه شغلی و فردی برای ارائه دهندگان خدمات
- تسهیل تعاملات بین حرفه‌ای
- فراهم کردن تجهیزات مورد نیاز بویژه در مناطق کمتر توسعه یافته

بلند مدت

- مشارکت دادن بخش خصوصی و نهادهای غیردولتی
- ارتقای سطح فرهنگ و آگاهی عموم جامعه نسبت به برنامه پزشکی خانواده

چالش‌های مرتبط با نیروی انسانی برنامه پزشکی خانواده

بالا بودن حجم کار و نیز ساعات کار

بی‌میلی ارائه‌دهندگان به کار در مناطق دورافتاده و محروم

وضعیت شغلی نامشخص برای کارکنان ارائه‌دهنده خدمت

نبود ساختار انگیزشی

نبود برنامه‌های آموزشی ضمن خدمت برای ارائه‌دهندگان خدمت

چالش‌های مرتبط با نیروی انسانی برنامه پزشکی خانواده

فقدان کارتیمی اثربخش

بی‌انگیزگی کارکنان

عدم توجیه مناسب پزشکان نسبت به برنامه

عدم آموزش کافی پزشکان نسبت به مسائل بهداشتی

عدم کفایت شایستگی‌های حوزه انسانی، ارتباطی و اخلاقی

راهکارهای بالقوه به منظور تقویت نیروی انسانی برنامه پزشکی خانواده

کوتاه مدت

- در نظر گرفتن مکانیزم‌های تشویقی به منظور ترغیب پزشکان و سایر حرفه‌ها برای مشارکت در این برنامه
- بهره‌گیری از مکانیزم‌های تشویقی به منظور ارائه برنامه‌های پیشگیرانه از سوی ارائه‌دهندگان خدمات
- در نظر گرفتن تسهیلات و مشوق‌های غیرمادی

میان مدت

- تسهیل بهره‌گیری از شواهد علمی به روز از سوی ارائه دهندگان خدمات برنامه پزشکی خانواده
- ارتقا هویت نقش حرفه‌ای پزشک خانواده از «کارشناس مستقل» به «سرپرست تیم»
- در نظر گرفتن استقلال و آزادی شغلی برای کارکنان نظیر ارائه خدمت در خارج از ساعات کار عادی
- بهره‌گیری از خدمات پزشکی از راه دور
- تقویت کار تیمی
- بهره‌گیری از نیروهای چندپیشه در مناطق محروم و دورافتاده

بلند مدت

- افزایش مسئولیت‌پذیری ارائه‌دهندگان و نیز دریافت‌کنندگان خدمات
- تقویت مهارت‌های ارتباطی ارائه‌دهندگان خدمات
- در نظر گرفتن ویژگی‌های فردی و شخصیتی کارکنان بویژه برای کار در مناطق محروم و دورافتاده
- بهره‌گیری از افراد بومی در مناطق محروم و آموزش دانشجویان در مناطق محروم

بحث

تولیت برنامه پزشکی خانواده شهری در ایران با چالش‌های متعددی مواجه می‌باشد. عدم ثبات مدیریت و تغییرات مداوم مدیران در ایران باعث شده است تا اجرای برنامه‌های کلان حوزه سلامت نظیر برنامه پزشکی خانواده با اختلال رو به رو شود و یا حتی از اولویت‌های نهادهای سیاستگذار خارج گردد (7, 10). علاوه بر این، انجام برنامه‌های اصلاحی و توسعه‌ای نظیر برنامه پزشکی خانواده نیازمند ثبات سیاسی و اقتصادی می‌باشد که متأسفانه با توجه به تحریم‌های بین‌المللی در دهه‌های اخیر، اجرای برنامه‌های کلانی نظیر پزشکی خانواده با موانع متعددی رو به رو شده است (7, 9, 11). مطالعات انجام شده در کشورهای مختلف دنیا هم به این نتیجه رسیده‌اند که بحران‌های سیاسی و اقتصادی اجرای برنامه‌های بهداشتی را با چالش‌های متعددی مواجه می‌سازد (12, 13). از همین رو، لازم است تا شرایط کلان سیاسی و اقتصادی جامعه را به انجام اجرای برنامه‌هایی نظیر برنامه پزشکی خانواده در نظر داشته باشیم.

سیاستگذاری و برنامه‌ریزی متمرکز از دیگر چالش‌های برنامه پزشکی خانواده در ایران است (7, 10). این در حالی است که توسعه و اجرای اثربخش سیاست‌ها مستلزم بهره‌گیری از هر دو رویکرد بالا به پایین و پایین به بالا می‌باشد (14, 15).

در واقع، رویکردهای پایین به بالا یک فرآیند تعاملی و پویا بوده و با مشارکت‌دادن ذینفعان کلیدی، عملیاتی‌تر می‌باشند. با این حال، در صورتی که رویکردهای متمرکز و بالا به پایین در نظر گرفته شوند، تعهد ذینفعان به اجرای برنامه کمرنگ خواهد شد (7, 10, 16).

سازمان بهداشتی جهانی نیز به این موضوع اشاره نموده و در نظر گرفتن رویکردهای دستوری در توسعه و اجرای سیاست‌ها را از جمله عمده‌ترین چالش‌های برنامه‌های اصلاحی نظام‌های سلامت بویژه در کشورهای در حال توسعه معرفی کرده است.

از همین رو لازم است تا با **تفویض اختیار مؤثر**، در مسیر تمرکززادیی سیاستگذاری و برنامه‌ریزی حوزه سلامت از جمله برنامه پزشکی خانواده شهری در کشور حرکت کنیم (9). برای این منظور، میتوان کمیته‌های تخصصی برنامه‌ریزی را در دانشگاه‌های علوم پزشکی مراکز استان‌ها تشکیل داد.

بحث **تعارض منافع** همواره به عنوان یکی از مهمترین مسائل در برنامه‌ریزی و اجرای طرح پزشکی خانواده در ایران مطرح بوده است (7, 9, 17). از جمله موارد این تعارض منافع می‌توان به حضور متخصصان رشته‌های مختلف پزشکی در کمیته‌های برنامه‌ریزی و سیاستگذاری و نیز جایگاه‌های مدیریتی وزارت بهداشت اشاره کرد. به روشنی مشخص است که برنامه پزشکی خانواده تلاش دارد تا سلامت افراد جامعه را در سطح اول مدیریت نموده و مراجعه غیرضروری به متخصصان پزشکی را کاهش دهد. وضعیتی که می‌تواند تقاضا برای دریافت خدمات تخصصی را کاهش دهد (14). علاوه بر این، می‌توان تعارض منافع ساختاری را هم مشاهده کرد. به این صورت که کاهش مراجعه به متخصصان پزشکی دانشگاه‌های علوم پزشکی می‌توان درآمد اختصاصی این دانشگاه‌ها را بصورت چشمگیری کاهش دهد. در واقع، رویکرد تخصص‌محور و درمان‌محور نظام سلامت ایران با رویکرد سلامت‌محور طرح پزشکی خانواده در تعارض است (7).

از همین رو، طراحی برنامه پزشکی خانواده باید به گونه‌ای باشد که نه تنها تهدیدی برای ذیفنعان مختلف نباشد، بلکه هم‌سویی و همگرایی این ذینفعان را به دنبال داشته باشد. در برنامه پزشکی خانواده ترکیه، پرداخت به پزشکان متخصص بصورت حقوق صورت می‌گیرد و نه به ازای ارائه هر خدمت، همین موضوع باعث شده است تا بین پزشکان خانواده و پزشکان متخصص تعارض منافع کمتری وجود داشته باشد (18). با این حال، وجود تعارض منافع شدید بین پزشکان خانواده و پزشکان متخصص را می‌توان در برنامه‌های پزشک خانواده کشورهایی نظیر ایالات متحده و آلمان هم مشاهده کرد (19ـ21). بر اساس شواهد علمی موجود، می‌توان از راهکارهای متعددی به منظور کاهش تعارض منافع برنامه پزشکی خانواده در ایران استفاده کرد از جمله: توسعه سامانه‌های پایش اطلاعات به منظور شفافیت در منافع سیاستگذاران و مدیران، بهره‌گیری از همه ذیفنعان کلیدی در سیاستگذاری و برنامه‌ریزی طرح، استفاده از متخصصان غیربالینی در جایگاه‌های مدیریتی و کاهش تفاوت درآمدی در میان پزشکان خانواده و سایر متخصصین (9).

عدم شفافیت و پاسخگویی از دیگر چالش‌های قابل توجه برنامه پزشکی خانواده شهری در ایران است (2, 10, 22, 23). در واقع، هنگامی می‌توانیم به اهداف از پیش تعیین شده برنامه پزشکی خانواده دست پیدا کنیم که یک نظام شفاف و پاسخگو وجود داشته باشد. بدون وجود مکانیزم‌های پایش و ارزشیابی اثربخش و به دنبال آن فرآیندهای مسئولیت‌پذیری و پاسخگویی، دستیابی به کارآیی و اثربخش در برنامه‌ها معنایی نخواهد داشت (9). موضوعی که توسط مطالعات داخلی و بین‌المللی هم مکرراً مورد تأکید قرار گرفته شده است.

در مطالعه حاضر پیشنهاد شده است تا یک نهاد ناظر با مشارکت وزارت بهداشت، بیمه‌ها، مجلس شورای اسلامی و شوراهای اسلامی شهر به منظور امکان‌پذیر نمودن نظارت ۳۶۰ درجه ایجاد گردد. در این ساختار پیشنهادی، ارزیابی کیفیت خدمات ارائه شده توسط وزارت بهداشت، ارزیابی هزینه خدمات توسط بیمه‌ها و ارزیابی میزان رضایت مردم توسط مجلس شورای اسلامی و شوراهای اسلامی شهر انجام خواهد شد.

متناسب نبودن آموزش پزشکان خانواده با نیازهای برنامه پزشکی خانواده از دیگر چالش‌های جدی این برنامه طی یک دهه اخیر بوده است.

در واقع، فقدان کوریکولوم‌های آموزشی مناسب، نبود راهنماهای بالینی جامع و روزآمد، بیمارستان محور بودن آموزش‌های بالینی و تمرکز بر مداخلات درمانی تا مداخلات پیشگیرانه و جامع‌نگر باعث شده‌اند تا نظام آموزش پزشکی کشور نتواند کارآیی لازم را داشته باشد (24ـ26). بر اساس مطالعات انجام شده، تربیت پزشکان خانواده با استفاده از سرفصل‌های آموزشی به روز و متناسب، پیش‌نیاز مهم اجرای برنامه پزشکی خانواده می‌باشد (27). نکته قابل تأمل این است که اصلاحات در نظام آموزش پزشکی می‌بایست متناسب با نیازهای جامعه ایران صورت گیرد. از آنجا که آموزش پزشکی تحت تأثیر شرایط اجتماعی و اقتصادی می‌باشد، وضعیت داخلی کشور را باید در هر گونه اصلاح در سرفصل‌های آموزشی در نظر داشته باشیم. با وجود اینکه گرایش به سمت تخصص‌های پزشک خانواده در سطح جهان رو به افزایش است، اما چنین تمایلی در میان پزشکان ایرانی دیده نمی‌شود.

عوامل مختلفی در بروز چنین شرایطی نقش دارند که از آن جمله می‌توان به عدم تمایل بیماران به مراجعه به پزشکان خانواده و نظام پرداخت ناعادلانه اشاره کرد (27, 28).

بر اساس مطالعات انجام شده، **عدم فرهنگ سازی** و آگاه‌سازی عموم نسبت به نظام ارجاع و برنامه پزشکی خانواده از جمله موانع اصلی این برنامه بوده است (9). در جامعه کنونی ایران، گرایش غالب میان عموم مردم به مراجعه به پزشکان متخصص می‌باشد تا مراجعه به پزشک خانواده. بنابراین، لازم است تا با بهره‌گیری از رسانه‌های جمعی، آگاهی عموم را نسبت به خدمات پزشکان خانواده ارتقاء داده و به موازات آن، با مکانیزم‌های سخت‌گیرانه بستر لازم برای تقویت نظام ارجاع را فراهم آوریم. چنین امری نیازمند مشارکت جامعه و نیز پزشکان خانواده و متخصصان می‌باشد (17, 28_30).

نظام ارجاع مجموعه فرآیندهایی است که مسیر حرکت و ارتباط فرد را در سطوح مختلف، برای دریافت خدمات موردنیاز به منظور تأمین جامعیت و تداوم خدمات سلامت تعیین می‌کند. اهمیت نظام ارجاع از آن جهت است که حدود ۸۰ تا ۹۰ درصد از مراقبت‌های بهداشتی-درمانی در همان سطح اول خدمات قابل تشخیص و ارائه می‌باشند که نتیجه آن کاهش بار وارده بر سطوح تخصصی می‌باشد (8). متأسفانه کیفیت نظام ارجاع در کشور ایران چندان مناسب نیست. یکی از چالش‌های عمده برنامه پزشکی خانواده شهری، بروز پدیده‌ای تحت عنوان «ارجاع معکوس (ارجاع نامطلوب)» است که در طی آن مراجعه بیمار به پزشک خانواده خود صرفاً به منظور دریافت کد ارجاع به پزشکان سطوح بالاتر انجام می‌باشد (9). بر اساس مطالعات انجام شده، بسیاری از ارجاعات پزشکان خانواده به سطوح بالاتر با اصرار بیمار انجام می‌شود و تنها تعداد کمی از بیماران پس از دریافت خدمات تخصصی، به پزشک خانواده ارجاع‌دهنده باز می‌گردند (17).از همین رو، لازم است تا تیم پزشک خانواده تلاش‌های بیشتری را به منظور جلب اعتماد بیماران انجام دهد.کمبود پزشک خانواده و سایر کارکنان برنامه پزشکی خانواده بویژه در مناطق محروم و دورافتاده از دیگر چالش‌های عمده این برنامه می‌باشد. بر اساس تحقیقات انجام شده، کمبود پزشک خانواده هم در کشورهای توسعه‌یافته و هم در کشورهای در حال توسعه قابل مشاهده است (34_36). عوامل مختلفی در بروز چنین کمبودی نقش دارند که از آن جمله می‌توان به ناشناخته بودن پزشکی خانواده و نیز عدم جذابیت کافی این تخصص در میان دانشجویان پزشکی اشاره کرد (9, 28). در کشورهایی نظیر ایران که پزشکان خانواده در واقع همان پزشکان عمومی می‌باشند، معمولاً نگاهداشت و حفظ آنها به عنوان پزشکان خانواده دشوار است. همچنین، در کشورهایی که پزشک خانواده یک تخصص محسوب می‌شود هم دانشجویان تحت تأثیر درآمد، فرصت‌های پژوهشی، شهرت و... ممکن است به دنبال دیگر تخصص‌های پزشکی بروند. از همین رو، لازم است تا با آگاه‌سازی جامعه و نیز حوزه سلامت نسبت به خدمات پزشکان خانواده، دیدگاه نسبت به این تخصص را ارتقاء بخشیده و با در نظر گرفتن مکانیزم‌های پرداخت اثربخش و فراهم کردن بستر توسعه شغلی، شرایط لازم برای ترغیب دانشجویان پزشکی به این حیطه را افزایش داد (9, 37, 38).

همچنین، می‌توان از رویکردهای خلاقانه‌ای نظیر استفاده از خدمات «پزشکی از راه دور» برای ارائه خدمات پزشکی خانواده در مناطق محروم و دورافتاده استفاده کرد (9).

با توجه به توسعه زیرساخت‌های ارتباطی در ایران کنونی، بهره‌گیری از این راهبرد می‌تواند بسیار موفقیت‌آمیز باشد. همچنین، می‌توان از «**نیروهای چندپیشه آموزش دیده**» که قادر به ارائه طیفی از خدمات اولیه به جمعیت تحت پوشش می‌باشند، بار و حجم کاری وارده بر پزشکان خانواده را مدیریت کرد. این نیروها را می‌توان از مردم بومی همان مناطق که دارای مدارک دیپلم یا کارشناسی می‌باشند انتخاب و با برگزاری دوره‌های آموزشی کوتاه مدت، توانمندی لازم برای ارائه طیفی از خدمات ابتدایی پزشک خانواده را در آنها ایجاد کرد.

از دیگر چالش‌های اساس برنامه پزشکی خانواده شهری در ایران که در کشورهای دیگر هم وجود دارد، نبود بسته استانداردی از خدمات می‌باشد. همچنین، توافق روشنی نیز در ارتباط با تعریف بسته خدمات برنامه پزشکی خانواده وجود ندارد (7). بر اساس مطالعات انجام شده، بسیاری از کشورهای در حال توسعه در ارائه خدمات بر اساس بسته تعریف شده از خدمات سلامت اساسی موفق نبوده‌اند (28, 39). شواهد علمی تأکید دارند که بسته خدمات پزشکی خانواده می‌بایست متناسب به موقعیت اجتماعی، اقتصادی و دموگرافیک هر منطقه تدوین شود. همچنین با توجه به بار بیماری‌های روانی و نیز بیماری‌های اسکلتی-عضلانی در ایران، خدمات اولیه مرتبط با این اختلالات می‌بایست در بسته خدمات پزشکی خانواده گنجانده شوند (9). تیم پزشکی خانواده به منظور ارائه خدمات کارآمد و اثربخش نیازمند اطلاعات دقیق و یکپارچه است. از همین رو، مدیریت و یکپارچه‌سازی داده‌ها از منابع مختلف، ایجاد پرونده‌های الکترونیک سلامت جامع و توسعه سیستم‌های اطلاعات سلامت حائز اهمیت فراوان است. با وجود آنکه در نسخه ۰۲ برنامه پزشکی خانواده بر ایجاد و توسعه پرونده الکترونیک سلامت تأکید شده است، اما در عمل سامانه های متعددی از جمله سیب و سپاس، سیمای سرطان، سینا و... در وزارت بهداشت ایجاد شدند که هر کدام اطلاعات بخشی از خدمات را ثبت کرده و هیچگونه یکپارچگی در میان آنها وجود ندارد (9, 14). علاوه بر این، بخش خصوصی نیز به بسیاری از سامانه‌ها دسترسی ندارد. این در حالی است که کشورهای پیشرو در حوزه پزشکی خانواده تلاش نموده‌اند تا با ایجاد پرونده‌های الکترونیک سلامت جامع، دسترسی تمامی ارائه‌دهندگان خود به تاریخچه سلامت مراجعه‌کنندگان را تضمین کنند. در انگلستان، هر جا که فرد به یک پزشک عمومی از نظام طب ملی مراجعه کند، برای وی یک پرونده الکترونیک سلامت تشکیل می‌شود. در این پرونده، اطلاعات سلامت مربوط به بیمار در مکان‌های مختلف از جمله مراکز نظام طب ملی، بیمارستان‌ها، مراکز دندانپزشکی و... ثبت می‌شود. از سال ۲۰۱۵ این امکان فراهم شده است تا بیماران به پرونده‌های الکترونیک سلامت خود دسترسی داشته باشند چرا که سیاستگذاران سلامت انگلستان معتقدند که چنین دسترسی می‌تواند افراد را از وضعیت سلامت خود آگاه نموده و خودمراقبتی را افزایش دهد (28). در ایران نیز تقویت برنامه پزشکی خانواده منوط به ایجاد و توسعه پرونده الکترونیک سلامت است تا بستر لازم برای ارتباط بین ارائه‌دهندگان مختلف خدمات سلامت فراهم شده و امکان ردگیری وضعیت سلامت مردم فراهم آید (7, 9, 40). **تأمین مالی** نظام سلامت و برنامه‌هایی نظیر برنامه پزشکی خانواده از چهار مسیر اصلی شامل بودجه دولت، نهادهای بیمه‌گر، پرداختی مستقیم از سوی دریافت‌کنندگان خدمات و نیز کمک مالی خیرین و نهادهای غیردولتی به انجام می‌رسد (41). وجود منابع مالی پایدار ضرورت دوام هر برنامه‌ای از جمله برنامه پزشکی خانواده می‌باشد.

متأسفانه در سالیان اخیر و با وضع تحریم‌های ظالمانه بین‌المللی و کاهش چشمگیر درآمدهای نفتی، منابع مالی نظام سلامت از جمله برنامه پزشکی خانواده با چالش‌هایی مواجه بوده است (37). از همین رو و با توجه به تجارب بین‌المللی، لازم است که از درآمدهای مالیاتی و نیز نهادهای بیمه‌گر به عنوان مأخذ اصلی تأمین مالی برنامه پزشکی خانواده استفاده شود، به گونه‌ای که پرداخت مستقیم از جیب کمترین سهم را داشته باشد (17, 37). در ارتباط با منابع مالیاتی، لازم است تا **درآمدهای مالیاتی** مرتبط ستاره‌دار شوند تا به سمت سایر برنامه‌ها سوق داده نشوند (9).

همچنین، چالش‌های متعددی بویژه در ارتباط با مشارکت نهادهای بیمه‌گر در این طرح وجود دارد. چرا که هر کدام از بیمه‌گران حوزه سلامت بسته‌های مختلفی از خدمات را با شرایط پوشش مالی متفاوت تعریف کرده‌اند. علاوه بر این، انباشت ریسک اثربخش در این صندوق‌ها که یکی از ارکان حیاتی تأمین مالی عادلانه نظام سلامت می‌باشد، به خوبی انجام نمی‌شود. بنابراین، با توجه به اینکه ادغام این صندوق‌ها تقریباً غیرممکن است، می‌بایست الزاماتی برای یکپارچه کردن بسته خدمت پزشکی خانواده برای تمام صندوق‌های بیمه وضع شده و نقش آنها به عنوان خریدار خدمات پزشکی خانواده پُررنگ‌تر شود (9).

مکانیزم‌های جبران خدمت برنامه پزشکی خانواده همواره مورد بحث و بررسی بوده‌اند. از مکانیزم‌های مختلفی به منظور جبران خدمت اعضای تیم پزشکی خانواده در سطح جهان استفاده می‌شود که از آن جمله می‌توان به حقوق ثابت، پرداخت کارانه، پرداخت سرانه‌ای، پرداخت مبتنی بر گروه‌های تشخیصی وابسته (Diagnosis-Related Groups (DRG))، پرداخت به ازای خدمت (Fee-For-Service (FFS))، پرداخت مبتنی بر کیفیت و نتایج (Quality and outcome based payment) و رویکردهای ترکیبی اشاره نمود (7, 42).

هر یک از این رویکردها دارای مزایا و معایب خاص خود هستند و دولت‌ها معمولاً بر اساس منابع در اختیار خود، یک رویکرد را انتخاب می‌کنند. پرداخت مبتنی بر کیفیت و نتایج از جمله جدیدترین رویکردهای پرداخت است که در کشور انگلستان در حال انجام می‌باشد (43). در این مدل پرداخت، برای هر بیمار تعدادی شاخص عملکردی تعیین شده و پرداخت بر اساس امتیاز بدست آمده برای هر شاخص انجام می‌شود. برای مثال، برای بیماران دیابتی شاخص‌هایی نظیر هموگلوبین خون، شاخص توده بدنی، فشار خون و... به عنوان شاخص عملکردی تعیین می‌شوند. این مدل پرداخت اخیراً در یکی از ایالت‌های استرالیا هم بصورت پایلوت به اجرا درآمده است و نتایج حاصل از آن بسیار امیدوارکننده بوده است. با این حال، یکی از موانع اصلی در مسیر اجرای چنین مدل پرداخت برای پزشکان خانواده، ضرورت الکترونیکی کردن داده‌های سلامت و فراهم کردن سیستم‌های یکپارچه ملی در دسترس می‌باشد. بر اساس مطالعات انجام شده، مدل پرداخت مبتنی بر کیفیت و نتایج اگرچه در ابتدا هزینه‌بر است، اما در بلندمدت بسیار هزینه‌اثربخش می‌باشد بویژه در ارتباط با بیماری‌های مزمن غیرواگیر نظیر فشار خون، دیابت و سکته مغزی (43).


۱۰ چالش اصلی اجرای برنامه پزشکی خانواده در ایران
فقدان اراده سیاسی در میان قوای سه‌گانه به منظور اجرای برنامه پزشکی خانواده
نبود پرونده الکترونیک جامع و دقیق
فقدان مکانیزم جبران خدمت انگیزاننده و پاسخگو
عدم جامعیت و تناسب بسته خدمتی با شرایط بومی و منطقه ای
سطح‌بندی ضعیف خدمات در نظام ارجاع
فقدان نظام پایش، ارزشیابی و بازخورد جامع و مستمر
عدم تناسب آموزش پزشکی با نیازهای برنامه پزشکی خانواده
عدم فرهنگ‌سازی در مسیر جلب اعتماد و مشارکت عمومی
وجود تعارض منافع شدید در نظام سلامت
سیاستگذاری و برنامه‌ریزی متمرکز


۱۰ راهکار بالقوه به منظور تقویت برنامه پزشکی خانواده در ایران
شکل‌گیری اراده سیاسی قوی در میان قوای سه‌گانه، احزاب و سایر ارکان قدرت به منظور اجرای برنامه پزشکی خانواده
بهره‌گیری از ظرفیت «پزشکی از راه دور» برای ارائه خدمات بویژه در مناطق محروم و دورافتاده
بهره‌گیری از نیروهای «پزشک‌یار» و «پرستاریار» در مناطق محروم و دورافتاده
فراهم نمودن بسترلازم برای تقویت پرونده الکترونیک سلامت
انطباق بسته خدمتی با تغییرات الگوی بیماری ها و در نظر گرفتن خدمات سلامت روان، سلامت سالمندان و توانبخشی اولیه
بهره‌گیری از مکانیزم «پرداخت مبتنی بر پیامد» با استفاده از شاخص‌های بالینی دقیق
اصلاح کوریکولوم آموزشی دوره پزشکی عمومی با توجه به نیازهای برنامه پزشکی خانواده
ارتقاء سطح سرمایه اجتماعی و نیز جلب حمایت عمومی از طریق رسانه‌های جمعی
ایجاد نهاد ناظر مستقل از وزارت بهداشت به منظور پایش و ارزشیابی مستمر برنامه و ارائه بازخورد
تفویض اختیار و برنامه‌ریزی غیرمتمرکز با توجه به شرایط و نیازهای هر منطقه

چالش‌های برنامه پزشکی خانواده شهری در ایران در طی یک دهه اخیر: یک مطالعه مروری حیطه‌ای و یک مطالعه کیفی با سیاستگذاران

نویسندگان: کامران باقری لنکرانی، بهنام هنرور، سعید شهابی

چکیده

مقدمه: علیرغم تمامی مزایای برنامه پزشکی خانواده شهری، همچنان فاصله قابل ملاحظه‌ای بین این برنامه و آنچه قرار بود به عنوان اهداف این مطالعه پس از اجرا در ایران بدست آید وجود دارد. در پاسخ به چنین شرایطی، این مطالعه تلاش نموده است تا مروری داشته باشد بر تمامی شواهد علمی منتشر شده در ارتباط با چالش‌های اجرای برنامه پزشکی خانواده شهری در ایران و همچنین یافتن راهکارهای بالقوه به منظور بهبود آن. علاوه بر این، یک مطالعه کیفی نیز به منظور شناخت بهتر دیدگاه‌های سیاستگذاران و تصمیم‌گیرندگان نسبت به چالش‌های این برنامه به انجام رسید.

روش کار: این مطالعه ترکیبی در دو فاز به انجام رسید. در فاز اول، یک مطالعه مروری حیطه‌ای با هدف شناسایی موانع رایج و راهکارهای بالقوه به منظور بهبود اجرای برنامه پزشکی خانواده شهری در ایران به انجام رسید. سپس در فاز دوم، یک مطالعه کیفی از طریق مصاحبه‌های نیمه‌ساختار یافته با سیاستگذاران و تصمیم‌گیرندگان مرتبط با هدف موانع و راهکارهای تقویت‌کننده برنامه اجرا شد. یافته‌های حاصل از این مطالعه با استفاده از چارچوب پنج اهرم کنترلی نظام سلامت شامل سازماندهی، تأمین مالی، پرداخت، قانون‌گذاری و رفتار دسته‌بندی شدند.

نتایج: بر اساس یافته‌های این مطالعه، رایج‌ترین موانع اجرای اثربخش برنامه پزشکی خانواده شهری در ایران عبارت بودند از: ۱) پُررنگ‌نبودن نقش تولیتی وزارتخانه بهداشت، درمان و آموزش پزشکی، برنامه‌ریزی و مدیریت ضعیف برنامه، آموزش ناکافی نیروهای انسانی برنامه، ضعف در نظام ارجاع و... (حوزه سازماندهی)؛ ۲) صندوق‌های بیمه‌های پراکنده، منابع مالی ناکافی و ناپایدار بودن منابع مالی (حوزه تأمین مالی)؛ ۳) مکانیزم‌های پرداخت نامناسب و تأخیر در بازپرداخت‌ها (حوزه پرداخت)؛ ۴) قوانین غیرشفاف و نبود الزامات قانونی برای اجرای برنامه (حوزه قانون‌گذاری) و ۵) وجود تعارض منافع میان ذینفعان و نیز مشکلات فرهنگی در جامعه (حوزه رفتار).

با این حال، در طی این مطالعه راهکارهای متعددی نیز به منظور تقویت برنامه پزشکی خانواده شهری در ایران مورد اشاره قرار گرفت که می‌توان به این موارد اشاره کرد: ارتقا نقش و جایگاه دولت در برنامه، بهبود نظام ارجاع، ارائه آموزش‌های جامع به کارکنان برنامه، حرکت به سمت مکانیزم‌های پرداخت ترکیبی و مبتنی بر عملکرد، افزایش سطح آگاهی جامعه نسبت به خدمات پزشکی خانواده و بهره‌گیری از رویکردهای انگیزاننده برای کارکنان.

نتیجه‌گیری: مطالعه حاضر نشان داد که با وجود اینکه برنامه پزشکی خانواده شهری بیش از یک دهه است که در ایران در حال انجام است، اما همچنان با چالش‌های قابل ملاحظه‌ای مواجه می‌باشد. از همین رو، تقویت این برنامه نیازمند شناخت دقیق چالش‌های موجود و بهره‌گیری از راهبردهای اثربخش به منظور دستیابی به اهداف از پیش تعیین شده برنامه می‌باشد. از یافته‌های ارائه شده در این مطالعه می‌توان به منظور تقویت برنامه در سطح کشور استفاده کرد.

واژه‌های کلیدی: پزشکی خانواده، مراقبت اولیه، سیاستگذاری سلامت، مرور حیطه‌ای، ایران

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دیدگاه تیم پزشک خانواده نسبت به اجرای برنامه پزشکی خانواده در طی یک دهه اخیر: یک مطالعه کیفی تماتیک در ایران

نویسندگان: دکتر بهنام هنرور، دکتر کامران باقری لنکرانی، دکتر حسن جولایین، دکتر سعید شهابی

مقدمه: ده سال از اجرای برنامه پزشکی خانواده شهری در ایران می‌گذرد. در این مطالعه، تلاش شده است تا نقاط قوت و چالش‌های اجرای این برنامه را از دیدگاه اعضای تیم پزشکی خانواده شهری بررسی نموده و راهکارهایی به منظور بهبود آن ارائه گردد.

روش کار: در این مطالعه کیفی با استفاده از روش نمونه‌گیری هدفمند، ۵۸ نمونه از اعضای تیم پزشکی خانواده شهری از ۱۰ شهر استان فارس انتخاب و مورد مصاحبه قرار گرفتند. مصاحبه‌های عمیق نیمه‌ساختاریافته با استفاده از تلفن به انجام رسید. به منظور ارتقا روایی و پایایی یافته‌های کیفی از رویکردهای ارائه شده از سوی لینکلن و گوبا بهره گرفته شد.

یافته‌ها: میانگین مدت زمانی که مشارکت‌کنندگان به عنوان عضوی از تیم پزشک خانواده مشغول به کار بودند حدود ۷ سال بود. بر اساس یافته‌های این مطالعه، مهمترین چالش‌های بیان شده عبارت‌اند از: نظام اطلاعات سلامت چالش‌برانگیز، نظام تأمین مالی شکننده، ناکافی بودن ارائه خدمات، کمبود نیروی انسانی و ناکافی بودن فناوری‌های و تجهیزات پزشکی. راهکارهای ارائه شده در این مطالعه نیز عبارت بودند از: بهبود حاکمیت برنامه، نظام اطلاعاتی جامع، بهبود کیفیت خدمات ارائه شده، بهبود وضعیت نیروی انسانی برنامه، کاهش هزینه خدمات ارائه شده و توانمندسازی به منظور استفاده از فناوری‌های نوین.

نتیجه‌گیری: پس از گذشت یک دهه از اجرای برنامه پزشکی خانواده شهری، همچنان دیدگاه‌های چالش‌برانگیری از سوی اعضای تیم پزشک خانواده وجود دارد. این شواهد بیانگر این حقیقت هستند که یک برنامه اصلاحی بنیادی برای این برنامه لازم است.

واژه‌های کلیدی: چالش‌ها، پزشک خانواده، راهکارها، ایران.

لینک تمام متن مقاله: Pubmed.ncbi.nlm.nih.gov/40376083

دیدگاه مردم نسبت به اجرای برنامه پزشکی خانواده شهری پس از گذشت یک دهه از اجرای آن: یک مطالعه کیفی در ایران

نویسندگان: دکتر بهنام هنرور، دکتر کامران باقری لنکرانی، دکتر حسن جولایی، دکتر سعید شهابی

مقدمه: در این مطالعه تلاش شده است تا دیدگاه مردم در استان فارس نسبت به اجرای برنامه پزشکی خانواده شهری در طی یک دهه اخیر مورد کنکاش قرار بگیرد.

روش کار: در این مطالعه کیفی که با رویکرد تحلیل محتوا در سال سال ۲۰۲۳ به انجام رسید، نمونه‌ها با استفاده از نمونه‌گیری هدفمند انتخاب شدند. هر نمونه در واقع یکی فرد بزرگسال از یک خانواده تحت پوشش برنامه پزشکی خانواده شهری در استان فارس بود. مصاحبه‌های نیمه‌ساختار یافته با استفاده از تلفن انجام شدند. نمونه‌گیری و انجام مصاحبه تا دستیابی به اشباع داده‌ها ادامه پیدا کرد. از معیارهای لینکلن و گوبا به منظور ارتقاء روایی و پایایی یافته‌های کیفی که تحت عنوان صحت و استحکام داده‌ها شناخته می‌شود، استفاده شد.

یافته‌ها: در مجموع ۲۵ فرد که میانگین سنی آنها حدود ۴۱ سال بود در این مطالعه مورد مصاحبه قرار گرفتند. بر اساس یافته‌های این مطالعه، مردم معتقد بودند که داشتن یک حاکمیت مناسب برای برنامه، ارائه کافی خدمات و ارتقاء سطح سلامت جامعه از جمله مزایای اجرای برنامه پزشکی خانواده شهری در طی سالیان اخیر بوده است. از طرفی دیگر، افراد مورد مصاحبه چالش‌های متعددی را هم برای این برنامه بیان کردند.

نتیجه‌گیری: پس از یک دهه از اجرای برنامه پزشکی خانواده شهری در استان فارس، مردم دیدگاه‌های متناقضی در ارتباط با اجرای این برنامه بیان کردند. از یکطرف، نقاط قوت این برنامه می‌تواند ترغیب‌کننده سیاستگذاران به ادامه اجرای این برنامه باشد و از سویی دیگر، نقاط ضعف بیان شده را می‌توان به منظور اصلاح برنامه مورد استفاده قرار داد.

واژه‌های کلیدی: پزشک خانواده، چالش‌ها، مطالعه کیفی، ایران

لینک تمام متن مقاله: Pubmed.ncbi.nlm.nih.gov/39239306

پزشکان خانواده در ایران: موفقیت علیرغم وجود چالش‌ها

نویسندگان: دکتر کامران باقری لنکرانی: دکتر سید مؤید علویان، دکتر علی‌اکبر حق‌دوست

با وجود چالش‌های برنامه پزشکی خانواده، دستاوردهای این برنامه نباید مورد غفلت قرار گیرند. به دنبال این برنامه، تعداد پزشکان در مناطق روستایی (مناطق با جمعیت کمتر از ۲۰ هزار نفر) از کمتر از ۲۰۰۰ پزشک در سال ۲۰۰۵ به بیش از ۶۰۰۰ هزار پزشک در سال ۲۰۰۶ افزایش یافته است. در واقع این افزایش تنها پس از گذشت یکسال از اجرای برنامه بدست آمده است. همچنین، درآمد این پزشکان از حدود ۱۵۰ دلار به حدود ۱۵۰۰ دلار به ازای هر ماه رسیده است.

به دنبال این برنامه، نزدیک به ۵۰ درصد از مراکز بهداشتی از مراکز اقامتی قابل قبول برای پزشکان برخوردار هستند. دسترسی به مراقبت‌های بهداشتی در مراکز روستایی بصورت قابل توجهی افزایش یافت است، به گونه‌ای که برای اولین بار پس از ثابت شدن نرخ مرگ‌ومیر کودکان و نوزدان از دهه ۱۹۹۰ میلادی، یک کاهش ۳۵ درصد در هر دو شاخص مرگ‌ومیر در برخی از نواحی روستایی مشاهده شد.

یکی از چالش‌های برنامه پزشکی خانواده، عدم آموزش پزشکان برای کار در مناطق روستایی می‌باشد. به منظور غلبه بر این مسئله، یک دوره کوتاه آموزشی اجباری در آغاز قرارداد برای پزشکان برگزار می‌شود. همچنین، دوره‌های آموزش مداوم پیوسته‌ای نیز از طریق اینترنت و فضای مجازی برای آنها ترتیب داده می‌شود. تمهیداتی اندیشه شده است تا پزشکانی که حداقل ۳ سال به عنوان پزشک خانواده فعالیت می‌کنند، قادر باشند وارد دوره‌های تخصصی شوند.

تأمین مالی برنامه پزشکی خانواده همچنان یک چالش عمده باقیمانده است. بر اساس ضوابط تعیین شده، وزارت رفاه به جای وزارت بهداشت ملزم به ایجاد زیرساخت‌های لازم برای تأمین مالی و پرداخت‌ها برای برنامه پزشکی خانواده شده است. اگرچه در ابتدا چالش‌های متعددی در این زمینه وجود داشت، اما وضعیت بهبود پیدا کرده است.

اخیراً، مجلس شورای اسلامی قانونی وضع کرده است برای گسترش برنامه پزشکی خانواده شهری به شهرهای زیر ۱۰۰ هزار نفر جمعیت. امید است که درس‌های آموخته شده پیشین در برنامه‌های آتی بستر بهبود برنامه پزشکی خانواده را فراهم سازند.

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پنج سال پس از اجرای برنامه پزشکی خانواده شهری در استان فارس: آیا دانش و عملکرد مردم رضایت‌بخش است؟

نویسندگان: دکتر بهنام هنرور، دکتر کامران باقری لنکرانی

مقدمه: برنامه پزشکی خانواده شهری از سال ۲۰۱۲ در استان فارس اجرا شد. هدف این مطالعه ارزیابی دانش و عملکرد مردم نسبت به این برنامه در طی پنج سال اجراء شده می‌باشد.

روش کار: در این مطالعه مبتنی بر جمعیت عمومی، از روش نمونه‌گیری تصادفی چند مرحله‌ای در شش شهر استان فارس استفاده شد. در مجموع، ۱۳۵۰ فرد بالای ۱۸ سال برای ورود به مطالعه انتخاب و مورد پرسشگری قرار گرفتند. برای جمع آوری داده‌ها، از یک پرسشنامه شامل اطلاعات جمعیتی، اجتماعی، دانش و عملکرد استفاده شد.

یافته‌ها: میانگین سنی افراد شرکت‌کننده در این مطالعه ۴۲/۴ سال بود. ۴۹/۹ درصد از مشارکت‌کنندگان را آقایان و ۴۸/۲ درصد از مشارکت‌کنندگان را خانم‌ها تشکیل می‌دادند. بر اساس یافته‌های این مطالعه، بیش از ۷۰ درصد از مشارکت‌کنندگان دارای سطح دانشی (knowledge) کمتر از ۵۰ درصد بودند نسبت به برنامه پزشکی خانواده شهری. همچنین، تنها ۳۲ درصد از مشارکت‌کنندگان دارای سطح عملکردی (practice) خود نسبت به این برنامه بودند. در میان شش شهر مورد بررسی، بالاترین میانگین دانش نسبت به برنامه پزشکی خانواده شهری مربوط به شهر پاسارگاد بود و کمترین میانگین مربوط به شهر لار بود. همچنین، بالاترین سطح عملکرد مربوط بود به شهر پاسارگاد و کمترین سطح عملکرد مربوط بود به شهر فراشبند. تحلیل‌های این مطالعه بیانگر این واقعیت بودند که داشتن بیمه تکمیلی، جنسیت مؤنث و همچنین سطح تحصیلات بالاتر تعیین‌کننده‌های قابل ملاحظه سطح دانش مشارکت‌کنندگان نسبت به این برنامه بود. این در حالی بود که افرادی که فاقد پوشش بیمه تکمیلی بودند، سطح عملکردی بهتری را نسبت به برنامه پزشکی خانواده نشان می‌دادند.

نتیجه‌گیری: پس از پنج سال اجرای برنامه پزشکی خانواده شهری در استان فارس، دانش و عملکرد افراد نسبت به برنامه چندان رضایت‌بخش نیست. از همین رو، لازم است تا اصلاحات اساسی در برخی از ابعاد برنامه پزشکی خانواده شهری اعمال شود.

واژه‌های کلیدی: برنامه پزشکی خانواده، دانش، عملکرد، جمعیت شهری

لینک تمام متن مقاله: pmc.ncbi.nlm.nih.gov/articles/PMC5981220

دانش و عملکرد مردم نسبت به حقوق‌شان در برنامه پزشکی خانواده شهری: یک مطالعه مبتنی بر جمعیت در شیراز

نویسندگان: دکتر بهنام هنرور، دکتر کامران باقری لنکرانی

مقدمه: برنامه پزشکی خانواده شهری از سال ۲۰۱۲ بصورت پایلوت در استان‌های فارس و مازندران به اجراء درآمده است. دیدگاه و نگرش سیاستگذارن و مردم نسبت به این چالش‌برانگیز شده است. از همین رو، این مطالعه تلاش کرده است تا به بررسی دانش و عملکرد مردم نسبت به برنامه بپردازد.

روش کار: این مطالعه مقطعی مبتنی بر جمعیت با استفاده از روش نمونه‌گیری تصادفی چند مرحله‌ای در شیراز به انجام رسیده است. دانش و عملکرد مردم نسبت به برنامه پزشکی خانواده شهری با استفاده از یک پرسشنامه مورد بررسی قرار گرفت.

یافته‌ها: میانگین سنی مشارکت‌کنندگان در این مطالعه ۳۸ سال بود و نسبت زنان و مردان تقریباً برابر بود. بر اساس یافته‌های این مطالعه، حدود ۹۰ درصد از مشارکت‌کنندگان دارای سطح دانش (آگاهی) پایینی نسبت به برنامه پزشکی خانواده داشتند. علاوه بر این، سطح دانش شرکت‌کنندگان رابطه مستقیمی داشت با تحت پوشش برنامه پزشکی خانواده بودن، تحت پوشش بیمه بودن و متأهل بودن. نسبت به عملکرد مردم، ۷۴ درصد از مشارکت‌کنندگان دارای عملکرد ضعیف بودند. این وضعیت رابطه مستقیمی داشت با تحت پوشش بیمه بودن و نیز داشتن درآمد ماهیانه بیش از ۱۰۰۰ دلار.

نتیجه‌گیری: شواهد موجود بیانگر این حقیقت هستند که دانش (آگاهی) و عملکرد مردم نسبت به برنامه پزشکی خانواده شهری در شیراز ضعیف است.

واژه‌های کلیدی: برنامه پزشکی خانواده، دانش، عملکرد، مردم، حقوق

لینک تمام متن مقاله: Pubmed.ncbi.nlm.nih.gov/26124943

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Urban family physician program over the past decade in Iran

Challenges and recommendations

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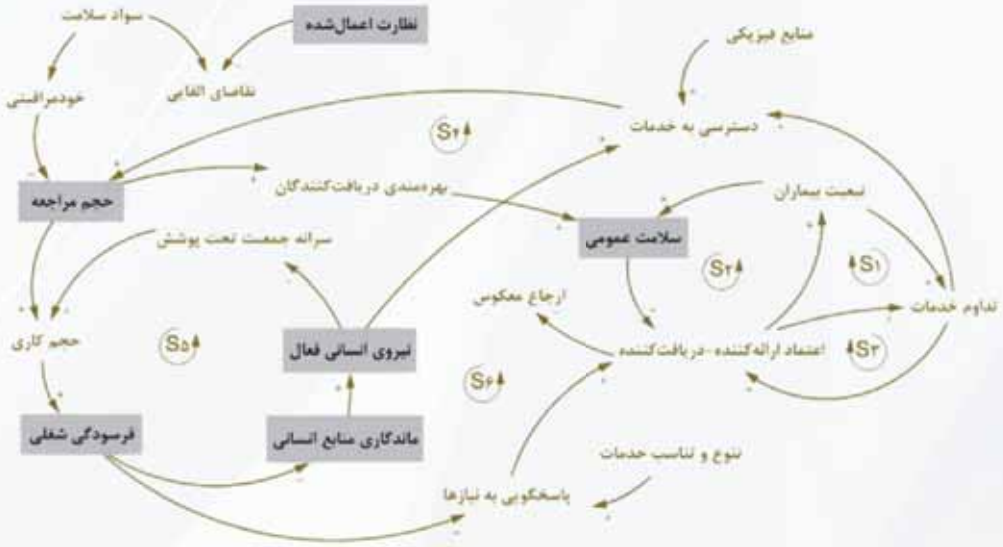
پیوست

پویایی‌های مدل اجرایی پزشکی خانواده

برنامه پزشکی خانواده را می‌توان به عنوان یک نظام پویا در نظر گرفت زیرا دارای اجزای مختلف و بهم پیوسته‌ای است که به طور مستمر بر هم تأثیر می‌گذارند. همانند یک سیستم پویا، برنامه پزشکی خانواده با حلقه‌های بازخورد، وابستگی‌های متقابل و تغییرات در رفتار و ساختار آن قابل تفسیر است.

در نمودار ۱، روابط و حلقه‌های علّی متغیرهای مؤثر بر ارائه خدمت در برنامه پزشکی خانواده آمده است. در این مدل، متغیرهای متعددی بر اجرای پایدار برنامه پزشکی خانواده مؤثر هستند از جمله: دسترسی به خدمات، استمرار و تداوم خدمات، نیروی انسانی فعال در برنامه، تنوع و تناسب بسته خدمتی و... که با واسطه سایر متغیرها یا بدون واسطه بر یکدیگر اثرات متقابل دارند.

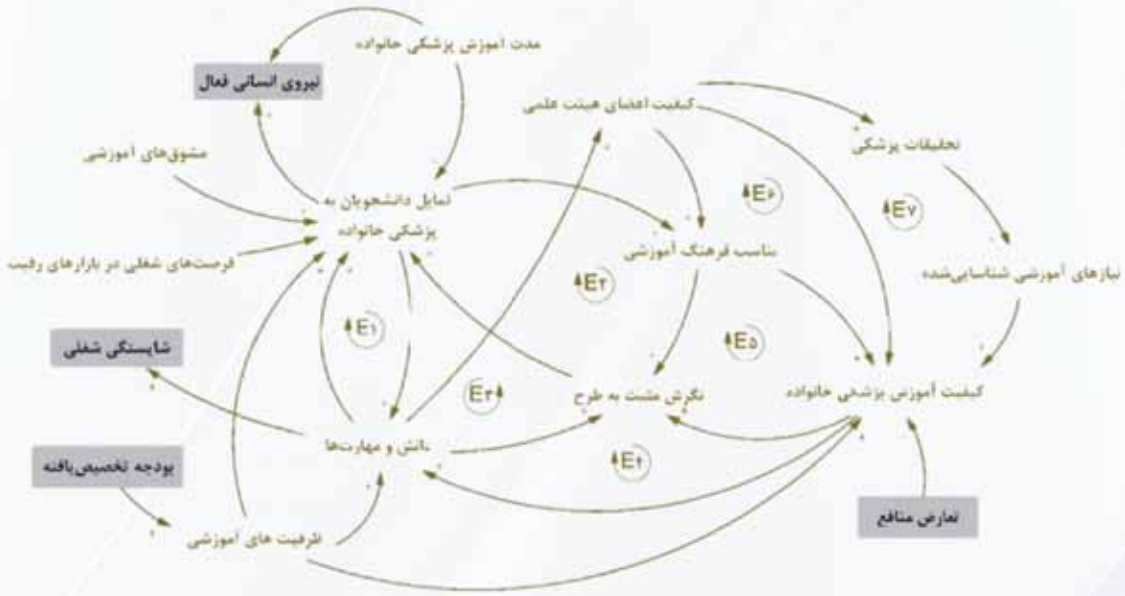
همانگونه که در نمودار زیر قابل مشاهده است، با افزایش سطح سواد سلامت می‌توانیم بستر لازم برای خودمراقبتی را فراهم آوریم که نتیجه آن کاهش چشمگیر حجم مراجعه برای دریافت خدمات خواهد بود. همچنین، به منظور جلوگیری از تقاضای القایی، می‌بایست برنامه نظارتی دقیقی را اعمال کنیم. به منظور حفظ و نگهداری نیروی انسانی در برنامه پزشکی خانواده، می‌بایست با کاهش فرسودگی شغلی نیروها، ماندگاری و نیز پاسخگویی آنها را تقویت کنیم.



نمودار ۱: حلقه‌های علّی مربوط به ارائه خدمت در برنامه پزشکی خانواده

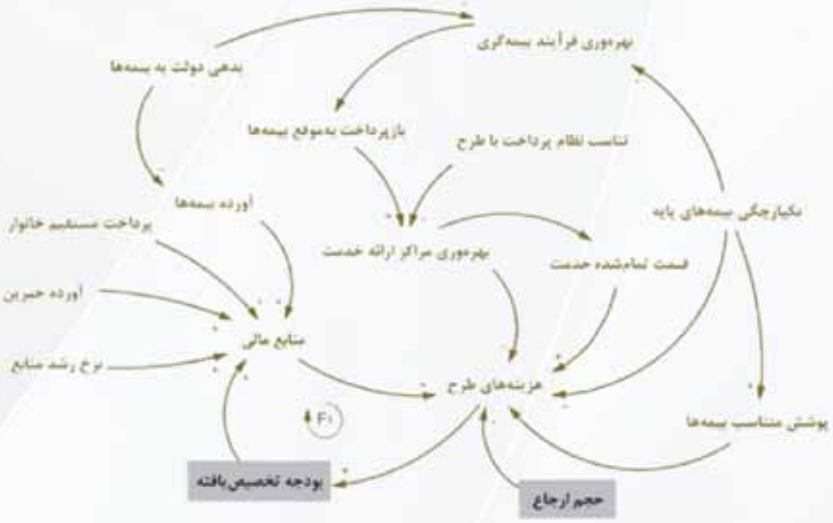
نمودار ۲ بیانگر روابط و حلقه‌های علّی متغیرهای مؤثر بر نظام آموزشی پزشکی خانواده می‌باشد. تربیت نیروهای انسانی متناسب با اهداف طرح، یکی از مهمترین مقوله‌ها در زمینه اجرای برنامه پزشکی خانواده می‌باشد. در این راستا باید تأثیرات متقابل دو رکن اصلی آموزش یعنی دانشجویان و اساتید مورد توجه واقع شود.

همانگونه در که در نمودار زیر آمده است، عوامل مختلفی بر تمایل دانشجویان به برنامه پزشکی خانواده وجود دارد که از آن جمله می‌توان به مشوق‌های آموزشی، فرصت‌های شغلی در بازارهای رقیب، ظرفیت‌های آموزشی، دانش و مهارت‌ها، نگرش مثبت به طرح و... اشاره کرد. از همین رو، لازم است تا با در نظر گرفتن چنین متغیرهایی، بستر لازم برای افزایش تمایل دانشجویان پزشکی برای کار به عنوان یک پزشک خانواده را فراهم کنیم.



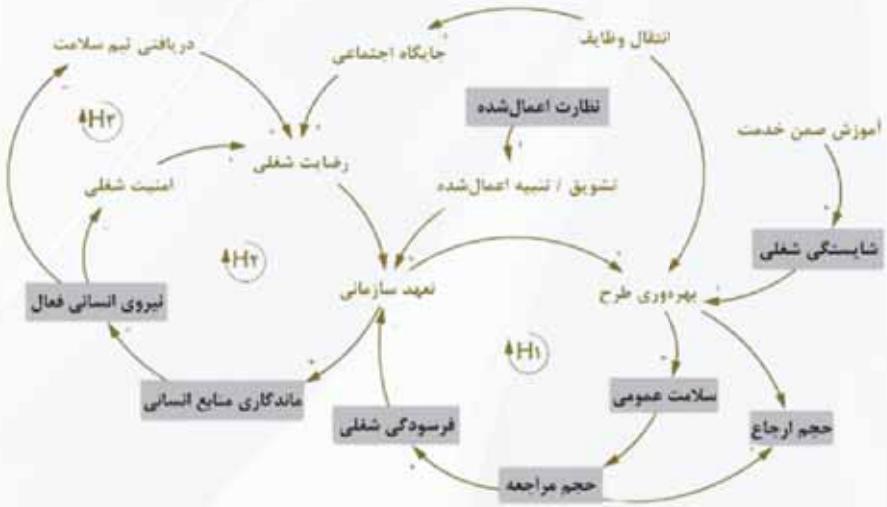
نمودار ۲: حلقه‌های علّی مربوط به نظام آموزشی برنامه پزشکی خانواده

تأمین مالی از اجزای اصلی اجرای برنامه پزشکی خانواده محسوب می‌شود. مدل‌سازی این بُعد با محوریت تأمین مالی و نظام پرداخت (به عنوان بزرگترین سهم هزینه‌های نظام سلامت) صورت گرفته است که باید به روابط متقابل آنها و همچنین تأثیرشان بر سایر ابعاد مدل توجه داشت (نمودار ۳).



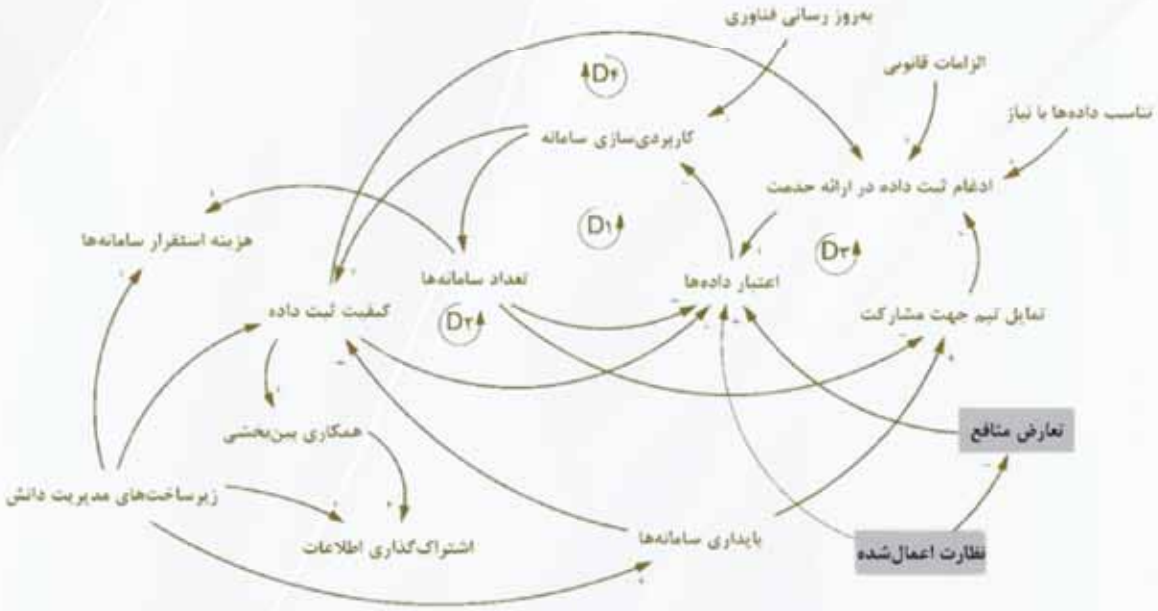
نمودار ۳: حلقه‌های علّی مربوط به مدیریت نظام مالی برنامه پزشکی خانواده

مطابق نمودار ۴، مدیریت منابع انسانی برنامه پزشکی خانواده مشتمل بر متغیرهای مختلفی همچون رضایت شغلی، نظام پرداخت، ماندگاری منابع انسانی و... است.



نمودار ۴: حلقه‌های علّی مربوط به مدیریت منابع انسانی برنامه پزشکی خانواده

یکی از کمبودهای جدی در اجرای پایلوت‌های برنامه پزشکی خانواده، فقدان نظام یکپارچه مدیریت دانش و اطلاعات بوده است. جریان داده‌ها و اطلاعات چه اطلاعات بالینی مانند گسترش و تنوع بیماری‌ها و نمایه سلامتی آحاد جامعه و چه اطلاعات مدیریتی مانند متوسط مراجعات مرکز ارائه خدمت، مدت ویزیت بیماران و بارکاری سطوح مختلف نظام ارجاع، به عنوان یکی از جریان‌های اصلی و حیاتی برنامه پزشکی خانواده است (نمودار ۵).



نمودار ۵: حلقه‌های علّی مربوط به مدیریت دانش و اطلاعات پزشکی خانواده

The challenges of urban family physician program over the past decade in Iran: a scoping review and qualitative study with policy-makers

HISTORY OF MEDICINE AND ETHICS

The challenges of urban family physician program over the past decade in Iran: a scoping review and qualitative study with policy-makers

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Keywords

Family Physician • Primary care • Health policy • Scoping review • Qualitative study • Iran

Summary

Introduction. *Despite all the advantages of urban family physician program (UFPP), there is still a gap between UFPP and what is actually achieved by the community after its implementation in Iran. In response, this study attempted to review published studies related to the barriers to the implementation of the UFPP in Iran as well as potential solutions to improve it. Further, a qualitative study was conducted to learn the perspectives of experts at the national level and in the Fars province in order to better understand the program's challenges.*

Methods. *This study was conducted in two phases. First, a scoping review was done, aiming to identify the common barriers and potential solutions to implementing UFPP in Iran. Second, a qualitative study using semi-structured interviews was conducted to investigate the views of decision- and policy-makers regarding barriers to and solutions for implementing the UFPP in the Fars province over the last decade. The findings were classified using the five control knobs framework (organization, financing, payment, regulation, and behavior).*

Results. *The most common barriers to UFPP were: 1) organization (ununited stewardship function of the Ministry of Health, weak management and planning, inadequate training of human resources, and a weak referral system); 2) financing (fragmented insurance funds, insufficient financial resources, and instability of financial resources); 3) payment (inappropriate payment mechanisms and delay in payments); 4) regulation (cumbersome laws and unclear laws); and 5) behavior (cultural problems and conflict of interests). On the other hand, several solutions were identified to improve the implementation of UFPP, including: enhancing the role of government; improving the referral system; providing comprehensive training for UFPP providers; considering sustainable financial resources; moving towards mixed-payment mechanisms; employing appropriate legal and regulatory frameworks; enhancing community awareness; and elevating incentive mechanisms.*

Conclusion. *Our research found that, despite the UFPP having been in place for a decade in Iran, there are still significant challenges in all five components. Therefore, the promotion of this program requires solving the existing implementation challenges in order to achieve the predetermined goals. The ideas in this study can be used to improve the current program in Fars Province and bring it to other cities in Iran.*

Introduction

The World Health Organization (WHO) has defined three goals for health systems: improving populations' health to an acceptable standard, improving the responsiveness of the health care system to legitimate population expectations, and ensuring fairness and equity in financial contribution [1, 2]. According to the WHO's Alma Ata Declaration (1978), implementation of primary health care (PHC) should be prioritized for achieving these goals and strengthening health systems [3]. PHC is regarded as the most inclusive, equitable, and cost-effective way to enable and facilitate access to the packaging of health services (prevention and health promotion, disease treatment and management, and rehabilitation) [4, 5]. PHC should be considered an integral part of any country's health improvement policies because it facilitates the move towards universal health coverage (UHC) [6].

Health systems, in order to increase efficiency and effectiveness, create justice in access to health services, and provide appropriate infrastructure for health service delivery, need to adapt policies and undergo various changes [7]. One of the biggest reforms in health systems is categorizing health care services into three levels, in which the family physician is at the first level [8]. The family physician program (FPP) provides PHC to the population and enables societies to attain UHC [9]. WHO suggests FPP as a key to quality improvement, cost-effectiveness, and equality in the healthcare system [10]. FPP has four principles: delivering PHC to the population, implementing a referral system

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through which it is predicted that the population can use specialized services, improving the payment system and protecting people against health costs, and changing the service delivery system from a treatment-oriented to a health-oriented perspective [11]. Family physicians (FPs) are responsible for providing care to individuals and their families and act as gatekeepers [12, 13]. They can make decisions about the appropriate use of health resources, which will reduce health costs and improve health outcomes. FPP, indeed, bridges the gap between people and the health care system to afford efficient and equitable health care services [12, 14].

The FPP and referral system were first developed in the UK in 1985 and were expanded to Europe, Canada, and other countries with significant improvements in healthcare systems as well as justice [15]. Before the Islamic Revolution of Iran in 1979, rural areas were undeveloped and suffered from poor public health indices. Afterwards, by introducing and establishing a health network system based on PHC, the health network system has achieved many improvements because PHC was the solution for many of Iran's health challenges [16, 17]. Gradually, the health system became fragile to respond to the emerging needs of the contemporary population because of the high burden of non-communicable disease, increasing public expectations to access qualified physicians, and the fast growth of expensive technologies [16, 18, 19]. Then the Ministry of Health and Medical Education (MOHME) initiated a series of health sector reforms [20, 21]. FPP in rural areas in 2005 was one of these major reforms that have recently received a lot of attention. FPP was initially introduced in rural areas and small cities with populations of less than 20,000 people [7, 22].

The implementation of this program has resulted in improvements in some of the most important health indicators, including child and maternal mortality rates, life expectancy, and infection disease control [23]. Based on Iran's fifth development program in the health sector and considering the positive effects of rural FP, urban family physician program (UFPP) was implemented as a pilot in two provinces, Fars and Mazandaran, along with referral system instructions to determine the pros and cons of implementing UFPP [24]. This program has attained achievements like out-of-pocket (OOP) payment for medical services, reducing unnecessary referrals to the next specialized level of the health system, and cost-effective use of current health resources. As with rural FPs, UFPs are gatekeepers for managing necessary services in first contact [7, 25, 26].

The establishment of FPP in urban areas versus rural areas had unique differences and complex characteristics that may affect the achievement of the program's desired goal: a passive and fragmented PHC network; a powerful private sector with massive inflict interest among FPs; a public with high freedom in selecting health providers; a tendency of urban residents to visit specialists; and a population with different cultural norms and diversity compared to rural areas. Furthermore, private-sector specialists are the most powerful stakeholders in health-care providers and do not advocate for FPP-provided preventive services. Hence, there is a gap between FPP and what is actually achieved by the community after its implementation [16, 27-29]. The expansion of this program to other cities depends on the results of the pilot implementation of UFPP in Fars and Mazandaran provinces [24]. Therefore, it is necessary to recognize the main barriers and facilitators of the successful implementation of this program during the last decade to provide a suitable platform for improving its implementation in the coming years. In response, this study attempted to review published studies related to the barriers to the implementation of the UFPP in Iran as well as potential solutions to improve it. Further, a qualitative study was conducted to learn the perspectives of experts at the national level and in the Iranian province of Fars in order to better understand the program's challenges.

Methods

Scoping review methodology

The first part of this study was a scope review that was conducted with the aim of identifying the most common barriers and solutions for the implementation of the UFPP in Iran during the last decade. In order to maximize the reporting quality, the Preferred Reporting Items for Systematic Reviews and Meta-analyses Extension for Scoping Reviews (PRISMA-ScR) checklist was used [30]. The main reason for choosing this review methodology was that scoping reviews provide the possibility of bringing together the scientific evidence in a specific field with the aim of answering a broad question. This scoping review was conducted based on the Arksey and O'Malley (2005) guidance [31], which includes five steps: 1) recognizing the research questions; 2) searching and finding the relevant evidence; 3) selecting the studies; 4) charting the collected data; and 5) collating, summarizing, and reporting the findings. The protocol of this study has been reviewed and approved by the Institutional Review Board (IRB) of Shiraz University of Medical Sciences (IR.SUMS.REC.1401.514).

Search strategy

In order to identify the related terms, scanning the Medical Subject Headings (MeSH) thesaurus and contacting relevant experts were applied. Finally, for the search strings, a number of key words, including "family physician," "family physicians," (physicians AND family), and "Iran," were considered. The primary search strategy was established for the PubMed database and then adapted for searching other international journal databases. Electronic databases including PubMed, Scopus, Web of Science, Embase, and ProQuest were searched from January 2012 (the beginning of the UFPP in Fars and Mazandaran Provinces) to September 2022. In addition, Iranian national research databases,

including the Scientific Information Database (SID) and Magiran, were searched with the Persian equivalents of identified key words. To reduce the possibility of publication bias, key journals (Medical Journal of the Islamic Republic of Iran, Archives of Iranian Medicine, Eastern Mediterranean Health Journal, International Journal of Preventive Medicine, Iranian Red Crescent Medical Journal, and BMC Health Services Research) and reference lists of included studies were manually reviewed to identify any missed studies.

Selection of studies

All the search results from both international and national databases were entered into the Endnote X9 software (Clarivate, Philadelphia, USA). After removing duplicates, studies were screened based on title and abstract, and potentially relevant studies were identified for further review based on the full text. Therefore, potential studies were reviewed based on the full text against the inclusion and exclusion criteria, and the final studies were selected. These steps were done by two authors independently, and in case of disagreement, the discussion and participation of the third author were used to resolve it. In this scoping review, all types of studies (quantitative, qualitative, letters to the editor, and opinions) that addressed the challenges of implementing the UFPP in Iran and provided solutions to improve it were considered. However, studies that were conducted on the rural family physician program, review studies, protocol studies, conference studies, and studies without available full text were excluded.

Data extraction

The process of getting the needed information was done by three authors on their own, using a form that was made with the help of everyone on the research team. Among the items on this form, the following can be mentioned: 1) first author; 2) publication year; 3) title of study; 4) objective(s); 5) study design; 6) publication language; 7) study population; 8) region; 9) main results; and 10) conclusion. At this stage, any disagreement among the authors was resolved through dialogue and the participation of an expert author.

Data analysis

A thematic analysis method was applied to synthesize and structure the results of the included studies [32]. The identified challenges of implementing the family physician program and also potential solutions to improve this program were developed in accordance with the five control knobs framework, including organization, financing, payment, regulation, and behavior [33]. After reviewing and evaluating the differences and similarities among the summaries by the three authors, the sub-themes emerged. The emerging sub-themes, which included challenges and solutions, were then classified and assigned to each component of the five control knobs framework.

Qualitative methodology

Participants

In order to recruit the participants, the research team prepared a list of managers and policymakers related to the UFPP in Fars province and at the national level. Then they were contacted and asked to agree to conduct an interview regarding the challenges of the UFPP and potential solutions for its improvement. After receiving the agreement of the participants to conduct the interview, the informed consent form containing the general information of the study was sent to the participants, and they were asked to express their consent to participate in the study after reading it carefully. In this form, the samples were guaranteed that their identity will remain completely unknown throughout the study, and they can freely withdraw from the study at any stage. In the process of selecting samples, it was tried to consider the maximum diversity in terms of experience and expertise. To cover such diversity, both purposeful and snowball sampling methods were applied.

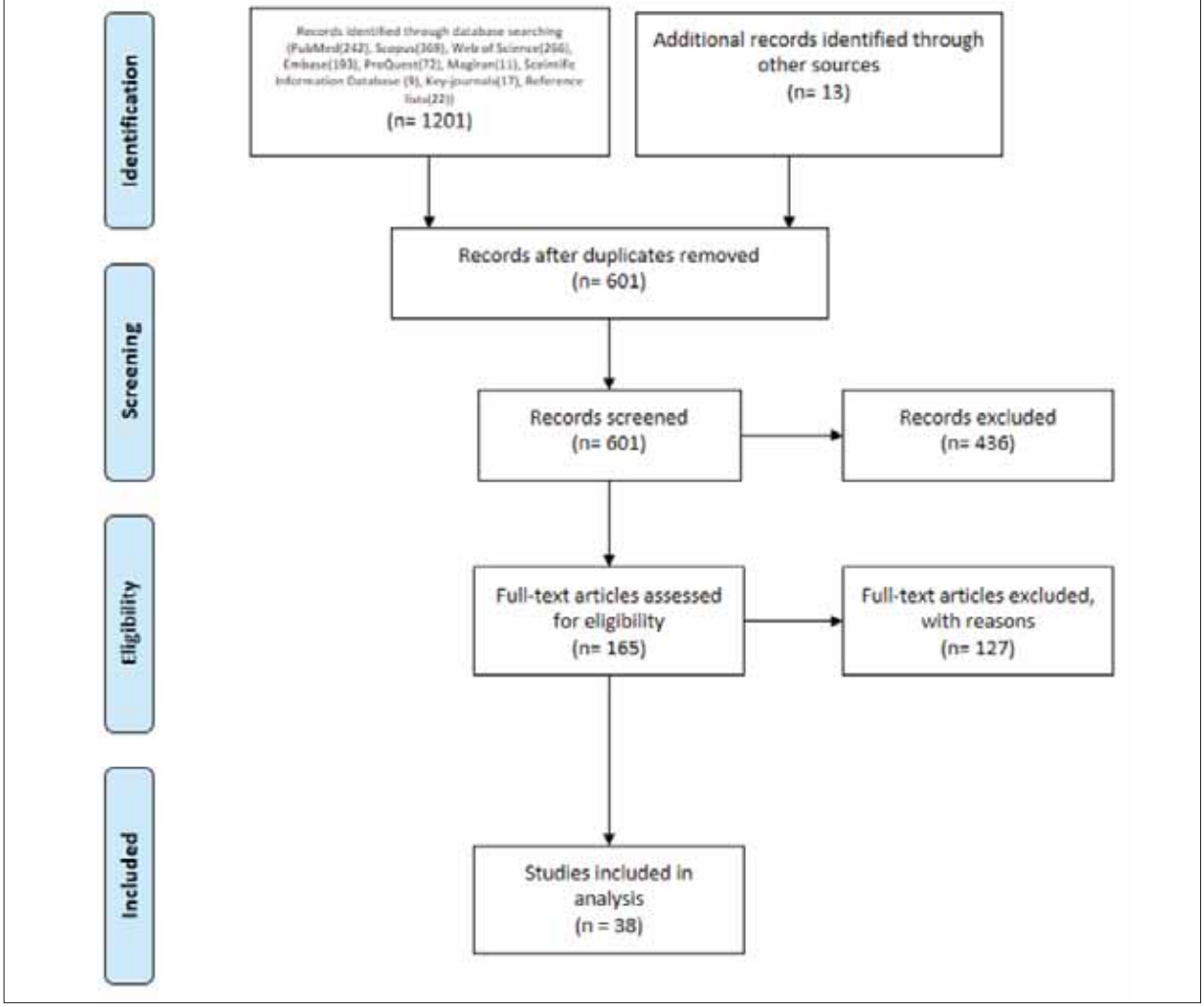
Data collection

Individual semi-structured interviews were used in order to understand the views of the participants in both face-to-face and online formats by two authors (M. H. and F. R.). During the interviews, an interview guide containing open questions was used to better guide the flow of the interview. The main questions in this guide were: 1) Tell us about your experience of implementing the UFPP. 2) If possible, describe the strengths and weaknesses of this program. 3) Which decisions and policies were effective in the implementation process of this program? and 4) As a policymaker, what solutions do you suggest to improve this program and eliminate its weaknesses? Based on the feedback received from the initial interviews, the interview questions were revised and modified for more clarity. After the end of each interview, the recorded audio file was written by the interviewer and saved in Word Office software to facilitate the analysis process.

Data analysis

A framework analysis approach was used to analyze the qualitative findings [34]. Three authors (SSH, MH and FZ) did initial coding by repeatedly reading the written texts. Then, the found codes were examined, and the close ones were placed in separate categories. After examining the relationship between the identified categories, they were assigned to the main themes of the study, which are actually the components of the five control knobs framework [33]. In order to minimize bias and maximize the strength of the findings, authors with diverse scientific and executive backgrounds were involved in the analysis process. Also, in cases where there was a lack of agreement among the authors, efforts were made to hold discussion meetings to resolve the lack of agreement, and in the required cases, the participation of an expert author was also used (KBL).

Fig. 1. PRISMA flowchart.



Results

Scoping review

Following the initial search, 1214 records were found; after removing duplicates, 601 articles were screened based on the title and abstract. In the next stage, 165 articles were evaluated based on their full texts, and 38 articles were selected as final included studies (Fig. 1) [7, 9, 15, 24, 29, 35-67]. Table I demonstrates the detailed characteristics of the included studies. In the following, the most important challenges of implementing the UFPP and the potential solutions mentioned in the included studies are concisely reviewed.

Challenges

Table II summarizes the challenges of implementing UFFP in Iran based on the studies included. Regarding the organization of UFFP, several challenges have been raised, the most common of which were: 1) weak management and planning; 2) inadequate human resources; 3) inadequate training of human resources; 4) a weak referral system; 5) insufficient physical infrastructure; 6) a high workload; 7) a lack of comprehensive monitoring and evaluation; 8) a weak information infrastructure; and 9) a poor incentive mechanism. Furthermore, a number of the studies mentioned the dispersed stewardship function of the MoHME, poor program notification, insufficient authority of family physicians, unrealistic medical tariffs, frequent turnover of administrators, non-participation of all stakeholders, lack of intra- and inter-sectoral collaboration, office time limits (single work shifts and off weekends), long waiting lists, and inconsistency between community needs and service packages as other organizational challenges.

Several challenges related to UFPP financing have been raised by the studies, which have made its implementation difficult, including: 1) insufficient financial resources; 2) fragmented insurance funds; 3) economic instability; and 4) instability of financial resources. In addition, this scoping review identified a lack of effective fund pooling, an undesirable purchasing system, money

Tab. I. The characterizes of included studies

First author (Year)	Title	Objective(s)	Study design	Publication language	Study population	Region	Main results	Conclusion
Abedi et al. (2017)	SWOT Analysis of Implementation of Urban Family Physician Plan from the Perspective of Beneficiaries	This study aimed at SWOT analysis of urban family physician from the perspective of beneficiaries	Qualitative research	Persian	Nine people including faculty members, family physicians, senior managers and health professionals	National	The main strengths included health services provision, easy accessibility to health services, classification of services, and decrease in unnecessary costs. The weak points according to SWOT analysis included management and planning, human resources, physical resources, referral system, electronic health records, payment mechanism, health services purchasing organizations, inter sectoral coordination, and assessment and control systems. Authorities' support, legal backing, educated human resources, and capacity of private section along public section were identified as the opportunities of the project. Furthermore, failure in public-private sector cooperation, health market and, society needs were considered as the threats	This study showed the strengths and weaknesses of family physician plan, and the opportunities and threats it is faced with. Hence, it is necessary to find solutions and perform necessary interventions in order to eliminate the weaknesses and threats and maintain and improve the strengths and opportunities before its implementation throughout the country
Bagheri Lankarani et al. (2010)	Family physicians in Iran: success despite challenges	NI	Correspondence	English	General population	National	NI	NI
Bayati et al. (2020)	Effect of two major health reforms on health care cost and utilization in Fars Province of Iran: family physician program and health transformation plan	The present study was aimed at evaluating the impact of these two reforms on the level of service utilization and cost of health care services	Interrupted time series	English	People insured by Social Security Insurance Organization	Fars Province	FPP resulted in a significant reduction in the number of specialist visits, imaging, and laboratory tests in the short term, and in the number of radiology services, laboratory tests, and hospitalization in the long term. In contrast, HTP significantly increased the utilization of radiology services and laboratory tests both in the short term and long term. Concerning the costs, FPP resulted in a reduction in costs in short and long term except general practitioners' and specialist visit, and medication in long term. However, HTP resulted in an increase in health care costs in both of the studied time periods	FPP has been successful in rationalizing the utilization of services. On the other hand, HTP has improved people's access to services by increasing the utilization; but it has increased health care costs. Therefore, policymakers must adopt an agenda to revise and re-design the plan
Bayati et al. (2022)	Influencing factors on the tendency of general practitioners to join in urban family physician program	This study aimed to investigate the factors which affect GPs' decision to join in the UFPP	Cross-sectional study	English	666 GPs	National	More than half of GPs (58.6%) participated in the study had a positive tendency to join in the UFPP. Older GPs (adjusted OR = 3.72; 95%CI 1.05-13.09), working in public sector (adjusted OR = 2.26; 95%CI 1.43-3.58), lower income level (adjusted OR = 6.69; 95%CI 2.95-15.16), higher economic expectations (adjusted OR = 2.08; 95%CI 1.19-3.63), and higher satisfaction from medicine profession (adjusted OR = 2.00; 95%CI 1.14-3.51) were the main factors which increased the GPs tendency to enter in UFPP	Decision for joining in the program is mainly affected by GPs' economic status. This clarifies that if the program can make them closer to their target income, they would be more likely to decide for joining in the program
Dehnavieh et al. (2015)	Urban family physician plan in Iran: challenges of implementation in Kerman	This study aims to determine probable implementation challenges of Family Physician Plan in Kerman	Qualitative study	English	21 experts in the field	Kerman	Most prevalent establishment challenges of Family Physician Plan were classified into policy-making, financial supply, laws and resources	The urban Family Physician Plan can be carried out more effectively by implementing this plan step by step, highlighting the relationships between the related organizations, using new payment mechanisms e.g Per Capita, DRG, make national commitment and proper educational programs for providers, development the health electronic Record, justifying providers and community about advantages of this plan, clarifying regulatory status about providers' Duties and most importantly considering a specific funding source

Delgoshaei et al. (2020)	Performance payment challenges for family physician program	This study aimed to investigate the challenges of implementation of P4P system in family physician program	Qualitative study	English	32 participants including the senior managers with at least 5 years of experience on the family physician program	Tehran	The current study identified 7 themes, 14 subthemes, and 46 items related to the challenges to successful implementation of P4P systems in the family physician program including family physicians' workload, family physician training, promoting family physician program, paying to the family physician team, assessment and monitoring systems, information management, and the level of authority of family physicians	The study results demonstrated notable challenges for successful implementation of P4P system which can helpful to managers and policymakers
Doshmangir et al. (2017)	Infrastructures Required for the Expansion of Family Physician Program to Urban Settings in Iran	This study aimed to explore the major infrastructures perceived to be required to achieve desirable implementation of urban FP through analyzing experts viewpoints reflected in the media and interviews	Qualitative study	English	Relevant and appropriate websites in consultation with some national health expert	National	Infrastructure needed for the implementation of FP were categorized in five main themes and 23 subthemes. The themes are: stewardship/ governance, Actors and stakeholders, structural infrastructure, technical infrastructure and needed resources and information and communication infrastructure	Expansion of FP program to urban settings needs appropriate attention to the principles of policy implementation as well as provision of robust infrastructures. Well-defined stewardship, revised approach to financial regulation and payment system, stakeholder's commitment to collaboration, policy for conflict resolution, and universal insurance coverage are pivotal for expansion of family physician program to the urban settings in Iran
Doshmangir et al. (2018)	Payment system of urban family physician program in the Islamic Republic of Iran: is it appropriate	This study aimed to investigate aspects of the payment system in the urban family physician program(FPP) in the Islamic Republic of Iran	Qualitative study	English	nine key informants from MoHME, two medical universities, insurance companies, and three FPs	NI	A range of concepts was explored related to the payment system of the FPP. By merging similar expressions, we categorized the findings into four main themes including: payment method, payment criteria and incentives, payment process and amount of payment	FPP is required to follow convenient implementation methods. The mechanisms of payment in the health sector are weak and have no transparency. A blurred combination of criteria makes an unclear process for determining the payment mechanisms. It is recommended that the opinions of key stakeholders be taken into consideration prior to developing payment mechanisms and financial incentives
Esmaeili et al. (2016)	The Experience of Risk-Adjusted Capitation Payment for Family Physicians in Iran	This study was conducted with the purpose of exploring the experiences of risk-adjusted capitation payment of urban family physicians in Iran when it comes to providing primary health care (PHC)	Qualitative Study	English	24 family physicians and 5 executive directors	NI	Regarding the effects of risk-adjusted capitation on the primary healthcare setting, five themes with 11 subthemes emerged, including service delivery, institutional structure, financing, people's behavior, and the challenges ahead. Our findings indicated that the health system is enjoying some major changes in the primary healthcare setting through the implementation of risk adjusted capitation payment	With regard to the current challenges in Iran's health system, using risk-adjusted capitation as a primary healthcare payment system can lead to useful changes in the health system's features. However, future research should focus on the development of the risk-adjusted capitation model
Fararouie et al. (2019)	Satisfaction levels with family physician services: a pilot national health program in the Islamic Republic of Iran	This study was conducted in 2014 to measure the rate of user satisfaction with services provided by family physicians to the rural and urban population of the second most populated county in Fars province	Cross sectional	English	160 households	Marvdasht county, Fars province	Overall satisfaction rate was 59.2%: 54.5% for urban areas and 63.2% for rural areas	This study suggests that satisfaction is higher among rural residents and that better quality services from family physicians are needed in both rural and urban communities
Fardid et al. (2019)	Challenges and strengths of implementing urban family physician program in Fars Province, Iran	Family physician (FP) is one of the best strategies to reform health system and Promote population health. Due to the different context, culture, and population, implementing this reform within cities would be more challenging than in rural areas. This study aimed to assess the challenges and strengths of Urban FP Program in Fars Province of Iran	Qualitative study	English	National and regional policy-makers, managers, physicians, health professionals, patients, and members of the public who actively or passively affected the process of decision-making, management, and implementation of UFPP	Fars	The participants' mean age was 44.9 ± 6.4 years, with a mean work experience of 13.2 ± 7.4 years. The transcripts revealed six themes and 17 subthemes. The emerging themes included three challenges and three solutions as following: social problems, financial problems, and structural problems as well as resistance reduction, executive meetings, and surveillance	Resolving staff shortage, decreasing the public resistance, and eliminating unnecessary referrals were among the strategies used by Fars, during FP implementation. To be successful in implementing this program, the required perquisites such as infrastructures and culture growth must be undertaken. The current study suggests the establishment of the electronic health record to improve the pace and quality of service provision as well as reducing violations

Fardid et al. (2020)	Policy brief on improving the finance of family physician program: An experience from urban areas of Iran Revenue Collection	This policy brief was formulated based on the role of FPs in public access to general practitioner (GP) services in the referral system on one hand, followed by the impact of it on health costs reduction on the another hand, and further considering the necessity of financing system audit to find a sustainable resources for this program to be implemented at a national level in the country of Iran	Policy brief	English	General population	Fars and Mazandaran.	As a result, this policy brief was formulated based on the role of FPs in public access to general practitioner (GP) services in the referral system on one hand, followed by the impact of it on health costs reduction on the another hand, and further considering the necessity of financing system audit to find a sustainable resources for this program to be implemented at a national level in the country of Iran	Paying to midwives from FP's capitation has been designed based on pay for performance. Therefore, detachment of midwives shares from FPs capitation may lead to disobedience of midwives from physicians. So it is suggested that the physician signs a satisfaction certificate for the midwife under supervision prior to payment to her. It will not only make the insurance organizations' payment to midwives uniform but also make the midwives observe job standards and respect to FPs. Besides, training the GPs increases their expectations to receive more rewards and as a result the costs will be increased. Therefore, before training GPs specifically, providing high-quality services by physicians must be assured and the relevant proper evaluation criteria should be set for service receivers
Farzadfar et al. (2017)	Views of managers, health care providers, and clients about problems in implementation of urban family physician program in Iran: A qualitative study	The aim of this study was to determine the viewpoints of managers, providers, and clients of health care services about the problems in the implementation of urban family physician program in Iran	Qualitative study	Persian	Managers, providers, and clients of health care services	Alborz, West Azerbaijan, and Kurdistan Provinces	According to the results of this study, the problems on the implementation of urban family physician program in Iran can be classified into seven categories including: financial, cultural, educational, motivational, structural, administrative, and contextual problems	We propose definition and stabilization of the financial resources and establishment of appropriate rules for payments to solve financial problems, and also training of general population and staffs and involvement of the mass media in training to solve the cultural problems. In order to solve the educational problems reforms in medical curriculum are recommended. Motivational problems can be solved via encouraging the private sector and experts to take part in the program and also through guaranteeing the continuity of the program. Establishment of appropriate organizations and provision of protocols are recommended to solve the structural problems. Finally, to overcome the contextual problems it is suggested to promote cross-sectoral and inter-sectoral coordination and also attract support from policy-makers
Gharibi & Dadgar (2020)	Pay-for-performance challenges in family physician program	This study was conducted to investigate the challenges faced in the implementation of the pay-for performance system in Iran's family physician program	Qualitative	English	32 key informants at the family physician program	Tabriz	This study identified 7 themes, 14 sub-themes, and 46 items related to the challenges in the implementation of pay-for-performance systems in Iran's family physician program. The main themes are: workload, training, program cultivation, payment, assessment and monitoring, information management, and level of authority. Other sub-challenges were also identified	The study results demonstrate some notable challenges faced in the implementation of the pay-for-performance system. This information can be helpful to managers and policymakers
Hajibadal et al. (2022)	Challenges of Implementing Family Physician Program in Urban Communities	This study aimed to explore the challenges and obstacles of implementing family physician program in an Iranian urban community context	Qualitative study	English	19 healthcare recipients and healthcare providers from urban health centers	Bonab	Three main categories including 'socio-cultural and economic challenges', 'interpersonal communication difficulties' and 'inefficient management' emerged as the challenges of implementing urban family physician program in the community	The implementation of family physician program is a long process that is influenced by various factors and elimination of barriers requires developing infrastructures and culture growth and improving the professional settings and interpersonal relationship

Homaie Rad et al. (2017)	Does Economic Instability Affect Healthcare Provision? Evidence Based on the Urban Family Physician Program in Iran	The main aim of this study was to evaluate the achievements of some important goals of Iran's urban family physician plan. This plan was implemented when the country experienced economic instability. We examine whether an economic crisis affects the efficacy of a healthcare program	Evidence-based	English	NI	Fars	No changes in out-of-pocket payments and healthcare utilization were found after the implementation of this program; however, inequality in out-of-pocket payments increased during the reform	The urban family physician program was not implemented completely and many of its fundamental settings were not conducted because of lack of necessary healthcare infrastructure and budget limitations. Family physician programs should be implemented under a strong healthcare infrastructure and favorable economic conditions
Honarvar et al. (2015)	Knowledge and Practice of People toward their Rights in Urban Family Physician Program	Urban family physician program has been launched as a pilot in Fars and Mazandaran provinces of Iran since 2012. Attitudes of policy makers and people toward urban family physician program have become challenging. This study shows what people know and practice toward this program	Population-Based Study	English	General population	Shiraz	Participation rate was 1257 of 1382 (90.9%), and the mean age of the respondents was 38.1 ± 13.2 years. Of 1257, 634 (50.4%) were men and 882 (70.2%) were married. Peoples' total knowledge toward urban family physician program was 5 ± 2.7 of 19, showed that 1121 (89.2%) had a low level of knowledge. This was correlated positively and in order to being under coverage of this program (P < 0.001), being under coverage of one of the main insurance systems (P = 0.04) and being married (P = 0.002). The mean score of people's practice toward the program was 2.3 ± 0.9 of total score 7, showed that 942 (74%) had poor performance, and it was correlated positively and in order to being under coverage of this program (P < 0.001) and having higher than 1000$ monthly income (P = 0.004). Correlation of people's knowledge and practice toward the program was 24%	Current evidences show a low level of knowledge, poor practice and weak correlation of knowledge-practice of people toward urban family physician program
Honarvar et al. (2016)	Satisfaction and Dissatisfaction Toward Urban Family Physician Program: A Population Based Study in Shiraz, Southern Iran	A national project of extending a family physician program to urban areas has been started since May 2013 in Iran. The present study aimed to detect correlates of people's satisfaction and dissatisfaction about urban family physician program	Population based study	English	General population	Shiraz	Mean age of 1257 participants in the study was 38.1 ± 13.2 years. Respondents included men (634; 50.4%), married (882; 70.2%), those who were educated at universities (529; 42%) and self-employed groups (405; 32.2%). One thousand fifty-eight (84.1%) were covered by the family physician program. Mean of referral times to a family physician was 2.2 ± 2.9 during the year before the study. Satisfaction toward urban family physician program was high in 198 (15.8%), moderate in 394 (31.3%), and low in 391 (31.1%). Dissatisfaction about this program was more among younger than 51-year-old groups (for 31-50 years odds ratio [OR] = 2.3, 95% confidence interval [CI] = 1.4-3.7, P < 0.001 and for 18-30 years OR = 2, 95% CI = 1.2-3.4, P = 0.005), less knowledgeable ones (OR = 2.2, 95% CI = 1.3-3.6, P = 0.001), singles (OR = 2.1, 95% CI = 1.2-3.4, P = 0.003), and those with more than 4 of family members (OR = 1.3, 95% CI = 1-1.7, P = 0.05)	Overall, the majority of the people are not very satisfied with the urban family physician program. This shows the need for a multi-disciplinary approach including training, improvement of infrastructures and referral system, continuous supervision, and frequent monitoring of user's and provider's feedback about this program. According the results, the family physician program should be improved prior to extending this program to other provinces in Iran

Honarvar et al. (2018)	Five Years after Implementation of Urban Family Physician Program in Fars Province of Iran: Are People's Knowledge and Practice Satisfactory?	Urban family physician program (UFPP) was launched in Fars province of Iran in 2012. We aimed to assess the knowledge and practice of people toward this 5-year-old program	Population-based study	English	1350 people older than 18 years	Fars	The mean age of the interviewees was 42.4 ± 14.2 years; male (674; 49.9%)-to-female (651; 48.2%) ratio was 1.03. Mean score of knowledge was 4.2 ± 1.7 (out of 14), while 961 (71.1%) had < 50% of the desirable knowledge. Mean score of practice was 4.4 ± 1.3 (out of 9), while only 443 (32.8%) had a good performance toward this program. Knowledge and practice did not show a significant correlation (r = 0.06, P = 0.05). Among cities, the highest and the lowest mean of knowledge belonged to Pasargad (5.6 ± 2.1) and Lar (3.0 ± 1.0) (P < 0.001), respectively. Pasargad (4.8 ± 1.4) had also the highest level of practice compared to Farashband (3.8 ± 1.4) which had the lowest score (P < 0.001). Multivariable analysis showed that supplemental insurance coverage (odds ratio [OR] = 2.5, %95 confidence interval [CI]: 1.6-3.9), female gender (OR = 1.9, %95 CI: 1.2-2.9) and higher level of education (OR = 1.7, %95 CI: 1.1-2.5) were the significant determinants of knowledge, while practice in those who were not covered by supplemental insurance was better (OR = 1.6, 95% CI: 1.2-2.5)	After 5 years of implementation of UFPP, knowledge and practice of people toward UFPP are not satisfactory. This finding calls for a serious revision in some aspects of UFFP
Imanieh et al. (2017)	Factors affecting public dissatisfaction with urban family physician plan: A general population based study in Fars Province	To determine the factors affecting public dissatisfaction with an urban family physician plan in Iran	To determine the factors affecting public dissatisfaction with an urban family physician plan in Iran	English	Family physician plan, specialists, para-clinic services, pharmacy, physicians on shift work, emergency services, and family physician assistants	Fars	In this study, 1,020 individuals (524 males, 496 females) were investigated. Based on the results, the most frequent factor affecting dissatisfaction with physicians was their single work shifts and unavailability (53%). In terms of dissatisfaction with family physicians' specialist colleagues and para-clinic services, the most common factors were related to difficulty in obtaining a referral form (41.5%) and making appointments (21.6%), respectively. Given the level of dissatisfaction with pharmacies, the significant factor was reported to be excessive delay in medication delivery (31.6%); and in terms of physicians on shift work and emergency services, the most important factor was lower work hours for family physicians (9.2%)	It seems that, the most common causes of dissatisfaction with the urban family physician plan are due to the short duration of services, obtaining a referral form and making appointments, and providing prescribed medications
Kabir et al. (2018)	The level of familiarity and attitude of the population covered by the criteria and requirements of the physician program Iranian urban family	This study aims to determine the level of familiarity and attitude of the population It was carried out under the criteria and requirements of the urban family physician program.	Cross-sectional study	Persian	General population	National	Among the 1217 surveyed people, the familiarity level of 551 people(31.1%) from the urban family physician program was low, 695(39.3%) people were average, and 523 people(29.6%) were high. 846 people(56.1%) had a positive attitude and 663 people (43.9%)had a negative attitude towards the criteria and requirements of the program. Eight individual and social variables were influential in the level of familiarity and six variables in the level of people's attitude (P < 0.05).	The results of the study showed that more than 51% of the covered population had a positive attitude and familiarity with the urban family physician program, but some individual variables and Social influence in it

Kabir et al. (2019)	Family Physicians' satisfaction with factors affecting the dynamism of the urban family physician program in the Fars and Mazandaran provinces of Iran	This study aimed to determine the family physicians' satisfaction level with the factors affecting the dynamism of the urban family physicians program in the Fars and Mazandaran provinces of Iran	Cross-sectional study	English	Physicians	Fars and Mazandaran	The overall satisfaction levels among family physicians in Fars and Mazandaran provinces were 2.77±0.53 and 3.37±0.56, respectively, revealing a statistically significant difference between provinces ($p < 0.001$). Moreover, the mean satisfaction scores for the performances of healthcare centers, insurance companies, specialists, healthcare workers, and the population covered were 2.78±0.1, 2.54±0.9, 2.52±0.8, 4.24±0.07, and 2.96±0.8, respectively. The family physicians' levels of satisfaction were significantly correlated with population size ($p = 0.02$, $r = -0.106$), and willingness to stay in an urban family physician program ($p < 0.001$, $r = +0.398$)	This study revealed that family physicians exhibited a low level of satisfaction with the urban family physician program. Given the direct association between family physicians' satisfaction levels and retention in the program, it is expected that family physicians will no longer stay in the program, and it is likely to have subsequent executive problems
Kohpeima Jahromi et al. (2017a)	Continuity of Care Evaluation: The View of Patients and Professionals about Urban Family Physician Program	This study aimed to determine the COC of health care in urban health centers	Cross-sectional study	English	FPs (n = 141) and patients (n = 710)	Fars and Mazandaran	Almost all FPs had a computer. The FPs hadn't kept their patients' medical records routinely. The software had some problems, so the FPs couldn't produce lists of patients based on their health risk and they couldn't monitor their population. Almost 88% of FPs have written referral letters for all referred patients but 57% of them got medical feedback from specialists. About 80% of patients' consultation times were up to 10 min. 29% of FPs knew the past problems and illnesses of the patients. From 40% to 50% of the patients stated that their FPs asked them for their desire about prescribed medicine and gave clear explanation about their illnesses. On average, patients visited their doctor 5.5 times during the previous year. Generally, patients and FPs in Mazandaran could summarize their experiences better than Fars in most topics of COC	It seems that after 3 years of using urban FP program in two pilot provinces, there were still some problems in COC. Strengthen software program, introducing incentives for FPs, and promoting patients' responsibility can be used by policy-makers when they seek to enhance COC
Kohpeima Jahromi et al. (2017b)	Access to Healthcare in Urban Family Physician Reform from Physicians and Patients' Perspective: a survey-based project in two pilot provinces in Iran	The study aimed to determine the accessibility of health care in the two pilot sites	Cross-sectional study	English	Family physicians (n = 141) and patients (n = 710)	Fars and Mazandaran	With an average population of 2,332, the main daily task for family physicians was patient visits (n = 39). Most patients were satisfied with the current hours (80%) but visiting a family physician on holidays or after working hours were only rarely possible. The co-payment was an inconvenience to access health services in getting medicines, getting para clinic exams and a visiting specialist. At least 70% of patients could receive their preferred healthcare facilities within 40 minutes. The majority of FPs (64%) believed there were some cultural characteristics in the population that made a limited role for providing better health services	In the reform the providers were geographically well distributed and some features of the organizational access were relatively high. However there were some difficulties in the financial, cultural, and other features of organizational access
Mehrolhassani et al. (2021)	Underlying factors and challenges of implementing the urban family physician program in Iran	This study aimed to explain the underlying factors and challenges of implementing the urban family physician program in Iran	Qualitative study	English	44 policy-makers and managers at national and provincial levels	National	A total of 10 categories, 18 sub-categories, and 29 codes were formed. Most challenges related to underlying factors included precipitancy, economic sanctions, belief in traditional medicine, belief in the expertise of previous physicians, and global ranking of countries. For program implementation, most challenges included a diversity of insurance organizations, budget allocation, referral system, electronic file, educational system, and culture building	The major challenges pertaining to underlying factors included international pressure for reforms and precipitancy in program implementation due to management changes. The challenges associated with program implementation included budget provision and interaction with insurance organizations. Therefore, to expand this program to other provinces in Iran, the identified factors should be carefully considered so that sufficient confidence and commitment can be guaranteed for all stakeholders

Mohammad-ibakhsh et al. (2020)	Family physician model in the health system of selected countries	The purpose of this study is to compare the model of implementation of FPP in the United States, England, Germany, Singapore, Turkey, Egypt, and Iran	Comparative study	English	Family physician	United States, England, Germany, Singapore, Turkey, Egypt, and Iran	In this study, we used the Control Knobs framework to compare countries' FPPs because the framework can demonstrate all necessary features of national health system programs. This framework includes governance and organization, regulation, financing, payment, and behavior in each country. The results of this study show that although the principles of FPP in the selected countries are almost common, they use different methods in FPP implementation	As the success of any policy depends on the political, economic, social, and cultural context of each country, considering these factors and reinforcing each of the control knobs are critical to the success of the family physician's policy implementation
Nasrollah-pour Shirvani et al. (2013)	Evaluation of the Referral System Situation in Family Physician Program in Northern Provinces of Iran: 2012-2013	This study was performed to evaluate the function of referral system and network system in Northern provinces of Iran	Analytic study	Persian	Patients	Golestan, Mazandaran, Babol and Guilan	From 963 patients who received the level 2 services, 687 cases (71%) were females and 276 (29%) were males. Three hundred and twenty cases (33%) had referral form from health house. Only 299 (31%) persons referred to the centers because of diagnosis of family physician and in 161 (17%) of cases, the family physician had a role to choose a specialist of level 2. For 155 (16.1%) of cases, the specialists wrote the results of their evaluation in feedback form. Only 149 (15.5%) of patients returned to their family physicians. Six hundred ninety-seven (79.6%) of patients did not return to their family physician because of lack of knowledge	The results of this study showed that many principles for referral system from level 1 to higher levels and vice versa are not considered that require education, reformation and intervention in this field
Ranjbar Eza-tabadi et al. (2015)	Using Conjoint Analysis to Elicit GPs' Preferences for Family Physician Contracts: A Case Study in Iran	This study aimed to elicit GPs' preferences for family physician contracts	Case Study	English	580 GPs selected from the family physician database in Iran	National	The results show that "quotas for admission to specialized courses" is the strongest preference of GPs (_ = 1.123). In order of importance, the other preferences are having the right to provide services outside of the specified package (_ = 0.962), increased number of covered population (_ = 0.814), capitation payment + 15% bonus (_ = 0.644), increased catchment area to 5 km(_ = 0.349), and increased length of contract to five years (_ = 0.345)	The conjoint analysis results show that GPs concerned about various factors of family physician contracts. These results can be helpful for policy-makers as they complete the process of creating family physician plans, which can help increase the motivation of GPs to participate in the plan
Reza Majdza-deh (2012)	Family Physician Implementation and Preventive Medicine; Opportunities and Challenges	NI	Editorial	English	General population	National	There are some challenges in implementing family physician and referral system plan. First is the gap between a plan and its implementation. Second is the deficiency on financial support for the implementation of this plan. Third, medical education in Iran, conventionally, do not prepare trainees appropriately for their future career. Fourth challenge is that health system has not acted as successfully in urban areas as rural. The fifth challenge is the plan's content. The question is that how much family physician plan has been designed according to preventive medicine and public standards	The family physician and referral plan is a promising opportunity for individuals and community health through strengthening public health and preventive medicine services. However, its implementation is seriously challenged, especially in by the financial resources, separation of insurance organization from MOHME, changing utilization behavior of the community and finally service providers who should be enrolled in the plan and provide preventive services
Sabet Sarves-tani et al. (2017)	Challenges of Family Physician Program in Urban Areas: A Qualitative Research	This study aimed at exploring the challenges of the family physicians program in urban areas in Iran in 2015	Qualitative Research	English	Family physicians	National	Coding and analysis of the interview data generated two categories and seven sub categories related to the challenges of the family physicians program. The categories were poor infrastructure and poor incentive mechanism	Our findings captured a good picture of family physicians program in urban areas to better clarify the challenges of the program and provide a foundation to plan and implement appropriate changes. Thus our findings will give policymakers a deeper perception to confront the challenges of the family physicians program in urban areas

Safarpour et al. (2019)	Developing Urban Family Physician Program in Shiraz, Fars Province, the Doctors' Experiences: A Qualitative Research	The purpose of this study was to explain the experiences of urban family physicians in Shiraz, Fars province, Iran	Qualitative study	English	8 physicians in the urban family physician program	Fars	Results were presented in 4 categories: lack of infrastructure, inefficiency of implementation, comprehensive look at the health of the community, and the need for corrective actions along with 17 subcategories	The most important challenges after 8 years of starting a family physician program include the lack of infrastructure, inefficiency of the implementation method, lack of a comprehensive look at the health of the community, and the need for corrective actions in the program. It is the responsibility of health policymakers to address these challenges to improve them. It is recommended that training at all levels of the involved individuals, including theoretical and practical training should be considered
Safizadehe Chamokhtari et al. (2018)	Analysis of the Patient Referral System in Urban Family Physician Program, from Stakeholders` Perspective Using SWOT Approach: A Qualitative Study	The aim of this study was to analyze the patient referral system at all levels of the health system using Strengths, Weaknesses, Opportunities and Threats (SWOT) approach	Qualitative study	Persian	20 people including administrative officers, family physicians, executive managers, and individuals working in insurance sector and 10 people receiving insurance services	National	The strengths included: reducing the costs, providing equitable access to health services, promoting the health level, and providing services in an evolutionary level. The weaknesses included not informing the people, physician issues, poor monitoring and evaluation, management issues, payment mechanisms, electronic health records, insurance organizations, and inadequate facilities and equipment of health centers. Opportunities included: the importance of health and health care for the leadership and the parliament, job creation, active participation of the private sector, the high level of literacy of the target group (people), and the cooperation of insurance organizations. The threats included lack of coordination and alignment between policy makers and planners, the therapeutic focus of health system, lack of attention of people to health care, and the influences of private sector	The appropriate implementation of referral system promotes the health of society and increases the healthcare burden. But today, it does not follow its own rules which is caused by different factors. Therefore, health authorities should address these by appropriate planning and timely actions
Sepehri et al. (2020)	A Descriptive-Comparative Study of Implementation and Performance of Family Physician Program in Iran and Selected Countries	This study aimed to compare the implementation and the performance of FPP in Iran with selected countries, in order to analyze those challenges and suggest potential solutions.	Descriptive-Comparative	English	NI	Iran and six countries (Canada, Australia, United Kingdom, Denmark, United States and the Netherlands)	This study revealed significant differences in implementation of the FPP and relatively low differences in FPP performance between Iran and the selected countries	Implementation and performance of FPP and patient referral system in Iran struggles with serious challenges and burdens, in contrast with the selected reviewed countries. As such, modification of the FPP in Iran seems to be a must. Such modification may include developing educational programs for FPs, clearly defining the duties and practices of FPs, and revising their reimbursement and employment status
Shahabian-moghaddam & Zanganeh Baygi (2022)	Explaining the Role of Physicians in Urban Comprehensive Health Service Centers After Implementing Health Transformation Plan in Southeast of Iran: A Qualitative Study	This study aimed to explain the role of physicians working in urban, comprehensive health service centers after implementing the HTP	Qualitative study	English	Physicians, healthcare providers, managers, and experts, working in urban health centers	Zahedan, Khash, and Saravan	After interviewing 35 people and several stages of review, coding, and using the experience of experts, the data were classified into six main categories, 11 subcategories, and 33 codes. Factors influencing the role of physicians were service delivery, electronic health records, resources, community culture, monitoring, supervision, and practical suggestion. The participants expressed the workload, referral system, integrated electronic health record, financial resources, human resources, equipment, and public participation as some aspects related to the role of physicians	Based on the current study, human and financial resources should be managed to retain the physicians in this plan. In addition, increasing the quality of services, improving electronic health records, and attention to public culture can be considered

Shiraly et al. (2021)	Doctor-patient communication skills: a survey on knowledge and practice of Iranian family physicians	This study evaluated knowledge and practice of doctor- patient communication among the urban family physicians based on main items of Calgary Cambridge Observation Guides	Cross sectional	English	family physicians	Fars	The study participants included 204 male and 196 female family physicians with a mean age of 46.7 years. The mean communication skills knowledge score was 41.5 (SD: پ 2.8) indicating a high level of knowledge. The mean score for practices was 38.7 (SD: پ 3.4), implying a moderate level of practice. Based on Bloom's scale, nearly 80% of family physicians had good knowledge about doctor-patient communication skills, however, 55% of participants reported moderate to poor level of practice in this regard. Results of multivariate regression analysis suggest that higher levels of related knowledge, having higher age or longer work experience, and working in the public sector can predict better practice scores (P < 0.005)	There is a potential gap between knowledge and self-reported practices toward communication skills among a sample of Iranian family physicians. They have fundamental weakness in the most important evidence based items of doctor-patient communication. Considering significant role of family physicians in prevention and control of non-communicable diseases (NCDs) as an emerging challenge of our country, the topic of communication skills should be inserted as a top educational priority of family physicians
Sokhanvar et al. (2020)	Family physician and referral system adherence in Iranian primary healthcare system	The aim of this study was to investigate the level of adherence of rural insured patients to family physicians (FP) and the referral system, as well as factors that affect self-referral	Cross-sectional study	English	Patients who were referred to select Rural Family Physician Centers (RFPC) during the data collection period	East Azerbaijan Province	Overall, 58.9% of participants adhered to the FPP and referral system. The total self-referral rate was 41.1%, including 24.3% patients who had attended an FP appointment only to obtain a referral code, and 16.8% had self-referred directly. Data on age, sex, family monthly expenditure, and place of residence were associated with self-referral. Structural pitfalls, societal knowledge and attitudes, and cultural challenges were identified as the patients' reasons for self-referring. Within these categories, the most frequent reasons included uncertainty about the knowledge and skills of FPs (74.2%), easy and inexpensive access to specialized services (66.7%), better quality of specialized services (59%), and a lack of awareness of the FPP and the services provided at level 1	A significant percentage of enrollees did not adhere to the FPP and referral system. Considering the unwelcome consequences of self-referral, designing and implementing practical interventions seems essential in order to encourage patients to be more compliant
Tavakoli et al. (2019)	Design of a Model for Management of Referral System in the Iranian Urban Family Physician Program	The purpose of this research was to identify the main dimensions of management of referral systems in family physician program and then introduce them to policymakers of the country primary health care	Descripting study	English	Employees of health centers of Mazandaran and Fars Provinces.	Mazandaran and Fars	In confirmatory factor analysis, coefficient of effect of Electronic Health Record on referral system (as the most important dimension), coefficient of Family Physician, coefficient of structure of insurance, coefficient of policymaking in health care system, coefficient of proper stewardship of health system, and basic health care services, were 0.887, 0.877, 0.860, 0.804, 0.568, and 0.522, respectively	Six effective dimensions including Electronic Health Record (as the most important dimension), family physician, structure of insurance, policymaking in health care system, proper stewardship of health sys-tem, and basic health care services were identified. According to six effective dimensions on management model of the referral system in the Iranian urban family physician program, the health system authorities pay serious attention to the six identified dimensions of the current study to improve the health of the urban community
Yazdi Feyz-abadi et al. (2018)	The relationship between the experimental implementation of the urban family physician program and health financial protection indicators in Fars and Mazandaran provinces	The present study was conducted with the aim of investigating the relationship between program implementation and financial protection indicators	Cross-sectional study	Persian	General population	Fars and Mazandaran	The percentage of families faced with Catastrophic health costs increased by 1.82% in the years of program implementation compared to the years before implementation (P < 0/05). This increase was 1.37% for rural areas (P < 0/05). The same percentage of poverty from total health payment increased by 0.83% in the years of implementation of the program. Implementation of the program did not have a significant relationship with Kakuani indicators and direct out-of-pocket payments as a percentage of total health expenses(P > 0/05)	Despite the success of the urban family physician program in increasing physical access to health services, it seems that it has not made significant achievements in improving financial protection and equitable financing of health. However, further studies are necessary.

Tab. II. Challenges of implementation of urban family physician program in Iran (scoping review).

Five control knobs	Challenges	Studies
Organization	Dispersed stewardship function of the MoHME	Doshmangir et al. (2017), Abedi et al. (2017)
	Weak management and planning	Abedi et al. (2017), Dehnavieh et al. (2015), Mehrolhassani et al. (2021), Sabet Sarvestani et al. (2017), Safarpour et al. (2019), Safizadehe Chamokhtari et al. (2018)
	Inadequate human resources	Abedi et al. (2017), Doshmangir et al. (2017), Farzadfar et al. (2017), Hajibadal et al. (2022), Safarpour et al. (2019), Safarpour et al. (2019), Shahabianmoghaddam & Zanganeh Baygi (2022), Sokhanvar et al. (2020)
	Inadequate training of human resources	Bagheri Lankarani et al. (2010), Bayati et al. (2022), Dehnavieh et al. (2015), Delgoshaei et al. (2020), Doshmangir et al. (2017), Farzadfar et al. (2017), Gharibi & Dadgar (2020), Honarvar et al. (2016), Imanieh et al. (2017), Mehrolhassani et al. (2021), Reza Majdzadeh (2012), Safarpour et al. (2019), Safizadehe Chamokhtari et al. (2018), Sepehri et al. (2020), Shahabianmoghaddam & Zanganeh Baygi (2022)
	Weak referral system	Abedi et al. (2017), Doshmangir et al. (2017), Esmaeili et al. (2016), Farzadfar et al. (2017), Honarvar et al. (2016), Imanieh et al. (2017), Mohammadibakhsh et al. (2020), Nasrollahpour Shirvani et al. (2013), Reza Majdzadeh (2012), Sabet Sarvestani et al. (2017), Safarpour et al. (2019), Safizadehe Chamokhtari et al. (2018), Sepehri et al. (2020), Sokhanvar et al. (2020), Yazdi Feyzabadi et al. (2018)
	Insufficient physical infrastructure	Abedi et al. (2017), Dehnavieh et al. (2015), Doshmangir et al. (2017), Farzadfar et al. (2017), Gharibi & Dadgar (2020), Homaie Rad et al. (2017), Mehrolhassani et al. (2021), Sabet Sarvestani et al. (2017), Safarpour et al. (2019), Safarpour et al. (2019), Safizadehe Chamokhtari et al. (2018), Shahabianmoghaddam & Zanganeh Baygi (2022), Yazdi Feyzabadi et al. (2018), Fardid et al. (2020), Imanieh et al. (2017)
	Non-implementation of electronic health record	Abedi et al. (2017), Dehnavieh et al. (2015), Fardid et al. (2019), Kohpeima Jahromi et al. (2017a)
	Non-synchronization of the private and public sector	Abedi et al. (2017)
	High workload	Abedi et al. (2017), Dehnavieh et al. (2015), Delgoshaei et al. (2020), Farzadfar et al. (2017), Gharibi & Dadgar (2020), Kohpeima Jahromi et al. (2017b), Safarpour et al. (2019), Safizadehe Chamokhtari et al. (2018), Shahabianmoghaddam & Zanganeh Baygi (2022)
	Lack of comprehensive monitoring and evaluation	Abedi et al. (2017), Delgoshaei et al. (2020), Farzadfar et al. (2017), Gharibi & Dadgar (2020), Honarvar et al. (2016), Mohammadibakhsh et al. (2020), Safizadehe Chamokhtari et al. (2018), Shahabianmoghaddam & Zanganeh Baygi (2022)
	Poor program notification	Dehnavieh et al. (2015), Farzadfar et al. (2017), Safarpour et al. (2019)
	Inappropriate communication among providers	Dehnavieh et al. (2015)
	Weak information infrastructure	Delgoshaei et al. (2020), Gharibi & Dadgar (2020), Hajibadal et al. (2022), Kohpeima Jahromi et al. (2017a), Mehrolhassani et al. (2021), Yazdi Feyzabadi et al. (2018)Mohammadibakhsh et al. (2020), Safarpour et al. (2019), Safarpour et al. (2019), Safizadehe Chamokhtari et al. (2018), Sokhanvar et al. (2020)
	Insufficient authority of family physicians	Delgoshaei et al. (2020), Gharibi & Dadgar (2020)
	Unrealistic medical tariffs	Doshmangir et al. (2017)
	Frequent turnover of administrators	Doshmangir et al. (2017), Farzadfar et al. (2017), Mehrolhassani et al. (2021)
	Non-participation of all stakeholders	Doshmangir et al. (2017), Fardid et al. (2020), Farzadfar et al. (2017)
	Lack of variation and quality of the services	Fararouie et al. (2019), Hajibadal et al. (2022)
	Fragmented network of primary care	Fardid et al. (2020)
	High freedom in selecting health services	Fardid et al. (2020)
	Gap between theory and practice	Fardid et al. (2020), Reza Majdzadeh (2012)
	Lack of intra- and inter-sectoral collaboration	Farzadfar et al. (2017), Gharibi & Dadgar (2020), Imanieh et al. (2017), Mehrolhassani et al. (2021)

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Organization	Long waiting list	Imanieh et al. (2017), Sokhanvar et al. (2020)
	Office time limit (single work shifts and off weekends)	Imanieh et al. (2017), Kohpeima Jahromi et al. (2017b), Sokhanvar et al. (2020)
	Non-adherence to clinical guidelines	Imanieh et al. (2017)
	Sanctions	Mehrolhassani et al. (2021),
	Poor incentive mechanism	Sabet Sarvestani et al. (2017), Safarpour et al. (2019), Safizadehe Chamokhtari et al. (2018), Shahabianmoghaddam & Zanganeh Baygi (2022)
	Frequent changes in instructions	Shahabianmoghaddam & Zanganeh Baygi (2022)
	Inconsistency between community needs and service package	Shahabianmoghaddam & Zanganeh Baygi (2022)
Financing	Fragmented insurance funds	Abedi et al. (2017), Doshmangir et al. (2017), Fardid et al. (2019), Mehrolhassani et al. (2021)
	Insufficient financial resources	Bagheri Lankarani et al. (2010), Dehnavieh et al. (2015), Delgoshaei et al. (2020), Doshmangir et al. (2017), Farzadfar et al. (2017), Gharibi & Dadgar (2020), Homaie Rad et al. (2017), Mehrolhassani et al. (2021), Reza Majdzadeh (2012)
	Economic instability	Dehnavieh et al. (2015), Hajibadal et al. (2022), Mehrolhassani et al. (2021), Yazdi Feyzabadi et al. (2018)
	Instability of financial resources	Doshmangir et al. (2017), Shahabianmoghaddam & Zanganeh Baygi (2022)
	Lack of effective fund pooling	Doshmangir et al. (2017), Farzadfar et al. (2017)
	Money transfer between budget items	Fardid et al. (2019)
	High costs of services	Imanieh et al. (2017)
	Undesirable purchasing system	Mehrolhassani et al. (2021)
	Soaring expenses	Sabet Sarvestani et al. (2017)
	Imposing additional Costs	Safarpour et al. (2019)
Payment	Insufficient service compensation	Abedi et al. (2017), Hajibadal et al. (2022), Sepehri et al. (2020)
	Inappropriate payment mechanism	Abedi et al. (2017), Dehnavieh et al. (2015), Doshmangir et al. (2018), Sabet Sarvestani et al. (2017), Safizadehe Chamokhtari et al. (2018), Shahabianmoghaddam & Zanganeh Baygi (2022)
	Delay in payments	Abedi et al. (2017), Dehnavieh et al. (2015), Doshmangir et al. (2017), Fardid et al. (2019), Farzadfar et al. (2017), Safizadehe Chamokhtari et al. (2018)
	Lack of outcome-based payment	Abedi et al. (2017), Delgoshaei et al. (2020)
	Considering co-payment for users	Kohpeima Jahromi et al. (2017b)
Regulation	Cumbersome laws	Dehnavieh et al. (2015)
	Unclear rules	Dehnavieh et al. (2015), Farzadfar et al. (2017)
	Law deviation	Fardid et al. (2019)
	Absence of legal requirements	Safizadehe Chamokhtari et al. (2018)
Behavior	Cultural problems of service users	Dehnavieh et al. (2015), Delgoshaei et al. (2020), Farzadfar et al. (2017), Kohpeima Jahromi et al. (2017b), Mehrolhassani et al. (2021), Safizadehe Chamokhtari et al. (2018)
	Cultural problems of providers	Dehnavieh et al. (2015)
	Conflict of interests	Dehnavieh et al. (2015), Fardid et al. (2020), Farzadfar et al. (2017), Mohammadibakhsh et al. (2020), Reza Majdzadeh (2012), Safarpour et al. (2019)
	Low incentives of physicians to work in deprived areas	Dehnavieh et al. (2015), Kabir et al. (2019)
	Service providers' concerns regarding funding	Dehnavieh et al. (2015), Farzadfar et al. (2017), Ranjbar Ezatabadi et al. (2015)
	Lack of awareness among people	Delgoshaei et al. (2020), Fardid et al. (2019), Farzadfar et al. (2017), Farzadfar et al. (2017), Gharibi & Dadgar (2020), Honarvar et al. (2015), Honarvar et al. (2018), Kabir et al. (2018), Sabet Sarvestani et al. (2017), Safizadehe Chamokhtari et al. (2018), Shahabianmoghaddam & Zanganeh Baygi (2022)
	Patients' preferences (for visiting by specialists)	Esmaeili et al. (2016), Fardid et al. (2020), Mehrolhassani et al. (2021), Sokhanvar et al. (2020)
	Inappropriate behavior of staff	Fararouie et al. (2019), Imanieh et al. (2017)
	Discrimination	Fardid et al. (2019)
	Resistance against implementation	Fardid et al. (2019)

Behavior	Treatment-centered advertisements by mass media	Fardid et al. (2020)
	Adherence to the indigenous norms	Hajibadal et al. (2022), Mehrolhassani et al. (2021)
	Lack of proper communication between the healthcare provider and the patient	Hajibadal et al. (2022), Kohpeima Jahromi et al. (2017a), Shahabianmoghaddam & Zanganeh Baygi (2022), Shiraly et al. (2021), Yazdi Feyzabadi et al. (2018)
	Lack of trust in health care providers' competencies	Hajibadal et al. (2022)
	Physicians' dissatisfaction	Kabir et al. (2019)
	Lack of acculturation	Sabet Sarvestani et al. (2017)
	Egoistic manner of medical specialists	Sabet Sarvestani et al. (2017), Safarpour et al. (2019),
	Lack of awareness among GPs	Sokhanvar et al. (2020)

transfers between budget items, and soaring expenses as other financing barriers to implementing UFPP. Notably, a large proportion of included studies raised concerns about the UFPP payment system, such as insufficient service compensation, ineffective payment mechanisms, payment delays, a lack of outcome-based payment, and the consideration of co-payment for users.

Cumbersome laws, unclear rules, law deviations, and the absence of legal requirements were the most commonly identified regulatory barriers in implementing the UFPP, as reported in the included studies. Furthermore, the current review identified a wide range of challenges related to the fifth dimension of the adapted framework, namely behavior. Among others, 1) cultural problems of service users; 2) conflict of interests; 3) lack of awareness among people; 4) patients' preferences; 5) lack of proper communication between the healthcare provider and the patient; and 6) the egoistic manner of medical specialists were expressed by more studies. Nonetheless, other behavior-related challenges were: low incentives for physicians to work in deprived areas; service providers' concerns regarding funding; inappropriate behavior of staff; adherence to indigenous norms; and a lack of trust in health care providers' competencies.

Solutions

Even though there are a lot of problems with how the UFPP is being carried out in Iran, the included studies that were looked at also came up with a number of ways to improve this (Tab. III is a summary of these solutions). Specifically, most of the solutions were related to the organization component. In this regard, the most common solutions were: 1) multi-dimensional planning; 2) promoting referral systems; 3) comprehensive training courses for providers; 4) establishing continuous professional development programs; 5) establishing electronic health records; 6) considering sufficient workforce resources; 7) creating appropriate monitoring and supervision systems; 8) creating an effective information system; 9) preparing protocols and guidelines; 10) enhancing intra- and inter-sectoral collaborations; 11) developing infrastructures; and 12) administering the centers through work shifts. In addition, enhancing the role of government, facilitating good interaction among beneficiaries, involving the mass media, clarifying the role of involved professionals, granting a reasonable level of authority to family physicians, and increasing the number of workforces were the other proposed solutions to improve the organization of the UFPP in Iran.

A number of the included studies proposed that considering a sustainable financial resource is essential to enhancing the financing of UFPP in Iran. Furthermore, merging the insurance funds, considering an extra fund, assigning franchises, creating an integrated virtual fund, and provider–purchaser separation were other identified solutions to improve the financing dimension of this program. Regarding the payment system, a significant number of studies concluded that there was a need to improve the payment system for UFPP employees. In addition, they reported that using risk-adjusted capitation mechanisms, moving toward the Beveridge family payment model, and considering a detachment of physician capitation from health care providers could be other potential solutions to strengthen the payment system. Through this scoping review, several policies were recognized to promote the regulation component of UFPP, including: 1) employing appropriate legal and regulatory frameworks; 2) constant reviewing of policies, rules, and regulations; and 3) applying efficient strategies by the government to encourage relevant stakeholders to join the program. In the final report, several recommendations were identified to curb the behavior-related challenges of UFPP in Iran, of which the most common were: enhancing community awareness, promoting public culture for using FP services, and improving the clinical knowledge of the population. Furthermore, strengthening the economic status of providers, considering incentives to attract workforces, using scientific evidence by providers, promoting patients' responsibility, considering the concerns of providers, and enhancing the communication skills of physicians were other potential solutions.

Qualitative interviews

Tables IV and V summarize the extracted challenges and solutions from the 15 participants' interviews. Among the participants, one was a former deputy of the MoHME, three were senior policymakers and planners of the family physician program in the MoHME, one was a former deputy of the Program and Budget Organization, two were former chancellors of Shiraz University of

Tab. III. Solutions to improve the implementation of urban family physician program in Iran (scoping review).

Five control knobs	Solutions	Studies
Organization	Enhancing the role of government	Bayati et al. (2022), Mohammadibakhsh et al. (2020)
	Multi-dimensional planning	Honarvar et al. (2015), Honarvar et al. (2016), Mohammadibakhsh et al. (2020)
	Seeking advocacy from political groups	Delgoshaei et al. (2020)
	Step-by-step implementation	Safarpour et al. (2019)
	Constant reviewing policies, rules, and regulation	Dehnavieh et al. (2015)
	Promoting referral system	Fardid et al. (2019), Imanieh et al. (2017), Kohpeima Jahromi et al. (2017b), Mehrolhassani et al. (2021), Reza Majdzadeh (2012), Safizadehe Chamokhtari et al. (2018), Sepehri et al. (2020), Shahabianmoghaddam & Zanganeh Baygi (2022), Sokhanvar et al. (2020)
	Comprehensive training course for providers	Bagheri Lankarani et al. (2010), Fardid et al. (2020) Farzadfar et al. (2017), Gharibi & Dadgar (2020), Honarvar et al. (2015), Sepehri et al. (2020), Shahabianmoghaddam & Zanganeh Baygi (2022)
	Continuous professional development program	Bagheri Lankarani et al. (2010), Honarvar et al. (2015), Imanieh et al. (2017), Kohpeima Jahromi et al. (2017a)
	Establishing electronic health record	Fardid et al. (2019), Imanieh et al. (2017), Mehrolhassani et al. (2021), Shahabianmoghaddam & Zanganeh Baygi (2022), Sokhanvar et al. (2020)
	Using internet-based virtual learning	Bagheri Lankarani et al. (2010)
	Engaging private sector	Farzadfar et al. (2017), Mohammadibakhsh et al. (2020)
	Considering specialty training for family physicians	Bagheri Lankarani et al. (2010), Sokhanvar et al. (2020)
	Considering sufficient workforce resources	Dehnavieh et al. (2015), Shahabianmoghaddam & Zanganeh Baygi (2022)
	Creating appropriate monitoring and supervision systems	Dehnavieh et al. (2015), Delgoshaei et al. (2020), Fardid et al. (2019), Gharibi & Dadgar (2020), Honarvar et al. (2015), Imanieh et al. (2017), Imanieh et al. (2017), Mohammadibakhsh et al. (2020), Sabet Sarvestani et al. (2017), Shahabianmoghaddam & Zanganeh Baygi (2022)
	Enhancing the quality of services	Fararouie et al. (2019)
	Facilitating good interaction among beneficiaries	Dehnavieh et al. (2015), Gharibi & Dadgar (2020)
	Establishing an appropriate working culture	Dehnavieh et al. (2015),
	Involvement of mass media	Dehnavieh et al. (2015), Farzadfar et al. (2017)
	Determining the physicians' workload	Delgoshaei et al. (2020)
	Improving management skills of providers	Delgoshaei et al. (2020)
	Creating effective information system (qualified registry system)	Delgoshaei et al. (2020), Gharibi & Dadgar (2020), Honarvar et al. (2016), Imanieh et al. (2017), Kohpeima Jahromi et al. (2017a), Sokhanvar et al. (2020)
	Clarifying the role of involved professionals	Delgoshaei et al. (2020), Gharibi & Dadgar (2020)
	Applying outcomes-focused approach	Delgoshaei et al. (2020)
	Preparing protocols and guidelines	Farzadfar et al. (2017), Gharibi & Dadgar (2020), Sokhanvar et al. (2020)
	Enhancing intra- and inter sectoral collaborations	Farzadfar et al. (2017), Gharibi & Dadgar (2020), Gharibi & Dadgar (2020), Hajibadal et al. (2022), Imanieh et al. (2017), Mehrolhassani et al. (2021),
	Clarifying the responsibilities	Gharibi & Dadgar (2020)
	Granting a reasonable level of authority to family physicians	Gharibi & Dadgar (2020), Delgoshaei et al. (2020)
	Developing infrastructures	Hajibadal et al. (2022), Homaie Rad et al. (2017), Mohammadibakhsh et al. (2020), Shahabianmoghaddam & Zanganeh Baygi (2022)
	Implementation of the program at the time of economic stability	Homaie Rad et al. (2017)
	Increasing the number of workforces	Imanieh et al. (2017), Kohpeima Jahromi et al. (2017b
	Administering the centers through work shifts	Imanieh et al. (2017), Kohpeima Jahromi et al. (2017b), Sepehri et al. (2020)
	Representatives of family physicians for decision making	Safarpour et al. (2019)

Organization	Institutionalizing the gatekeeper role for FPs	Sepehri et al. (2020)
Financing	Considering a sustainable financial resource	Dehnavieh et al. (2015), Farzadfar et al. (2017), Mehrolhassani et al. (2021), Mohammadibakhsh et al. (2020), Shahabianmoghaddam & Zanganeh Baygi (2022)
	Merging the insurance funds	Fardid et al. (2019)
	Considering an extra fund	Fardid et al. (2020)
	Assigning franchises	Fardid et al. (2020)
	Creating an integrated virtual fund	Fardid et al. (2020)
	Provider–purchaser separation	Mohammadibakhsh et al. (2020)
Payment	Improving payment system	Dehnavieh et al. (2015), Delgoshaei et al. (2020), Doshmangir et al. (2018), Farzadfar et al. (2017), Kohpeima Jahromi et al. (2017a), Mohammadibakhsh et al. (2020), Sokhanvar et al. (2020)
	Using risk-adjusted capitation mechanism	Esmaeili et al. (2016), Gharibi & Dadgar (2020)
	Moving toward the Beveridge family payment model	Fardid et al. (2020)
	A detachment of physician capitation from health care providers	Fardid et al. (2020)
Regulation	Employing appropriate legal and regulatory frameworks	Sepehri et al. (2020)
	Constant reviewing policies, rules, and regulation	Dehnavieh et al. (2015)
	Applying efficient strategies by government to encourage relevant stakeholders for joining in the program	Bayati et al. (2022)
Behavior	Strengthening economic status of providers	Bayati et al. (2022)
	Improving the clinical knowledge of the population	Doshmangir et al. (2018), Farzadfar et al. (2017)
	Enhancing community awareness	Fardid et al. (2019), Gharibi & Dadgar (2020), Honarvar et al. (2015), Honarvar et al. (2018), Kabir et al. (2018), Kabir et al. (2019)
	Promoting public culture for using FP services	Fardid et al. (2019), Fardid et al. (2020), Hajibadal et al. (2022), Kabir et al. (2019)
	Considering incentives to attract workforces	Fardid et al. (2019),
	Using scientific evidence by providers	Imanieh et al. (2017)
	Promoting patients' responsibility	Kohpeima Jahromi et al. (2017a)
	Incentive programs for FPs who teach their populations in prevention programs	Kohpeima Jahromi et al. (2017b)
	Considering the concerns of providers	Ranjbar Ezatabadi et al. (2015)
	Using rotational shifts	Safarpour et al. (2019)
	Receiving franchise to reducing induced demands	Safarpour et al. (2019)
	Enhancing communication skills of physicians	Shiraly et al. (2021)

Medical Sciences, two were former vice chancellors of Shiraz University of Medical Sciences, the former president of health insurance in Fars Province, three were senior officials of the family physician program in Fars Province, and two were people from the Medical Council of the Islamic Republic of Iran were also participants. Qualitative findings have been detailed in the Supplemental file 1.

Discussion

According to the current study, the UFPP faces five dimensions of challenges: organization (distributed stewardship, high provider workload, inadequate human resource training, weak referral systems, lack of comprehensive monitoring and evaluation, poor information infrastructure, inappropriate management and planning, and lack of intra- and inter-sectoral collaboration); financing (insufficient financial resources, fragmented insurance, and instability of financial resources); payment (inappropriate payment mechanism, delay in payments, and lack of outcome-based payment); regulation (cumbersome laws, unclear rules, and absence of legal requirements); and behavior (cultural problems, conflict of interests, lack of proper

communication between the healthcare provider and the patient and lack of determination and incentive). However, a number of solutions were also found in order to improve the implementation of this program all over the country and especially in the Fars province.

Organization

Stewardship, including intra-sectoral governance and inter-sectoral leadership, plays a very important role in the successful implementation of a program, especially for programs that have different stakeholders [68, 69]. In this study, it was shown that the lack of united stewardship caused the implementation of the UFPP to face a serious challenge. In Iran, the role of the MoHME has indeed shifted from policymaking and supervision to financing and providing healthcare services, which has made it unable to fulfill its governance and leadership roles in a desirable manner [70, 71]. Therefore, it is necessary for the MoHME to return to its main functions, such as policymaking and supervision, in order to provide the necessary platform to guide reform programs, including UFPP [29, 39].

This study identified that, in addition to the inadequate human resources of the UFPP, the existing workforces also do not have enough knowledge and skills to work on this project. In fact, the lack of community-oriented training and the lack of a holistic view among the involved professions have caused them to lack sufficient preparation to provide family physician services [23, 39]. Indeed, focusing on treatment-oriented courses in the educational system has made it difficult for practitioners to understand health-oriented problems [54]. Thus, many studies have suggested that we should train appropriate practitioners and therapists for community-oriented programs such as family physicians by making amendments to educational curricula [29, 36, 61]. In addition, ad hoc training and constant educational courses should be considered seriously in order to update knowledge and skills [23].

The weakness of referral system has always been recognized as one of the obstacles to the effective implementation of the UFPP in Iran. The referral system allows people to access facilities and health services based on their needs and priorities [59]. In this regard, in the law of the fifth development plan, the creation of an effective referral system is emphasized as a mandatory law by the MoHME. However, with the passing of several years under such a law, the health care referral system in Iran is facing serious challenges that have greatly affected the UFPP. Various factors have led to the emergence of such a situation, including easy access to specialized services, a lack of an accurate information system, a lack of awareness about UFPP goals, cultural problems, etc. [21, 44, 72]. Nonetheless, evidence suggests that family physicians acting as gatekeepers can reduce costs and improve care quality [60, 73]. Therefore, strengthening the referral system through increased cooperation between different levels of the health care system, cooperation between the public and private sectors, and the creation of accurate information systems is a vital prerequisite for the successful implementation of the UFPP [44, 49, 53].

Insufficient physical and information infrastructures were other identified challenges that mentioned by other studies [35, 39, 74]. Although a decade has passed since the implementation of the UFPP, there are still problems with physical space and equipment. In addition, the inappropriateness of the information infrastructure, such as the unavailability of electronic health records, has caused the professions involved in the UFPP to not perform well [40, 46, 54]. Even though in 2016, a national action was taken to develop an integrated health system for Iranians by creating an electronic health record registration system, this problem has not yet been fully resolved [54]. Therefore, besides the development of physical infrastructure, the successful implementation of the UFPP requires the development of software infrastructure with the aim of accessing people's health records.

Lack of comprehensive monitoring and evaluation was another challenge identified through this study. Indeed, performance evaluation allows decision- and policy-makers to amend and modify paths based on the variables involved [23]. Although checklists were developed to monitor and evaluate the services provided by the UFPP team, the feedback obtained from them has not been effectively used to improve policies and service delivery processes [75]. In response, a number of studies have emphasized the importance of effective monitoring and evaluation in order to minimize the drawbacks of programs [45, 59, 61]. Therefore, it is crucial to develop effective monitoring and evaluation systems both at the individual and team level while recognizing the existing deficiencies and modifying the policies in order to strengthen the UFPP services.

High workload, along with the lack of sufficient incentive mechanisms, has caused the performance of UFPP providers to be significantly affected. Related evidence has also revealed that physicians and other health care providers in the family physician program are unhappy with the high workload and low pay [23, 39, 58]. Notably, family physician facilities differ greatly between developed and underdeveloped areas [25]. This has made many physicians reluctant to participate in the program, especially in less developed areas. Moreover, the presence of a significant share of physicians and health care workers in the UFPP is not permanent, which has caused them to not enjoy job stability [23]. In addition, some studies have indicated that family physicians suffer from mental disorders (like stress and burnout) and job dissatisfaction due to inappropriate financial compensation, a high workload, and inadequate time to balance their personal lives with their professional lives [23]. Thus, by applying a wide range of strategies while reducing the workload of the providers, it is necessary to move in the direction of increasing their motivation to participate in UFPP.

Tab. IV. Challenges of implementation of urban family physician program in Iran (qualitative study).

Five control knobs	Categories	Codes	Participant ID
Organization	Dispersed stewardship	The stewardship function of the MoHME had been dispersed with its inadequate authority to implement the FP program.	Participant 01
		The lack of justification of the political and executive authorities or the insufficient information provided	Participant 06
		Weak governance in Iran's health system and instability in policies lead to the implementation of UFPP was not successful	Participant 02
		Lack of integrity to provide health care in Iran's health system	Participant 01
	High workload of family physician	The ratio of physicians to the population in Mazandaran province was inadequate, also considering the workload and responsibilities of the urban family physician.	Participant 01
		The working hours of UFPP* were from morning until evening, due to the high volume of visits. Also, the bureaucracy dramatically increased the workload.	Participant 02
		One of the problems faced by family physicians was the lack of annual or monthly leave and high working responsibility.	Participant 01
	Lack of comprehensive education	There were insufficient skills and training levels in family physicians to better implement this plan.	Participant 01
		The lack of a community-based vision in the educational system, and the lack of involvement of the members of the health team in the family physician's education system.	Participant 01
		Inadequate skills and training for service providers and lack of retraining programs.	Participant 01
		The medical education in Iran, conventionally, do not prepare trainees appropriately for their future career.	Participant 01 Participant 03
		The non-readiness of physicians for caregiving as an FP and lack of experience, as well as lack of a holistic view of this program, was problems to the fully effective implementation of UFPP.	Participant 01
	Inadequate workforces	The number of trained physicians, caregivers, and midwives was not proportional to the population covered.	Participant 04 Participant 05
	Weak referral system	There is no systematic referral system in Iran's health system. Therefore, there is no restriction on access to specialist levels and hospitals. This is despite the fact that an effective referral system prevents unnecessary visits to more specialized levels as well as the waste of material and human resources.	Participant 01
		No one cares about the second-level referral cycle and hospitals are only concerned with making money and paying their bills. Although the referral system is a good tool for controlling healthcare costs and increasing the standardization of clinical practices between general practitioners and specialists.	Participant 01
		The second-level referral was not well defined and there were limitations in referral to secondary care.	Participant 06
		One of the reasons for the ineffectiveness of the program was the optional referral system.	Participant 05
	Lack of effective monitoring and evaluation Inadequate incentive mechanism	There was a poor monitoring and evaluation system in Iran's health system to assess the performance of service providers.	Participant 01
		There was no accreditation evaluation system for urban family physicians.	Participant 02
		Output indicators and Outcome indicators were not approved for UFPP evaluation.	Participant 04
		In the UFFP the supervisions are mostly quantitative, and qualitative supervision has not been done.	Participant 05
		Most doctors only practiced as family physicians when they had no choice.	Participant 01
		Inadequate remuneration and denigration of family physicians and also, inadequate remuneration for midwives were the reasons for the failure of the program.	Participant 03 Participant 05 Participant 07
		Unreasonable facilities in the residence, inappropriate work environment, and insufficient equipment and medical facilities have contributed to the lack of motivation of family physicians.	Participant 06

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Organization	Lack of effective monitoring and evaluation Inadequate incentive mechanism	The specialist incentives for further collaborations have gradually diminished over time and lack of motivation is one of the main barriers to providing effective health services	Participant 01
		Unsuitable salary requirements, lack of job security, and lack of opportunity for continuing education were regarded as the most common reasons for leaving the program.	Participant 02
		Failure to prepare and attract the cooperation of the media.	Participant 06
	Lack of comprehensive information system	Lack of electronic health database of individuals and suitable infrastructure for the development of the health information system.	Participant 01 Participant 05 Participant 06 Participant 07 Participant 08
		There is currently no comprehensive and proper electronic record in Iran and different levels of the health system are not linked to it.	Participant 01 Participant 05 Participant 06
		Inadequate amount of information sent from referral sources to hospitals and vice versa.	Participant 06
	Administrative issues	Changes in management and policies easily influence the plan's progress.	Participant 02
		The therapeutic focus of the UFPP caused soaring expenses and reduced achievement.	Participant 01 Participant 08
		There was a gap between a UFPP plan and its implementation.	Participant 02
		At the beginning of the implementation of the UFPP, service packages were not defined.	Participant 01
		To follow up on the patient's health by the family physician a service package was not defined.	Participant 04 Participant 06
		National planning meetings are not held in the executive headquarters of the UFPP, and most importantly, the stakeholders are not present in these meetings.	Participant 01
		The national headquarters, which should have existed in the MoHME and followed up the program, was closed.	Participant 02
		The coordination meetings of the National Family Physician staff and its executive staff have not been held due to inadequate management and political commitment.	Participant 04
		There was no political interest in the process of implementing the UFPP.	Participant 03 Participant 07
		There was no responsibility commensurate with authority in the UFPP.	Participant 04
		The implementation of UFPP was done at the micro level without coordination with the macro level.	Participant 04
		In addition to the role of health management, the family physician should also be given the role of financial management.	Participant 04
		The UFPP in Iran should have been implemented nationally and not on a pilot basis. Because it caused inertia in service recipients.	Participant 04 Participant 05
		In the implementation of the UFPP, we did not see all the axes and our view was not systemic and holistic.	Participant 04
		In UFPP, the important role of the family physician in prevention and health promotion was ignored.	Participant 06 Participant 08
		The pharmaceutical communication between the family physician and the pharmacy was not good. Pharmacies complained about the payments.	Participant 06
		They did not determine the per capita correctly and logically.	Participant 05 Participant 07
		The main goals of the program, which were risk assessment and health improvement, have not been achieved because the family physician and midwives, and caregivers were not provided with a suitable platform.	Participant 03
		Not using the points of view of the main owners of this program (family physicians and associations of general practitioners and executives) was another factor in the failure of the program.	Participant 07
	Insufficient Intra- and sector collaboration	The weakness of inter-sector collaboration and people's participation affected the fully effective implementation of UFPP.	Participant 01

Organization	Insufficient Intra- and sector collaboration	Failure in public-private sector cooperation in particular in the Fars province due to a large number of private clinics and the conflict of interest with their capitalists. (Mazandaran province had better public-private sector cooperation).	Participant 01 Participant 07
		Not participation of all stakeholders was another factor in the failure of the program.	Participant 06
		The lack of coordination between the Ministries of Health and Welfare created confusion and problems for both providers and recipients of services and the insurance system.	Participant 06
Financing	Budget deficits	Following the implementation of UFPP in 2013, financing has been provided through the public budget, which was funded by the Ministry of Health and Medical Education (MoHME) and the Ministry of Cooperatives, Labor, and Social Welfare (MoCLSW). Therefore, a suitable budget was allocated at the beginning of the UFPP and Over time, financial problems have caused delays in payments to service providers.	Participant 01 Participant 02
		Not having sustainable financing in the budget line for UFPP.	Participant 01 Participant 03 Participant 06
		The budget required for the UFPP was foreseen and approved in the budget law but was not paid for years due to various reasons (including a change of ministers and governments, and the implementation of concurrent competitor programs).	Participant 02
		Insufficient financial resources were the main barrier to implement UFPP.	Participant 07
		The financing of the UFPP by insurance, Tax, and public resources required rules and guidelines.	Participant 04
	Insurance issues	The insurance provided good support at the beginning of the FPP. Their support was because they approached their main tasks (strategic purchasing, resource management, cost saving, promoting quality, efficiency, equity, and responsiveness in health service provision). Over time, due to budget deficits, insurance support decreased and insurance problems increased.	Participant 02
		In the context that currently exists and the unusual and ineffective contracts that insurance organizations currently have with doctors, they cannot control costs.	Participant 02
		The diversity of insurance organizations and multiple insurance funds and lack of pooling was a barrier to financing UFPP properly.	Participant 01
		Weak interaction between the health system and insurance organizations at the beginning of the program implementation was another factor in the failure of the program.	Participant 02
Payment	Wrong payment mechanism	The payment system in UFPP was a fee for services (FFS). A method in which physicians are paid for each service performed. While the proper payment system in UFPP was per capita payment in the Iran context. To implement the per capita policy as a preferred payment mechanism, physicians had to cover a certain number of patients and were paid according to the number of services provided. However, the per capita scheme did not fully take into account the services actually provided.	Participant 01
		The most common model of payment to specialists is through FFS.	Participant 07
	Inappropriate payment	The salaries of the specialists were sometimes inadequate.	Participant 01
		A large number of specialists in Fars province, who were generally in the special clinic, despite the fact that the university was interested in their payment correctly and through the referrals system, created disruptions in the proper implementation of the plan.	Participant 01
		Compared with other jobs, the salaries of staff providing family physician services are low, and this also has a negative impact on motivation to attend the program.	Participant 06
		Delay in payment to physicians was an important factor in the failure of the program.	Participant 05 Participant 06
		Failure to pay on time and irregularity in payments was an important factor in the failure of the program.	Participant 08
		Delay in payments by insurance organizations was an important factor in the failure of the program.	Participant 07

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Payment	Inappropriate payment	The common share of caregivers from FP's capitation led to some issues including out-of-pocket payment to caregivers due to delays in receiving capitation and discrimination in paying caregivers due to physicians' preferences.	Participant 06
Regulation	Centralized planning	The decision-making process was top-down and centralized rather than collaborative and participatory, thus leading to debates and controversies.	Participant 01
		Lack of necessary delegation in UFPP implementation was one of the barriers to the fully effective implementation of UFPP.	Participant 01 Participant 08
	Unclear laws	The related rules and guidelines were not very clear.	Participant 02
Behavior	Cultural problems	The culture of many people's lack of trust in the services provided by GPs and the willingness to use the services of specialists was one of the barriers to the fully effective implementation of UFPP.	Participant 02
		Lack of trust in health care at low levels of service delivery was one of the barriers to the fully effective implementation of UFPP.	Participant 06
		The unfamiliarity of the public with the correct use of FP services and visiting their FP only to be allowed to visit a specialist without any cost was a problem to the effective implementation of UFPP.	Participant 01
		Little attention was paid to the required perquisites such as cultural infrastructure growth.	Participant 02 Participant 05 Participant 06
		The egoistic manner of medical specialists was a problem to the effective implementation of UFPP.	Participant 01 Participant 06
	Determination	At the beginning of the implementation of UFPP, the determination of the university was high, but there were challenges with the Association of General Practitioners, insurance organizations, parliamentarians and officials, and local and native politics.	Participant 02
		At the end of the 10th government, with the change of the minister, there was a change in the national determination.	Participant 02
		The 10th, 11th, and 12th government ministers were not in favor of the UFPP and wanted to stop the program.	Participant 02 Participant 04
		The UFPP gradually lost its national and regional determination.	Participant 01
	Conflict of interest	Lack of a well-designed and efficient referral system. For this reason, horizontal referral happened especially in the private sector (the physician referred to his private clinic). As a result, the physician would create induce demand or refer the patient to himself.	Participant 02 Participant 05
		Some medical specialists think that the UFPP may reduce their patient numbers and consequently their income.	Participant 04
		Due to the conflict of interests, the tariffs are not communicated correctly.	Participant 04
		The conflict of interests of the some university chancellors caused a disruption in the project implementation process. The extent that specialist doctors were rewarded with two visits in addition to their own visit and a high share of the income of the faculty members was provided from there. Therefore, the cost of outpatient services in Fars province increased a lot.	Participant 01

* UFPP: Urban Family Physician Program.

Financing

The UFPP faces several financial challenges, including insufficient government budgets. This challenge has been mentioned in the study by Mehrolhassani et al. (2021) that, despite the legal approval of the budget of the UFPP, due to various reasons such as the change of administrators and economic conditions, there are usually fluctuations in the payment of the budget [54]. Besides this, the existence of different insurance funds with different policies and approaches is a challenge for Iran's health system, which has also faced difficulties in financing the UFPP [41, 44, 54]. In fact, the existence of multiple health insurance funds has caused insurance mechanisms such as resource pooling, risk distribution, and cross-subsidizing to not be carried out well. Although, according to the law of the fifth development plan, health insurance funds should have been merged and integrated, this policy has not yet been implemented. This finding has been mentioned in the study by Dehnavieh et al. (2015), which found that the existence of multiple health insurance funds and the absence of a single insurance system is one of the major challenges of implementing the UFPP in Iran [39]. Therefore, in addition to providing stable financial resources for the UFPP, which is of course very difficult considering Iran's economic conditions, fundamental reforms should be carried out in Iran's health insurance sector in order to make it more effective.

Tab. V. Solutions to improve the implementation of urban family physician program in Iran (qualitative study).

Five control knobs	Categories	Codes	Participant ID
Organization	United Stewardship	The stewardship of the health system should be strengthened and centralized in Health Ministry	Participant 01
	Involving political actors	The correct implementation of the program in the whole country requires national determination and political determination.	Participant 02 Participant 04
	Gradual implementation	The UFFP should be implemented step by step and according to the schedule.	Participant 01 Participant 02
		First, solve the problems of the two pilot provinces that have been identified during the last ten years and bring them to standard status, and gradually implement the plan in the rest of the country's provinces with a specific schedule and step-by-step.	Participant 02
	Considering the successful models in other countries	Follow the successful countries in implementing the UFPP as an example.	Participant 01
	Enhancing intra- and inter-sectoral collaboration	The sequence of actions of the UFFP should have a logical timing. Also, promoting inter-sectoral collaboration as the stakeholders of family physician policy is necessary.	Participant 02
		The UFPP is not specific to the MoHME, but it is a mega project and should have comprehensive collaborations.	Participant 06
		The national planning meetings should be held in the presence of the president and ministers related to the program.	Participant 04
	Improving referral pathways	We could apply referral limits, and assign franchises to hinder the excessive referrals to FPs. Zero franchises can be devoted only to lower-income percentiles while for rich regions a franchise can be assigned as mandatory. The people who go to FPs more than a specific amount will have to pay a franchise.	Participant 01
		Implementing the UFPP with the compulsory referral system.	Participant 04 Participant 05
		Implementing the UFPP with the compulsory referral system.	Participant 05
		Implementing the UFPP with the gatekeeper role and the compulsory referral system should first be culturally institutionalized in the officials, MPs, ministers, and members of the government, then it should be imposed on the people.	Participant 02
		With the correct implementation of the UFPP and the compulsory referral system, the FP gains credibility in society and gains the trust of the people.	Participant 01 Participant 02
		Develop the primary health care (PHC) of the country actively through caregivers and FPs and under the supervision of the UFPP.	Participant 02
		As regards, the family physician plan being aimed at confronting people with the first level of services, the model of providing outpatient and specialized and sub-specialized services must be changed.	Participant 01
		The UFPP services should be regionalized. It is better that the regionalization is stratified into four levels (macro level, community level, family level, and basic level).	Participant 06
	Establishing electronic health records	The development of electronic health records at all three levels is one of the important infrastructures in the implementation of UFPP.	Participant 01 Participant 05 Participant 08
	Using shift rotation	Rotate the shifts of family physicians so they can leave at any time, without worrying about a replacement physician.	Participant 01
		Adjusting the working hours of family physicians from 8 to 14 and from 14 to 21 and assigning several patients to two FPs during these hours in order to prevent FP's dual practice and to focus more on the family physician program.	Participant 07
	Establishing an effective service packages	UFP service packages should be developed based on the burden of the disease.	Participant 01 Participant 02

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Organization	Nationwide implementation	The UFPP should be implemented nationwide.	Participant 04
	Moving towards prevention	The health status of the population covered should be actively followed up, by FPs and caregivers and we should move from a treatment-oriented mode to prevention.	Participant 05
	Accountability	Promote accountability in the FP to improve the implementation of UFPP.	Participant 05
	Effective monitoring and evaluation	Creating a powerful monitoring and evaluation system based on the payment system to provide high-quality services by physicians and the relevant proper evaluation criteria should be set for service receivers.	Participant 01
		Use accreditation method for evaluation the UFPP.	Participant 01
		The evaluations should change from quantitative to qualitative and compare the performance of each FP with the total performance of the province and the country.	Participant 05
		The deputy health department should continuously monitor the indicators and health status of covered people.	Participant 05
Behavior	Promoting the culture of users and providers	Social marketing is needed so that people accept UFPP services. The mass media and opinion leaders should promote its acceptance. Using UFPP services should be represented as a value.	Participant 01
		Increase the covered population awareness by enhancing the culture of FP's correct use.	Participant 01
		The behavior change must occur in both service recipients and providers. This change is gradually obtained in the community and requires trust building.	Participant 02
	Enhancing incentive mechanisms	Improve incentive mechanisms for specialist collaboration.	Participant 03
	Voluntary participation	The FP should be voluntary for the GPs, that is, if the physicians like to participate in the program and use its benefits and if they do not want to leave the program and give the covered population to another physician.	Participant 09
	Establishing a comprehensive education	Improving the ability of GP and training the fundamental differences between FP and GP, behavior to the patient as an FP, and having a holistic view of diagnostic-curative topics as specific courses for FP. A short mandatory course at the beginning of the FP contract, with a continuous professional development program, should be arranged.	Participant 01 Participant 03 Participant 06
		Reforms in medical curriculum are recommended	Participant 02
		Improving the ability of caregivers by arranging continuous professional development programs.	Participant 01 Participant 03 Participant 08
		Necessary training should be given to the covered population in order to appeal to people's trust and encourage their active collaboration in this program.	Participant 05
Financing	Moving towards effective insursnce	The working model of the insurance fund must be changed and the financial resources must be integrated virtually till the time their real polling can be reached.	Participant 01
	Considering stable resources	Providing sustainable financial resources for the continuous implementation of UFPP is necessary.	Participant 01 Participant 04 Participant 05
		Participation of FP and specialists in the financial risks imposed on the health system and payment system reform.	Participant 01
	Splitting between users and providers	We must make the per capita realistic and eliminate the financial and monetary relationship between the patient and the FP.	Participant 05
Payment	Moving towards mixed payment mechanisms	Establish a performance-based payment system up to the service package ceiling.	Participant 01 Participant 05
		Establishing health care services for all urban dwellers with a per capita payment system.	Participant 01

Payment	Moving towards mixed payment mechanisms	A combination of payment methods is more appropriate to increase the efficiency and effectiveness of the payment system and improve the expected results and the method of payment per capita is generally used alongside other methods.	Participant 01
	Splitting between purchaser and provider	Establishment of appropriate rules for payments to solve financial problems. It's better for the Ministry of Welfare to be assigned the infrastructure and payments for the FPP instead of the Ministry of Health, for the MoHME to strengthen its surveillance role.	Participant 06
		Provider–purchaser separation can lead to success and reduce conflicts of interest in Iran's health system.	Participant 01
		One of the most important solutions is maintaining order in payments and timely payment to FPs.	Participant 07 Participant 08
Regulation	Setting rational tariffs	Setting medical tariffs rationally and based on the relative value of health services is needed infrastructures, which are deemed necessary for the effective implementation of UFPP.	Participant 01 Participant 03
	Strengthening clinical guidelines	Practice the referral system, regularization, and strategic purchase of services based on the compilation of clinical guidelines and through the UFPP.	Participant 01 Participant 08
	Clarifying the legal requirements and authorities	Clarifying the legal requirements of planning to provide resources and facilitate the UFPP implementation plan.	Participant 01
		Special powers should be obtained for the national headquarters of the UFPP, so that during the implementation of the program, there is no need to obtain a license, approve the law, and delegate powers through the parliament.	Participant 04
		The necessity of developing a referral system and family physician program in all cities across the country is the most important dimension of Iran's upstream health policies.	Participant 07
	Decentralization	Delegating provincial powers to facilitate the implementation of the UFPP.	Participant 01 Participant 08

Payment

Inappropriate payment mechanisms, both in our study and in other published studies, have been raised as one of the most important obstacles to the effective implementation of the UFPP in Iran. In this regard, relevant evidence showed that payment mechanisms such as per capita payments do not motivate UFPP's employees well [35, 39, 57]. According to the study by Doshmangir et al. (2018), although bonuses are also paid in order to improve the quality of services provided to employees, they still cannot compensate for the services provided [41]. That is why in many countries they use mixed payment methods, including monthly salary, bonus, capitation, and fee-for-service (FFS) [41]. Using a mix of payment methods can help motivate providers, stop unnecessary visits, and improve the quality of care services, among other things [76]. Further, the delay in payments is a common challenge in this dimension, which has significantly caused the dissatisfaction of the employees of this program [44, 45]. In line with this finding, Arab et al. (2014) reported that delayed payments was one of the main reasons for family physicians' dissatisfaction [77]. Therefore, with timely payments, we can move in the direction of improving the level of motivation and satisfaction of employees.

Regulation

Based on our findings, the rules are cumbersome, and since there is no rigorous monitoring and evaluation process, the supervision has become very complicated. Other studies [39, 45] have also expressed such a finding and believe that the lack of clarity in the laws and regulatory approach has caused the implementation of the family physician program to face a serious challenge. Furthermore, centralized planning is another challenge related to the legislation of the family physician program, which, of course, is a feature of the entire Iranian health system and is not specific to this program [78]. In fact, there is a need for the role of provincial governments to become more prominent in the planning process of such community-oriented programs. So, one of the policies that needs to happen before the UFPP can be pushed forward in the coming years is for local governments to be more involved and given real power, so that they can make decisions faster and spot problems more quickly.
One of the notable findings was that, despite some legal requirements, changing in governments and administrators are accompanied by changes in attention to programs such as family physician. Meanwhile, such reforms require medium- and long-term planning in order to achieve their desired impacts. In agreement with this finding, evidence has shown that, as with other

reform programs in Iran, changes in governments and senior managers significantly affect the implementation of previous programs [45, 54, 74]. In fact, personal and group preferences cause the implementation of a legal program to be challenged. Therefore, it is necessary to create a clear road map for the health system reforms and to make the managers adhere to the plans so that even with the change of managers, the implementation of the plans will not be disturbed.

Behavior

Cultural issues on the part of both service recipients and providers have made the provision of UFPP services problematic [39, 40, 45, 59]. Based on the findings, some people do not have a proper view of the knowledge and performance of general practitioners in the family physician program. Therefore, a significant proportion of patients prefer to be evaluated by a specialist in the first place. Indeed, these conditions are caused by the lack of sufficient knowledge of the service recipients about the services of the UFPP and the referral system [44, 66]. According to a study done by Janati et al. in 2010, more than half of the people who went to the emergency room for non-urgent problems could have been treated by a general practitioner [79]. Furthermore, the findings showed that some specialists have an egoistic manner and are not very willing to cooperate with the family physician program. In fact, they think that the implementation of such a program can reduce the number of patients and therefore FPs' income [39, 44]. Moreover, lack of private sector participation in UFPP has made the private sector, as a significant beneficiary of Iran's health system, uninterested in cooperating with this program. These factors have led to a series of conflicts of interest that have significantly challenged the effective implementation of the UFPP. In response, effective strategies need to be implemented in order to raise the public's and health professionals' awareness about the UFPP and its main functions. Nonetheless, it should also be noted that improving culture and behavioral changes is very complex, time-consuming, and requires national commitment and community-oriented educational programs.

Conclusion

This study showed that despite the passing of a decade of the UFPP, there are still serious challenges related to all five dimensions: organization, financing, payment mechanisms, regulation, and the behavior of providers and recipients. Therefore, the promotion of this program requires solving the existing implementation challenges in order to achieve the predetermined goals. The ideas in this study can be used to improve the current program in Fars Province and bring it to other regions of Iran.

Ethics approval and consent to participate

The ethical committee of the Shiraz University of Medical Sciences approved the study previously (IR.SUMS.REC.1401.514). Participants were aware of their voluntary participation and that they could leave the study freely at any stage. A signed informed consent form was also received from participants prior to each interview. All methods were performed in accordance with relevant guidelines and regulations.

Consent for publication

Not applicable.

Availability of data and materials

The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

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Conflict of interest statement

The authors declare that they have no competing interests.

Authors' contributions

KBL, BH, SRN, SS: conceptualization. MH, FZ, SRN, SS, MF, MM: data collection. KBL, MG, FZ, SS, MF, FR: data analysis. KBL, BH, SS, MH, FZ, MF: writing and initial draft. KBL, BH, SS, MH, FZ, MF, FR, SRN: writing, review and editing. MM: editing.

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Supplementary file 1: Qualitative findings

Organizational Challenges

Integrated stewardship of the health system is one of the important factors in carrying out the UFPP. But fragmentation and multiple entities in the stewardship role of the MOHME were obstacles to implementing UFPP in Iran.

"The fragmented stewardship of the MOHME and weak governance in Iran's health system, coupled with instability in policies, led to failure in the implementation of the UFPP in Iran." [Participant 02]

In addition, the long working hours of the UFPP due to single work shifts and inadequate family physicians that led to a long waiting list had increased the public's and physicians' dissatisfaction.

"The working hours of FPs were from morning until evening, due to the high volume of visits and high level of responsibility. Also, bureaucracy has dramatically increased the workload." [Participant 02]

The proper educational programs for providers are an important part of the establishment of the UFPP. It seems that one of the reasons for the failure of UFPP in Iran was the educational problems and lack of development of the necessary skills to be a FP. Also, FPs lack innovation in improving healthcare, and their education is focused solely on treatment.

"The lack of a community-based vision in the educational system, inadequate training for service providers, and physicians' lack of readiness and necessary skills for caregiving as an FP all posed challenges to the UFPP's full implementation." [Participant 01]

An incomplete referral system was a severe obstacle for the UFPP. Without an efficient referral system, the most important functions of FPs as gatekeepers for access to specialized care have not been properly practiced.

"The absence of a well-designed and efficient referral system had resulted in numerous issues, including horizontal referral, particularly in the private sector, induce demand, and physician self-referral." [Participant 05]

The weakness in health monitoring and evaluation by the MOHME, the medical universities, and insurance companies, the inadequacy of continuity of supervision on the performance of the services, the absence of a native evaluation program, and a lessened emphasis on outcome indicators had led to the inefficiency of the UFPP in Iran.

"There is a poor monitoring and evaluation system in the health system of Iran to assess the performance of the UFPP service providers." [Participant 01]

Poor incentive mechanisms such as inadequate remuneration, unreasonable facilities at residence, a poor working environment, political interference, inadequate supplies, and medical facilities all contributed to a lack of motivation in FPs.

"Unsuitable salary requirements, a lack of job security, and a lack of opportunity for continuing education were the most common reasons for FPs to leave the program." [Participant 07]

UFPP needs an efficient electronic health information system (HIS) to provide physicians with patients' information centrally and provide program managers with more comprehensive information, such as the medication and equipment used and the type of services provided to the client. The HIS must provide communication at different levels. A lack of strong information technology infrastructure was another serious obstacle to the UFPP.

"The lack of an electronic health database of individuals and suitable infrastructure for the development of the HIS was an obstacle to UFPP implementation that needed to be resolved at the highest levels of the healthcare system." [Participant 08]

Participants talked about the administrative problems and hurdles that family physician programs in Iran's cities face.

"At the beginning of the implementation of the UFPP, service packages were not defined. Also, the service package was not defined to include follow-up on the patient's health by the FPs. So there was a gap between the UFPP plan and its implementation." [Participant 06]

"The coordination meetings of the National Family Physician staff and its executive staff have not been held due to inadequate management and political commitment. So, there was no political interest in the process of implementing the UFPP." [Participant 03]

There is a need for collaboration between family physicians and the organizations that provide healthcare services to efficiently implement UFPP. However, the lack of inter-sector collaboration and public participation hampered the full implementation of UFPP in Iran.

"The lack of coordination between the ministries of health and welfare has caused confusion and problems for both providers and recipients of services, as well as for the insurance system." [Participant 02]

Financing challenges

The participants believed that the implementation of the UFPP was affected by two main factors: budget deficits and insurance problems. According to experts, the non-realization of sustainable financial resources for the continuous implementation of the UFPP, while adequate funds were available to launch the plan at the beginning, was the key reason for the failure of the plan. Fragmentation in health insurance system funds and the health system's interaction with insurance organizations challenged urban FP program performance even further. In this regard, one of the participants mentioned:

"Insurance provided good support at the beginning of UFPP. Their support was because they approached their core mandates (strategic purchasing, resource management, cost savings, promoting quality, efficiency, equity, and responsiveness in health service provision). Over time, due to the budget deficit and fragmented insurance funds, insurance support decreased and insurance problems increased."[Participant 02]

Payment challenges

The payment system has an important role in providing appropriate health services. Many participants believed that the unfavorable payment mechanism in the UFPP and the inappropriate payment of salaries of health workers in the UFFP, as well as the lack of clarity and notable income gap among the members of a health team, had led to delays in refunding the payments to the FPs and increased their dissatisfaction with the UFPP. In this regard, one of the participants mentioned:

"Physicians had to cover a certain number of patients and were paid based on the amount of services provided in order to implement the "per capita" payment mechanism as the preferred payment mechanism. The per capita mechanism did not fully take into account the services actually provided. Also, delays in the payment of salaries have caused many physicians not to continue their cooperation."[Participant 01]

Regulation challenges

More authority in UFPP has not been delegated, which could lead to motivation in the management of people's health and play an important role as a gatekeeper.

"The decision-making process was top-down and centralized rather than collaborative and participatory, thus leading to debates and controversies due to the lack of necessary delegation in UFPP implementation."[Participant 01]

Behavior challenges

Many participants believed that the cultural problems of service receivers and service providers and the poor information process were the obstacles to establishing this plan because the necessary infrastructures were not ready to implement the project. In this regard, one of the participants mentioned:

"At the beginning of the plan, little attention was paid to the required prerequisites, such as cultural infrastructure growth. The unfamiliarity of the public with the correct use of FP services led to people visiting the FP only to be allowed to visit a specialist without any cost."[Participant 06]

Another behavioral challenge and obstacle to implementing this program was the lack of national and political determination in the years of plan implementation.

"At the beginning of the implementation of UFPP, the determination of the universities was high, but at the end of the 10th government, with the change of the minister, there was a change in the national determination. Also, the 11th and 12th government ministers were not in favor of the UFPP and wanted to stop the program." [Participant 02]

The establishment of the FPP in urban regions faces some challenges, such as a powerful private sector with high conflicting interests among family physicians and between specialist physicians and GPs.

"Because family physicians and specialists make very different amounts of money, putting in place the family doctor program with the gatekeeper role and the mandatory referral system will make it more likely that there will be a conflict of interest, which will make the problems worse."[Participant 04]

Solutions

Organizational-related solutions

According to the suggestions of the participants, strengthening and centralizing the stewardship of the health system is one of the important factors for the implementation of the UFPP in Iran. It is more effective to implement this plan in the entire country step by step and according to the schedule and logical timing. The UFPP must be implemented with the compulsory electronic referral system. It's important to promote inter-sectoral collaboration between service presentation levels and beneficiary organizations. UFP service packages should be developed based on the burden of the disease. It's better to use a consultation form instead of a referral form because specialists pay more attention to the views of GPs. To prevent excessive referrals to FPs, we could impose referral caps and limit zero franchises to lower-income percentiles. To decrease the workload of FPs, we could design rotational shifts. It needs to create a powerful monitoring and evaluation system based on the payment system to allow FPs to provide high-quality services. These suggestions will be realized if there is a political and national determination to implement the plan.

"My suggestions to improve UFPP implementation in Iran are; strengthening the stewardship of the MoHME, Implementing the program step by step, using a consultation form, compulsory referral system, enhancing the people's culture through education, limiting Zero franchises and excessive referrals to FPs by rules, Rotating the shifts of FPs, designing UFP service packages based on the burden of the disease, strengthening the cooperation of the private sector, improving the model of providing outpatient and specialized and sub-specialized services

according to successful countries in implementing the UFP, improving monitoring and evaluation system based on the payment system, and using the accreditation method for evaluating the UFPP."[Participant 01]

Financing-related solutions

The UFPP in Iran compensates services on the basis of a per capita payment system based on coverage of a defined population. According to the opinion of the participants, Iran's health system should be creating and strengthening sustainable financing strategies to develop equity in healthcare financing through a progressive financing policy. Participants suggest designing a financial system based on the capabilities of the public and private sectors for an entire population in a region and based on a defined per capita cost supervised by the provincial health care and treatment network.

"We must make the per capita realistic and eliminate the financial and monetary relationship between the patient and the FP. Also, we must be able to make changes according to the conditions of each province so that we can respond to all the needs of the covered population."[Participant 05]

Payment-related solutions

The payment system for the UFPP in Iran was not appropriate. Several interviewees highlighted the importance of designing a payment system based on mixed payment methods, including a combination of capitation, FFS, and bonuses.

"A combination of payment methods is more appropriate to increase the efficiency and effectiveness of the payment system and improve the expected results, and the method of payment per capita is generally used alongside other methods."[Participant 01]

"We should establish a performance-based payment system up to the UFPP service package ceiling and maintain order in payments to FPs."[Participant 05]

Regulation-related solutions

According to the opinion of the participants, the required infrastructures for planning and launching UFPP included: setting medical tariffs rationally, establishing the referral system, strategic purchasing of services based on the compilation of clinical guidelines, developing electronic health records at all three levels, clarifying the legal requirements of the plan, regionalizing the UFPP services, and delegating provincial powers.

"Setting medical tariffs rationally and based on the relative value of health services, strategic purchasing of services based on the compilation of clinical guidelines, developing electronic health records at all three levels, Clarifying the legal requirements to provide resources, and delegating provincial powers are suggested to facilitate the implementation of the UFPP."[Participant 01]

Behavior-related solutions

The implementation of the family physician program needs culture-building among people and service providers. In this regard, interviewees suggest orienting the public's mentality toward the program. The mass media should advertise the program and be involved with the program. Also, urban community-based medical education for GPs should be developed.

"Social marketing is needed so that people accept UFPP services. The mass media and opinion leaders should promote its acceptance. Using UFPP services should be represented as a value."[Participant 01]

"Social marketing is needed so that people accept UFPP services. The mass media and opinion leaders should promote its acceptance. Using UFPP services should be represented as a value."[Participant 02]

Scrutinizing the Perspective of Family Physician Teams After the first Decade of Implementation of Urban Family Physician Program: A Thematic Qualitative Study from Iran

Original Article

Scrutinizing the Perspective of Family Physician Teams After the first Decade of Implementation of Urban Family Physician Program: A Thematic Qualitative Study from Iran

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Abstract

Background: Urban Family Physician Program (UFPP) passed the first ten years of its age in Iran. In this study, we aimed to determine the strengths and challenges of this program from the viewpoints of family physician (FP) teams to address comprehensive evidences and solutions for its improvement. **Methods:** In this qualitative study, using purposeful sampling, 58 members of FP teams from ten cities of Fars province were interviewed. In-depth semistructured phone interviews were performed. The trustworthiness of data was checked using Guba and Lincoln criteria. **Results:** Interviewees' mean years of working in UFPP was 6.9 ± 3.5 years. Themes of challenges included: Inefficient governance, Challenging information system, Fragile financing system, Inefficient service provision, Inefficient Health Workforce, and Inadequate medical products and technologies. Themes of strengths included: Improving governance, Comprehensive information system, Improved quality of service delivery, Improved health workforce conditions, Curbing the costs of health systems, and Capability of application of new technologies. The bulk of views were toward challenges compared with the strengths. **Conclusions:** After the first decade of running UFPP and regardless of some contradictory opinions among family physician teams, the challenges of this program outweigh its strengths. These evidences address the need for a fundamental reform in this program.

Keywords: *Challenges, family physician, Iran, program, solutions, strengths, urban*

Introduction

Family Physician Program (FPP) improves primary healthcare and quality of the health system, reducing healthcare costs, coordinating services, and controlling patient referrals.[1-8] Urban Family Physician Program (UFPP) was lunched as a pilot program with eight defined goals in 2012 in the Fars province of Iran.[9] Since then, this program led to some gains in the health system, however, it was also encountered to great challenges.[10-13] Therefore, this study aimed to explore the strengths and challenges of UFPP from the viewpoint of FPP teams 'members.

Methods

Study design and setting

This qualitative study was conducted in 2023 in Fars, Iran. In this study, a thematic conceptual content analysis was applied to explore the UFPP teams' opinions about the strengths and challenges of this program.

Sampling and data collection

At first, 31 cities of Fars province were divided into two groups of high population (over 50,000) and low population (less than 50,000). Then, five cities of each group were selected randomly. The target population was UFPP team members including FP, psychologists, nutritionists, dentists, public health experts, and midwives. Names and contact information of these groups were provided by the health deputy of Shiraz University of Medical Sciences (SUMS). In the next step, a purposeful sampling with a maximum diversity was applied to choose interviewees from the selected cities. The only exclusion criterion was nonwillingness to join this study.

Data collection tool and technique

All interviews were conducted via phone contacts because of wide geographical distribution of the target population, and logistical barriers in conducting face-to-face

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interviews. The interviews were conducted by a skilled interviewer with extensive experience in qualitative research. Once the study' aims were explained at the first call, an in-depth and semistructured interview was arranged with each participant at his/her preferred time.

In interviews, the participants were asked about the strengths and challenges of the UFPP. The follow-up/probing questions such as "What?," "How?," "Why?," and "May you explain more?" were also used to reach much more information about these aspects. Furthermore, note-taking was highly considered during the interviews. Interviews were recorded and continued until reaching the saturation of data; no new data was added, and no new code could be extracted. It should be mentioned that to ensure an accurate recording of the interviews, two voice recorders were used.

Data analysis

Data collection and analysis were conducted simultaneously. After each interview, the audio file was transcribed into open codes for further analysis. The transcripts and notes were carefully reviewed multiple times to develop a comprehensive understanding of their information. The thematic content analysis approach was applied.[14] This process involved reviewing the texts and extracting open codes. From there, concepts were developed, and these codes were further categorized into subthemes. Finally, the main themes were derived through the interpretation of the subthemes and were categorized according to the WHO health system's six building blocks; (i) Governance and leadership; (ii) Health information; (iii) Financing; (iv) Service provision; (v) Health workforce; and (vi) Medical products and technologies.[15]

Trustworthiness of the study

To ensure the trustworthiness of the data, the Guba and Lincoln criteria; credibility, confirmability, dependability, and transferability were used as scientific reliability criteria in qualitative research.[16] To ensure the transferability of the data, a comprehensive explanation of the subject matter, the characteristics of the interviewees, and the process of data collection and analysis were provided. This ensured that the findings could be applied and understood in various contexts. Furthermore, using purposive sampling methods enhanced the transferability of the findings. Credibility was ensured through the use of semistructured interviews, field notes, and deep engagement with the subject matter. In addition, constant peer probing, expert review, and member checking were used to validate the credibility of the data. To ensure the confirmability of the data, the lead researcher conducted multiple comprehensive review meetings to gather concepts and ideas from members of the research team. In addition, records of each step in the study were documented to support the confirmability of the data. It should be mentioned that an audit trail was accomplished by researchers familiar with the healthcare system and qualitative research. This process helped ensure the transparency and traceability of the research methodology and findings. Furthermore, the dependability of the study was verified through deep discussions with experts in the field and a review process involving the interviewees as well as other researchers.

Ethics statement

The ethics committee of SUMS approved the study's proposal, encoded IR.SUMS.REC.1401.330. Also, the 1964 Helsinki Declaration was considered in this study.[17] Before each interview session, participants were informed about the objective of this study and verbal consent was obtained from each of them. Furthermore, all interviewees were made aware that their participation in the study was voluntary and that they could withdraw at any point. In addition, interviewees were given the assurance that their interviews would be kept confidential, and stored anonymously, and after the article's publication, the audio recordings would be completely deleted.

Results

Demographic characteristics

Overall, 58 members of FPs' teams, including 39 females and 19 males, from ten cities of Fars province, Iran were interviewed. Their mean age was 39.6 ± 11.6 years old (median 34, minimum 24, and maximum 74 years old). Out of all interviewees, 32 had doctorate or PhD degrees and the rest had a lower degree of academic education. Furthermore, 35 were FPs, two were dentists, seven were midwives, two were nurses and four were from each of the fields of nutrition, psychology, and public health. Also, 27 were occupying in the public centers, 29 were in the private centers and two were in the both centers. Their mean years of working in the UFPP was 6.9 ± 3.5 years (median eight years, minimum one, and maximum ten years). Out of all, 32 were working as one shift per day, and 26 working as two shifts daily. Demographic characteristics are shown in the Table 1.

Challenges of UFPP

As Table 2 shows, 263 open codes, 51 concepts, 30 subthemes, and six themes about the challenges of UFPP were extracted. Themes included inefficient governance and leadership, challenging and nontrustable information

Table 1: Demographic and occupation characteristics of interviewees

ID	Gender	Age (year)	Job position	Section of occupation	Working experience in UFPP† (year)	City of occupation in the Fars province of Iran
≠1	Female	33	Family physician	Private	10	Fasa
≠2	Female	28	Public health	Private	4	Kazerun
≠3	Female	32	Psychology	Public	4	Kazerun
≠4	Female	32	Public health	Private	8	GhirKarzin
≠5	Female	33	Midwifery	Public	10	Shiraz
≠6	Female	43	Midwifery	Public	10	Shiraz
≠7	Female	40	Family physician	Private	10	Shiraz
≠8	Female	27	Family physician	Private	3	Shiraz
≠9	Female	28	Family physician	Public	6	Shiraz
≠10	Female	42	Family physician	Private	10	Shiraz
≠11	Female	31	Nutrition	Public	6	Shiraz
≠12	Female	33	Psychology	Public	6	Shiraz
≠13	Female	31	Dentistry	Public	1	Shiraz
≠14	Female	30	Public health	Public	2	Shiraz
≠15	Male	44	Psychology	Private	7	Shiraz
≠16	Female	42	Midwifery	Public	1	Shiraz
≠17	Female	34	Nutrition	Public	1	Shiraz
≠18	Female	27	Midwifery	Public	4	Lamerd
≠19	Female	42	Nursing	Public	10	Abadeh
≠20	Female	34	Psychology	Private	8	Abadeh
≠21	Female	26	Dentistry	Public	1	Abadeh
≠22	Female	30	Nutrition	Public	7	Neyriz
≠23	Female	30	Nursing	Public	6	Neyriz
≠24	Female	30	Midwifery	Public	5	Neyriz
≠25	Female	30	Public health	Public	7	Rostam
≠26	Female	25	Midwifery	Public	1	Pasargad
≠27	Female	24	Nutrition	Public	1	Sepidan
≠28	Female	24	Midwifery	Private	1	Sepidan
≠29	Male	46	Family physician	Public	10	Shiraz
≠30	Male	52	Family physician	Public and private	10	Shiraz
≠31	Male	55	Family physician	Private	10	Shiraz
≠32	Male	30	Family physician	Private	10	Shiraz
≠33	Male	51	Family physician	Public	10	Shiraz
≠34	Male	47	Family physician	Public	10	Shiraz
≠35	Female	34	Family physician	Public and private	7	Shiraz
≠36	Male	55	Family physician	Private	10	Shiraz
≠37	Female	53	Family physician	Private	10	Fasa
≠38	Female	38	Family physician	Private	8	Fasa
≠39	Female	56	Family physician	Private	10	Abadeh
≠40	Male	59	Family physician	Private	10	Abadeh
≠41	Male	29	Family physician	Private	4	Kazerun
≠42	Male	59	Family physician	Private	10	Neyriz
≠43	Female	34	Family physician	Private	2	GhirKarzin
≠44	Female	52	Family physician	Private	10	Shiraz
≠45	Male	52	Family physician	Private	10	Shiraz
≠46	Male	45	Family physician	Private	10	Lamerd
≠47	Male	60	Family physician	Private	10	Sepidan
≠48	Female	49	Family physician	Private	10	Shiraz
≠49	Male	53	Family physician	Private	10	Shiraz
≠50	Male	56	Family physician	Private	10	Fasa
≠51	Female	33	Family physician	Private	5	Shiraz
≠52	Male	42	Family physician	Public	8	Shiraz

Contd...

Table 1: Contd...

ID	Gender	Age (year)	Job position	Section of occupation	Working experience in UFPP† (year)	City of occupation in the Fars province of Iran
≠53	Male	74	Family physician	Private	10	Shiraz
≠54	Male	33	Family physician	Public	6	Shiraz
≠55	Female	31	Family physician	Public	8	Shiraz
≠56	Female	32	Family physician	Public	1	Shiraz
≠57	Female	30	Family physician	Public	1	Shiraz
≠58	Female	52	Family physician	Private	10	Shiraz

†UFPP: Urban Family Physician Program

systems, inappropriate and fragile financing, inefficient service provision, inefficient health workforce and resource limitations, and inadequate medical products, vaccines, and technologies.

Theme 1: Inefficient governance and leadership

Weak planning, insufficient intra and intersectoral collaborations, uncertainties in UFPP, fragile advocacy, inefficient referral system, not building trust, lack of proper preparation, lack of FP teams' authority, inefficient monitoring and evaluation, and failure to quality improvement were the subthemes. Below some examples of quotes are shown.

About the rules and regulations of UFPP, one of the interviewees said; "*...the rules and regulations in this program are not very clear and even harm the health team and the people too. For example, in psychology section, people expect to solve psychiatric problems in the health care center but it has conflict with the ministry's instructions which has announced that the number of counseling sessions is limited."* A large number of interviewees believed that the long period of implementation of the UFPP as a pilot program was one of the important challenges and this factor became the basis for subsequent problems. They also pointed out that the new policymakers do not agree with the implementation of this program and only because of the coercion and previous approvals, this plan is still being implemented in this province, and it has been practically left without a trustee. Among other challenges of UFPP is lack of support for FPs and forcing general practitioners to join this program. For example, insurance systems sign contracts with only doctors who join this program. "*...Living in Fars province is one of the reasons why you should be an FP. I didn't have other options...*" Interviewees, also expressed that one of the most important factors that contributed to the failure of the UFPP was, firstly, not using the opinions of experienced FPs in the running of this program, and secondly, the lack of effective communication between related departments. They also mentioned that this program failed in its most important goal, i.e. the proper implementation of the referral system and reducing the costs of the health system. One of the most important reasons for this lack of success was free visits by FPs at the beginning of the project, which led to the induction of referrals to the FPs and repeated requests to receive a referral form for referrals to the specialists. An interviewee mentioned; *"...it might be interesting. Once someone brought his child to me just because their child had made an excuse to go to the doctor. I examined him completely but didn't find any illnesses. Then I got upset and said Why did you do this? Am I sitting here without any work? He said, Doctor, why are you upset? Come and take my blood pressure instead!!! or A patient came to me and said Doctor this time give me two referral forms. I said, 'Why? He said that psychiatrist prescribes less medicine so that I have to visit him again soon..."*

According to the participants, failure to provide specialists' feedback to the FPs, and failure of specialists to follow the chain of referrals are among the obstacles to achieving an appropriate referral system. The absence of a proper specialist referral system in dentistry is also too obvious. A dentist acknowledged: "…. *There was no proper referral system and the provision of necessary and more specialized services such as root canal treatment of permanent teeth or orthodontic treatments was not predicted in the referral system. Therefore, those who are among the low-income groups cannot refer to the specialized centers."*

Participants mostly mentioned that no effective action has been taken to introduce UFPP in the society and people have not been informed enough about this program. People prefer to go directly to the specialists and do not have trust in FPs. Free visits at the beginning of the project, along with not educating people about the project, caused other problems. For example, many people thought that low-quality and worthless services were being provided due to the cheapness of the services, and they did not trust and pay attention to the treatments by FPs and their orders. This issue became one of the big challenges of FPs with patients. A challenge that FP faced every day.

Another serious problem from the FPs' point of view was the rude behavior of some patients and their unreasonable requests. Many FPs believed that the implementation of the UFPP has led to their desecration by the people and this led to exhaustion and burnout of them. "*...People think we are their slaves. For example, one of my patients came and gave me a form to stamp*

Table 2: Challenges of UFPP from the view point of family physician teams

Theme	Subtheme	Concept	Open code
Inefficient governance and leadership	Weak planning	Weak and unclear strategies and legislation in the UFPP	1. Absence of a clear and comprehensive plan for UFPP
			2. Lack of proper insight and the same perspective of the policymakers on the UFPP.
			3. Absence of a specific goal for the project.
			4. Noninvolvement of FPs and community medicine specialists in the planning of UFPP.
			5. Ignoring the predictions and resistances of general practitioners against the program before its implementation.
			6. Incompatibility of the UFPP with the country's health system.
			7. Inconsistency between the service delivery, supervisory, and implementing bodies in the current program.
			8. Obvious flaws in the content of UFPP.
			9. Lack of clear law for UFPP.
			10. Bugs in the rules of UFPP.
			11. Removing the parts of UFPP regulations that include the doctor's benefits.
			12. Nonsuccessful implementation of copied foreign versions of UFPPs.
			13. Failure of the dispensation of the authority and total discretion about the implementation of UFPP to the Fars province by the Ministry of Health.
			14. Changing free to charging services caused the public's dissatisfaction with this program and brought a face-to-face challenging status between FPs' teams and people.
		Conflict of interests	1. Conflict of interest in program planning (planners are medical specialists).
			2. Inability of insurance systems to supervise and regulate specialist doctors in the UFPP.
			3. More payments of insurance systems to specialists who filled referral forms compared witth before implementing UFPP.
			4. Insurance is the only authority to confirm or reject complaints of doctors against insurance.
		Obligatory participation	1. General practitioners' hateful mentality toward the UFPP because of the mandating of joining this program at the beginning of its implementation.
			2. People's hateful mentality toward the UFPP because of the mandating of joining this program at the beginning of its implementation.
	Insufficient Intra and intersectoral collaborations	Inappropriate intrasectors collaboration	1. Lack of the authorities' information about the details and rules of the UFPP.
			2. Lack of correct and appropriate information transfer between officials and implementers in the medical university.
			3. Lack of coordination between different health units (occupational health, family health, etc.) in the medical university.
			4. Lack of proper communication between the FP, FPs' team, and clients.
		Poor intersectoral collaboration	1. Lack of coordination among various organizations for successful implementation of the UFPP.
			2. Noninteractive relationship between insurance systems and FPs.
			3. Not covering of UFPP by some of the insurance systems such as armed forces, and oil companies' insurance systems.
			4. Influence of the insurance bodies on the policymakers and opposition to the UFPP in this way.
			5. Diminished cooperation of private sector doctors because of deductions.

Contd...

Table 2: Contd...

Theme	Subtheme	Concept	Open code
	Uncertainty	Unsustainability in the implementation of UFPP	1. Rapid change and high turnover of policymakers.
			2. Lack of policymakers 'familiarity with the UFPP.
			3. Implementation of the UFPP in only two provinces, after ten years of its starting.
			4. Uncertainties about the continuation of UFPP.
			5. Uncertainties about the extension of UFPP to other provinces.
			6. Changing the direction of the initial plan because of obstacles and moving away from the initial goals.
			7. Disagreement of the new policymakers with the program.
			8. Discordance among managers of UFPP.
	Fragile advocacy	Low attention to the FP team's demands and challenges	1. Failure to solve and handle problems of FPs by the Ministry of Health managers.
			2. Policymakers do not allocate FPs' representative and do not hear their voices.
			3. Failure to fulfill the promise to improve the situation of the UFPP team by the authorities.
			4. The project managers do not have the experience of working in the UFPP or do not have a real understanding of the role of FPs.
			5. Failure of managers, insurance, universities, and people to fulfill their obligations toward the FPs and UFPP.
			6. Absence of a complaint system for FPs despite the existence complaint system for people.
			7. Lack of support of FPs by related institutions.
			8. Inappropriate behavior of insurance companies with FPs.
		Low cooperation of people in UFPP	1. Inappropriate support and cooperation of people in the UFPP.
	Inefficient referral system	Incompetency of the referral system	1. Lack of enculturation and knowledge of people about the referral system.
			2. Refusal of specialist doctors to cooperate with the UFPP.
			3. Specialists do not accept patients who are referred by FPs.
			4. Not filling the referral forms and resending them by specialists to the FPs.
			5. One-way and out-of-reach specialized services.
		Regulation insufficiency	1. Limitation of the number of patients who can be referred per month to the specialists by each FP.
			2. Possibility of direct referral of patients without a referral form to some specialists and special clinics.
			3. The lack of proper training of doctors to implement good referral systems.
		Induced demand	1. Many reasonless referrals to the FPs for visiting because of low franchise.
			2. Referral of patients to the FPs only because of minor illnesses.
			3. People's lack of knowledge about the disease treatment process and their unnecessary requests for referring to specialists.
	Not building trust	Lack of clients' trust	1. People do not go to the FPs and do not have trust in the abilities of FPs and their teams.
			2. People's willingness to be visited directly by specialists.
			3. lack of trust of people toward the abilities of FPs' teams.

Contd...

Table 2: Contd...

Theme	Subtheme	Concept	Open code
			4. People's fear of expressing psychological problems and risky behaviors and unwillingness to register such information in the system.
			5. Low acceptance and adherence of people to routine care.
			6. Patients do not follow FPs' recommendations.
		Specialists' pessimistic view and lack of trust in the UFPP	1. Special doctors' economic and negative views toward the UFPP.
			2. Lack of trust and respect of specialist doctors for FPs.
	Lack of proper preparation	Weak infrastructure	1. Nonavailability of the necessary infrastructure before starting the UFPP.
		Lack of public awareness and culture building about UFPP	1. People's lack of knowledge and failure to inform them about the UFPP and its goals.
			2. People are not concerned about prevention as much as treatment.
			3. Lack of awareness and justification of the people about their rights and duties and the position of doctor and patient in the UFPP.
			4. Unreasonable people's expectations and requests about UFPP; they expect to receive free medicine, expect to do things quickly expect their medical needs to be met by FPs.
			5. People consider UFPP as a cheap service or as a worthless service.
			6. Failure to use NGOs, universities, mass, and social media to raise awareness of and educate people about UFPP.
			7. Time-consuming to educate all people about UFPP.
		Lack of preliminary preparation of FPs and their teams	1. Failure to enough training for FPs and their teams before they join UFPP.
			2. The lack of training for all doctors to work with computers.
			3. Lack of specialist information about UFPP.
	Lack of FPS team authority	Disrespect, insolence, and ignoring the position and responsibilities of FPS teams	1. People do not care about the job and position of the FP team.
			2. Recognizing the FP as who just completes the sheets or refers them to the specialists or prescribes what they want.
			3. Attempts to desecrate the position of the doctors in the media and virtual networks.
			4. Discrediting FPs.
			5. People's aggressive behavior toward FPs.
			6. Ingratitude, insulting, and complaint against the FPs in case of their resistance against unreasonable demands.
			7. The FP is the weakest part of the program (instead of being the strongest part and managing the program).
			8. Family physicians do not have enough power to control people and specialists.
	Inefficient monitoring and evaluation	Non-professional and non-ethical monitoring and evaluation	1. Lack of respect for the FPs in the process of monitoring and evaluations by authorities.
			2. Irrational criticisms of FPs by the authorities.
			3. Damage to the FP's reputation because of the supervisor's asking people about the FP's work.
			4. Program monitoring is based solely on statistics and not paying attention to the quality-of-service delivery.
			5. Failure to evaluate the mid-term and long-term results of the program.
			6. Not paying attention to the level of people's satisfaction toward UFPP.
			7. No attention to the realities and pay only to the predetermined and theoretical measurement standards in the monitoring and evaluation of UFPP.

Contd...

Table 2: Contd...

Theme	Subtheme	Concept	Open code
			8. Lack of statistics fact-checking.
			9. Lack of sufficient baseline data (before implementation of UFPP) for before-after implementation comparisons.
			10. Entering fake information into the "SIB" system to not reduce salary (in some cases).
			11. National inspectors check only a limited number of known FPs' clinics.
			12. Failure to evaluate the UFPP in terms of health economics and cost reduction.
			13. The monitoring system pays attention only to the negative points.
			14. The efforts and performance of the FP teams are not visible in the monitoring processes.
			15. Demotivating evaluation system.
			16. Inappropriate and rude behavior of the evaluators with FPs' teams.
			17. Lack of feedback on the performed monitoring of the FPs.
			18. FPs do not have a role in the monitoring and evaluation.
			19. The commanding and threatening tone of the authorities towards the doctors.
			20. One-sided and illogical decision of the arbitration committee when the FP is convicted.
	Failure to quality improvement	Nondynamicity of UFPP	1. Failure to solve problems despite the passage of ten years of starting UFPP.
			2. Addressing marginal issues instead of correcting the main ones.
			3. Failure to implement suggestions and requests of FPs.
		Data fabrication	1. The supervisors persuade FPs to provide unrealistic statistics (in some cases).
			2. Decrease in honesty in providing statistics because of high pressure on the FPs and their teams.
		Induction luxury services to compensate for the insufficient income	1. Forcing FPs who work in the private sector to perform cosmetic work and outpatient surgeries to cover the expenses of the office.
			2. Forcing FPs to visit a large number of out-of-insurance coverage patients to cover the costs of the office.
			3. Forcing FPs to work in private clinics because of low income.
			4. Physicians' preoccupation with financial issues and failure to focus on the purpose and principles of the UFPP.
Challenging and nontrustable information system	Inappropriate health information system (HIS) and data-gathering approach	Problems in the SIB system	1. The real addressee of the SIB system is the health care provider, not the FP.
			2. Impossibility of registering all diseases in the "SIB" system.
			3. Slow speed of the internet, nonupdated, and difficult user interface of the SIB system.
			4. It is time-consuming to register health information in the SIB system.
			5. The disclosure of patient information in the SIB system (the information can be seen by all personnel).
			6. Repetitive and unnecessary questions instead of operational ones in the "SIB" system.
			7. Failure to fix the "SIB" system's problems.
			8. Lack of enough time for the doctor to register all the diseases in the SIB system.
			9. Low accuracy of registered data.

Contd...

Table 2: Contd...

Theme	Subtheme	Concept	Open code
			10. The lack of integration of the "SIB" and electronic prescription systems and the impossibility of registering the desired para clinical tests and examinations in both systems.
			11. Cares which were determined in the SIB system are not well related to health.
Inappropriate and fragile financing system	Ambiguous paying mechanisms	Lack of transparency	1. Absence of a regular payment structure.
			2. Failure to explain to the FPs the reason for the decrease in the amount paid.
			3. Declaring the deductions and their reasons after deducting from the doctor's salary, not before that.
			4. Impossibility of calculating fees due to delay in payment.
			5. The organization that pays salaries to the FPs is not defined in the initial contract.
		Low payment	1. Nonconcordance of FP's facilities, time, and salary with the expectations of people, experts, and officials.
			2. Low salary of FPs and their team members.
			3. Departure of a large number of members of UFPP because of low salaries.
			4. The FP's income is lower than that of emergency doctors and general practitioners.
			5. Very small amount of per capitation FP' salary.
			6. Disproportionate expenses and salaries of FPs.
			7. Disproportionate salaries and inflation rate.
			8. High expenses of the FPs.
			9. FPs cannot afford to pay their teams' salaries.
			10. Nonincrease of the per capita even after FP's great efforts for tariff increase.
			11. Fixed payment to the doctor, not matching it with the work quality.
			12. No change in the payment as the doctor's experience increases.
		Delay in payment	1. Delay in payment of salaries by insurance systems and paying a part of salary over a long-time span.
			2. Nonresponsiveness insurances about the delayed payments.
		Unfair and inappropriate payment mechanisms	1. Absence of paying per case.
			2. The difference in per capita amount between a single-shift doctor without overlap physician and a single-shift doctor with overlap, even with the same working hours and service provision.
			3. Nonfulfillment of obligations to increase payment.
			4. Payment to the FPs is done by insurance systems instead of universities.
			5. Health team dissatisfaction with the salaries and payment methods.
			6. Injustice in payment.
			7. The difference in salaries between different fields working in the UFPP.
			8. Lack of proportionality between the payment and duties.
			9. Disagreement with paid leave of FPs' team members.
			10. Dominancy of FPs' opinions in determining the payment structure for their team.
			11. The personal opinion of the FP is considered in reducing or cutting the salary and insurance amount of the FP team members.
			12. Not paying doctors' fees during the COVID-19 pandemic.

Contd...

Table 2: Contd...

Theme	Subtheme	Concept	Open code
			13. Not paying doctor's fees by insurance companies for irrational reasons.
			14. Ignoring doctors' overtime working in payments.
			15. Applying significant and multiple numbers of deductions without a logical reason.
			16. Nonrefunding the fines, after proving the insurance's mistake and FPs' innocence.
			17. Additional tax for younger physicians under the title of "Ghasedak" and "Pellekan" programs.
		Ambiguity in the contracts	1. Dumb initial contract with many legal defects (in other words, whatever they leave to FPs, they must do it).
			2. Imposing multiple screening programs during the implementation of UFPP on the FPs in contrary to the initial contract.
			3. Absence of a single authority to specify the duties of FPs.
			4. Absence of a bilateral contract between the insurance and the FPs and the lack of clear description of the duties and legal penalties of the insurance.
			5. New requests from FPs by insurance.
	Conflicts with employers	Ambiguity about the employer of FP's team members	1. Not defined the employer of the FP's team members in the initial contract.
			2. Determining the FP as the FP's team employer and forcing him/her to pay their salary.
			3. Contradiction of the rules of the university, Social Security Organization, and the employment office regarding the provision for paying FPs' team members.
	Insurance problems	Insurance-UFPP mismatching	1. Excluding drugs from insurance coverage without valid reasons.
			2. Lack of a scientific view of the insurance on the UFPP and having a commercial approach to it.
			3. Insurance dissatisfaction in case of the low number of FPs' visits.
	Insufficient funding	Shortage of budgets	1. Failure to provide enough funds for the maintenance and upgrading of the UFPP.
	Increasing out-of-pocket (OOP) expenditure	Increasing trend of OOP	1. Nonfree visits by FPs in opposite to the beginning of the program.
			2. Reduction of free medicines.
			3. Lack of cost reduction in para clinical centers.
	Increasing financial burden on the health system	nonindicative referrals, diagnosis, and treatments	1. Inducing additional costs for the health system and insurance organizations by implementing UFPP.
Inefficient service provision	Nonguideline-based approach	Nonindicative referrals	1. Failure to implement correctly the instructions of the UFPP guidelines.
			2. Early referral of patients to a specialist by some FPs without initial precise examination.
	Inefficient responsiveness	Low responsiveness	1. Failure to comply with the FP's role as the health system's gatekeeper.
			2. Nonallocation of appropriate time for patients by some FPs.
			3. Lack of successful follow-up because of the high cost of some para clinics and medicines.
			4. Inappropriate response to the people.
			5. Absence of an updated system to notify FPs about the patients who have withdrawn from the insurance coverage
			6. Lack of appropriate physical space leads to the loss of patient privacy in the FPs' centers.
		Prolonged waiting time	1. Long waiting time
			2. Lack of an electronic appointment system for visiting patients
		Shortages in facilities	1. Constraints in physical space and equipment in the FPs' centers

Contd...

Table 2: Contd...

Theme	Subtheme	Concept	Open code
		Instability	1. Unstability of covered population by UFPP.
		Problems related to the electronic prescribing (e-prescribing) system	1. Impossibility of long-term drug prescriptions for patients. 2. Electronic prescription registration problems (low internet speed, server outage, not having all drugs' names in the system, not receiving the tracking code). 3. The lack of integration of the prescription systems and the differences in the medicine codes in each system. 4. Exhaustiveness of the electronic prescription process and disruption of the doctor's concentration to examine and diagnose the next patient because of the electronic prescription problems.
		Underestimation of prevention	1. Services in UFPP are mainly treatment-based and prevention has not been valued and applied for clients as much as treatment. 2. Lack of officials' and insurance companies' attention on prevention and their attention is more treatment-based.
	Inappropriate coverage	No good coverage of UFPP by insurance systems	1. Providing services to patients with insurance is performed only in governmental centers. 2. Lack of insurance coverage for some para clinic services and medicines if prescribed by an FP. 3. Insurances do not cover preventive approaches. 4. The impossibility of visiting patients who are not covered by UFPP
	Poor quality services	Poor quality of services	1. Decreasing the quality of services in UFPP because of extreme emphasis of evaluators and managers on health statistics and figures instead of services' quality. 2. Failure to allocate time and energy for patients, causes errors in diagnoses by physicians. 3. Entry of incompetent doctors into the program because of low payment. 4. The FP does not have accurate information about the health indicators of his/her population because of low public cooperation. 5. Limited time for visiting patients. 6. Reducing the doctor's accuracy in examining patients due to unnecessary and excessive visits. 7. Inadequacy of the covered population with the necessary care. 8. Failure to achieve treatment goals because of high covered population. 9. High effect of job instability on FPs' services quality.
	Nonmotivating system	Punishment-based management	1. Priority of punishment instead of incentives and encouragement. 2. Disagreement with paid leave of healthcare workers. 3. Lack of enthusiasm in the UFPP. 4. Employees' demotivation approaches. 5. Termination of cooperation of specialists with the UFPP. 6. Dissatisfaction and lack of interest and encouragement among FPs' teams. 7. Lack of welfare and well-being for FPs' teams. 8. Failure to meet FPs' expectations from the program. 9. FPs do not have holidays. 10. Lack of insurance and pension benefits for the FPs. 11. The impossibility of using medical university facilities by FPs although they are working for the university. 12. Failure to pay attention to the FP's health.

Contd...

Table 2: Contd...

Theme	Subtheme	Concept	Open code
	Low meritocracy	Nonmeritocracy-based employment	1. Incorrect evaluation indicators for recruitment. 2. The impact of recorded quantitative indicators on the future employment of employees. 3. Injustice in the facilities and benefits between official and corporate employees. 4. Employing some people with unrelated academic fields as members of FP teams.
Inefficient health workforce and resources limitations	Noncomprehensiveness FP team	FP team does not cover all health needs	1. Restrictions on the selection of FPs' team members from special fields, while the need for experts from other fields has remained unmet.
	Low job security	Job instability	1. Low job security for nonofficial employed staff in UFPP. 2. Uncertainty and frequent changes of regulations in UFPP threaten the future of work for members.
	High burnout and wasted time	FPs' teamwork overload	1. Overpopulation covered by each center. 2. Large and unreasonable number of people visited by each doctor in each working shift. 3. High workload of the FPs team. 4. Visiting patients even after working hours. 5. Mental exhaustion and burnout in the UFPP team. 6. Inappropriate working conditions. 7. Inappropriate working hours of two working shift doctors. 8. Time between two shifts is unusable for the FPs. 9. Restriction of not working in the opposite shift for overlapping single-shift doctors. 10. Long working hours for FPs. 11. High and variant and increasing expectations from FPs. 12. Assigning the responsibility of culture building in society about UFPP to FPs. 13. Unreasonable expectations from FP teams to reach the predefined indices. 14. Forcing (abuse) FPs to rewrite specialists' prescriptions in the electronic prescription system. 15. Insufficient number of FP members compared with the large number of covered people. 16. Occurrence of physical illness because of high work pressure and stress. 17. Permanent occupational stress because of job instability. 18. Long and time-consuming routine care. 19. Failure to provide conditions for participating FPs in the training programs.
	Lack of professional association	Lack of professional confederacy for FP teams	1. Lack of professional association for FP teams.
	Inefficient training and retraining programs	Fruitless training	1. Sameness and non-contextual based on subjects that are taught for FPs in the different cities. 2. Not using educated experts to hold training courses. 3. Failure to hold special training courses for FPs. 4. Inapplicability of training classes.

Contd...

Table 2: Contd...

Theme	Subtheme	Concept	Open code
			5. Internet outage and low quality of virtual training programs. 6. Lack of training of FP teams on how to properly perform screening tests and educate people. 7. Interference between the hours of the retraining program and the FPs' working hours. 8. The impossibility of participation of all FPs who work outside of the capital of Fars province in retraining programs (because of space, time, and cost limitations). 9. It is not possible for FPs (who work in the same center) to participate together in training courses (one person must be in the center as a substitute for another). 10. Failure to properly educate the medical communities about the UFPP. 11. Treatment-oriented view of midwives and nurse assistants to the UFPP. 12. Educations are not appropriate to the level and type of trainees. 13. Educations are not welcomed by FP teams. 14. Receiving high fees for participating in the retraining courses.
Inadequate medical products, vaccines and technologies	Insufficiency of medical drugs	Not availability of some medical drugs	1. Patients are looking for some drugs from door to door.
	Not using available technologies	Not using E-health/ Telehealth/m-Health	1. E-health/Telehealth/m-health systems have not been used in the UFPP.
		Not using social networks	1. Social networks have not been used in the UFPP.

his child's health form. When I said that I would not do this and it is not my duty, he shouted and finally, because of this, he said that I want to cancel and go under the cover of another FP..." Another FP mentioned; *"Unfortunately the respect of the FP has dropped drastically. A patient came to me and told me frankly, Doctor, give me a referral form, and write a laboratory test and ultrasound for me. Apart from the fact that it makes my job very difficult, it is showing me his vision towards me..."*

"... Recently, specialists give their prescriptions and tell patients to go to their FPs to register them in the electronic prescription system because they don't have time to enter the system. It's wrong but this is not culturalized and people look at me as a discount coupon to visit the specialists..." Among the other challenges of weak leadership in the UFPP was the wrong way of monitoring and evaluating this program, which was done only based on statistics. This excessive insistence on statistics many times has led to the presentation of fake and false statistics by FP teams. *"…The way of evaluation is completely wrong. Evaluators sit there and check to see how many ticks I checked, how many blood pressures I took, how many medicines I prescribed, and how many people I visited. If the number is high, I am a good doctor, if the number of ticks is low, I am a bad doctor. The quality of my work does not matter at all..."*

"…Evaluators expect us to fill the SIB system [Integrated health system in Iran which is a system for registering patients' information system] *and if it is not done. then they protest. Then when we bring the reason, they say just enter this fakely...*"

Theme 2: Challenging and non-trustable information system

The subtheme of this theme is inappropriate health information system (HIS) and data gathering approach. Many participants complained about the defects of the SIB system. Participants mostly expressed that the SIB system causes too many problems for employees and the low speed of the internet has made these problems more severe. The electronic prescription (e-prescription) system and the lack of its integration with the SIB system, caused FP to have to register the prescription in the both systems. Some FPs said that working with the SIB system is so exhausting that the doctor is unable to maintain his concentration and calmness for the proper examination of the next patient. Interviewees also said that the most important drawback of the SIB system is the excessive and unnecessary care which are defined in it, so most of the FPs mentioned that it is impossible to perform all the care. They mentioned that the only way to avoid deductions of salary is to record fake information in this system. One of the interviewees claimed that "*…some caregivers have to enter a lot of fake information. Because, if the scores are not desirable, salaries will be reduced."*

Another participant believed that *"…there are so many tasks which should be done about the care of pregnant mothers by FP instead of doing them by midwives. As a result, pregnant mothers don't receive these cares enough..."*.

Theme 3: Inappropriate and fragile financing

This theme includes subthemes of ambiguous paying mechanisms, conflicts with employers, insurance problems, insufficient funding, increasing out-of-pocket (OOP) expenditure, and increasing financial burden on the health system. All participants agreed that financial problems are as one of the main problems in UFPP implementation. Frequent complaints about financial problems shows the high importance of this issue. One of the most important challenges mentioned by all interviewees was the small amount per capita for each FP and also the small amount of salary that is paid to the FPs. Interviewees mentioned that this amount is so low and insufficient that many general practitioners and clinics have refused to cooperate with the UFPP. A participant said: *"Really, compared to the work we do and the expectations that managers have of us, our salaries and benefits are very low, and I don't know who is responsible at all?! So far, no one has responded at all."* Another participant said: *"…If you calculate my visit numbers per month and multiply it by the visit fee set by the Ministry of Health, my receipts should be around 80-90 million Tomans per month, while my receipt is around 20 million Tomans per month. Furthermore, the salary of my team and side expenses should also be paid from this amount."*

The interviewees were also very dissatisfied about the non-implementation of approvals and promises by the medical university about increasing the amount of per capita and per capita payment for FPs. "*... It is very interesting that social security insurance agents very easily walk into the doctor's office and claim that HCWs are defined as your workers and must be paid by you (as the employer), while the university has considered that neither the doctor is the employer nor HCWs are the employee!*," as one of the FPs explained. He also added "*…At the beginning of the program, the officials said that HCWs' salaries should be 12% of the doctor's salary which was more than the labor department salary. They did not increase our per capita income during these ten years so it is no longer enough. Now 12% of my salary is about 3 million Tomans, while the salary of the labor department is about 5.5 million Tomans. It has been halved because our per capita hasn't raised. After that, it was decided that the university should raise the salaries of HCWs. But it didn't happen."*

Another challenge that FPs are faced, was the insurance's delay in paying their salaries. This delay in payment even reaches several months. It is worth noting that the insurance is not regarding itself as responsible for this delay and arrears. Another challenge that was mentioned by many FPs was the implementation of punishment instead of a proper and encouraging incentive system. Most of the interviewees complained about numerous unreasonable insurance deductions and reductions of their salaries without justified reasons. Some others criticized why the reduced fine from doctors' salaries is not used as an incentive for committed doctors. They mentioned that this issue has caused the insurance companies to compensate for their budget deficit by reducing doctors' salaries. Several doctors stated that the amount paid by the insurance is not clear and the doctor does not know the amount of the salary and the amount of the fine. A FP mentioned; *"…If I am an insurance employee, why am I not insured? If I am not an insurance employee, then how can the insurance organization specify my working hours, and my tariff, what kind of partnership is this? From the legal point of view, everyone's duties must be specified, and the legal description and legal punishments should also be included in it."*

Theme 4: Inefficient service provision

Subthemes of this theme include non-guideline-based approach, Inefficient responsiveness, Inappropriate coverage, Poor quality services, nonmotivating system, and Low meritocracy. There are some issues with service delivery in different sections of UFPP, for example in the nutrition section, one of the interviewees explained; "*The impossibility of implementing the diet therapy program in the UFPP, failure to refer some chronic patients to a nutritionist (despite the existing necessity such as patients undergoing dialysis) and limitation of the time of consultation sessions, are among examples of important challenges in this sector.*" Another reason for reducing the quality-of-service delivery, as some of the participants pointed out, was paying too much attention to the statistics, so a large part of the efforts and attentions of the FPs and their teams was spent on completing wanted (and not necessarily real) statistics. Among the other challenges of this part, which we can point out is the lack of equipment in FPs' offices due to the high costs of the offices and the low income of doctors. The lack of an appointment system for patients was another problem.

Theme 5: Inefficient health workforce and resources' limitations

This theme includes subthemes such as Non-comprehensiveness FP team, Low job security, High burnout and Wasted time, Lack of professional association, and Inefficient training and Retraining programs. Ensuring the job security of the health team is one of the things that have not been seen in the program, and this has had a significant impact on the workforce's motivation. Rapid changes in regulations and uncertainties in the program aggravate feelings of job insecurity among FP teams. Burnout was another challenge of UFPP. A small number of FPs and HCWs compared to the covered population and tasks has caused them to undergo a heavy workload.

The interviewees were very dissatisfied with long and separated working hours. A large number of FPs who work in two shifts believe that the time between shifts is useless. Many of the interviewees stated that lack of insurance and retirement benefits and inappropriate behavior of insurance and arbitration committees with FPs are pieces of the puzzle that together lead to severe burnout and frustration among them. A family physician explained; *"As a double shift doctor, I have to come from 8 am to 12 pm and from 4 pm to 8 pm. These 4 hours in the middle are useless to me and it bothers me physically and mentally. I'm obliged to see every patient who comes to me, there is no maximum for my visits…."* Among other challenges of human resources, is the lack of effective training and retraining programs. A participant acknowledged: *"They have monthly meetings, they explain one or two very difficult chapters in two hours, we don't even get to take notes, we don't know where they came from!!!"*. He added, "*Many doctors mentioned that they are not able to participate in training classes due to training programs being held during their working hours.*"

Theme 6: Inadequate medical products, vaccines, and technologies

Insufficiency of some medical drugs and not using available technologies are the subthemes of this theme. Lack of some medical drugs is one of the challenges that were repeatedly addressed by interviewees, a participant said; *"…Unfortunately, there is a shortage of antibiotics and intravenous fluids in the pharmacy, the patient has to spend an hour or two looking for medicine, search all the pharmacies in the city for an antibiotic."* Another problem is not using electronic health (e-health), mobile health (m-health), telehealth, and social networks in the UFPP. These facilities can increase the scope, speed, and quality of the services, while decreasing the costs.

Strengths of the Urban Family Physician Program

As Table 3 shows, 60 open codes, 15 subthemes, and six themes about the challenges of UFPP were extracted. No concept was extracted. Themes include improving leadership and governance, comprehensive health information system, improved quality of service delivery, Efficient health workforces, curbing the costs of the health system, and capability of application of new technologies.

Theme 1: Improving leadership and governance

Improved people's health awareness and improved monitoring and evaluation are the subthemes of this theme. From the start of UFPP till now, people gradually became more sensitive to their health and their related awareness has increased. One of the participants mentioned about strengths of the monitoring system in the UFPP. He said: *"Monitoring has made progress compared to the early stages of the project."*

Theme 2: Comprehensive Health Information System

Improved recording and registering system is the subtheme of this theme. It is leading to the availability of health information, thereby health providers can make significant decisions and efforts. Most of the participants also acknowledged that the SIB system has improvements and the most common strength of it, is access to the patient's health information and records. "*You can retrieve information from the SIB system very easily. as it contains information about various diseases. Everything that is recorded is stored with the date and time in this system."*

Theme 3 Improved quality of service delivery

Increased responsiveness, holistic view toward people's health, improved referral system, discipline in treating patients, enhanced affordability, active and dynamic surveillance system, and increased service accessibility are the subthemes of this theme. The participants often held the same point of view about service provision. They mostly indicated that prevention and treatment services have been improved. One of them explained: *"According to the long-time training of people in this program; better control of diseases became possible."* Another aspect of service provision in the UFPP is the presence of a nearly complete healthcare team in the health centers; as a participant stated, *"The nutrition and psychology experts in our clinic have solved many people's problems. The expensive nutrition programs, are provided for free by our nutrition expert here."* Among the other strong points of the UFPP, is improvement in disease prevention. This happened with the implementation of screening programs, active surveillance systems, and early diagnosis of diseases in this program. One of the other achievements of the UFPP has been increasing access of the deprived groups of population to the primary health care services. One of the other most important benefits of the UFPP is the increase in the quality of services provided. Regular visits of chronic patients and adjustment of their medications, better and faster diagnosis of diseases because of the FP's previous familiarity with the people, having a holistic view toward people's health, preventing unnecessary tests, and improving the health of mothers, children, and women, are among factors that have been achieved through the UFPP and have led to an increase in the quality of services. For example, a FP said: "*The quality of health care has improved a lot. Now it seems that the care of women, children, and pregnant women has become much more precise and clear in UFPP. In the past, many pregnant women had insurance, but they did not visit a doctor until they were close to the delivery, and no one followed them up. But now, with the UFPP, many of these diseases are diagnosed soon and this could prevent many consequences in them."*

Some of the FPs explained that one of the most important and obvious benefits of the UFPP has been reducing people's expenses. Reasons for reducing costs include

Table 3: Strengths of UFPP from the viewpoint of family physician yeam

Theme	Sub-theme	Open code
Improving leadership and governance	Improved People's health awareness	1. People's education and culturalization about the efforts of FPs.
		2. Sensitization of people and increasing their awareness of their health.
		3. People's access to the correct medical information.
		4. Training along with providing medical services for the population.
	Improved monitoring and evaluation	1. Improving monitoring by registering in the SIB system and fixing system bugs.
		2. Evaluation of the diseases' prevalence by FPs in the covered population.
		3. Monthly monitoring improves performance and fixes defects.
		4. Great progress of the UFPP compared to its beginning.
		5. Better monitoring of health care workers.
Comprehensive information system	Improved recording and registering system	1. Establishment of an Informative integrated health system which is named "*SIB system*"
		2. Access to the patients' health information and records such as previous regimens and underlying diseases.
		3. Up-to-date statistics and information about the covered population.
		4. Collection of population health determinants.
		5. Completion of patients' health records.
		6. Protecting patient privacy in the SIB system.
Improved quality of service delivery	Increased responsiveness	1. Strengthening the physician-patient relationship.
		2. Building trust in the doctor-patient relationship.
		3. Direct communication with the clients and create a sense of humanity.
		4. Lack of financial relationship between FPs and patients.
		5. Increasing the respect to the FPs (compared with the start of the program).
		6. Easy access to the people and helping and serving them.
		7. Providing services per the needs assessment.
		8. Providing a wide range of services.
		9. Improved prevention services compared with the start of the program.
		10. Optimal control of diseases, especially infectious diseases such as leishmaniosis, pediculosis, etc.
		11. Effective screening of colon and cervical cancer.
		12. Better and faster diagnosis of diseases.
		13. Facilitate the treatment pathway for chronic patients.
		14. Assigning a physician to the limited and defined population and a better physicians' control over the covered population.
		15. Unity and integrity of the population.
		16. Better provision of primary health services.
		17. Providing service packages for different groups of patients such as women, children, pregnant women, chronic patients, etc.
		18. Improvement of health indicators.
	A holistic view of people's health	1. The presence of experts with different disciplines in the FP team.
		2. Having a comprehensive view of population health.
	Improved referral system	1. Improved referral system between some specialists such as gynecologists, pediatricians and FPs (compared to the start of the program).
		2. Preventing waste of money by implementing the referral system.
	Discipline in treating patients	1. Discipline in treating patients.
		2. Reducing patient wandering.
	Enhanced affordability	1. Providing low fee services to the patients (doctor visits, tests, medicines, etc.).
		2. Justice-oriented service delivery by improved health services to the lower deciles of society.

Contd...

Table 3: Contd...

Theme	Sub-theme	Open code
	Active surveillance system	1. Implementing an active surveillance system. 2. Defining and Improving of the medical and non-medical determinants of non-communicable diseases.
	Increased service accessibility	1. Facilitating people's access to health services and general and specialist practitioners. 2. Good cooperation of pharmacies, laboratories, and imaging centers with FPs.
Improved health workforces' conditions	Creating opportunities for young doctors	1. Job position creation for newly graduated young doctors. 2. Creating opportunities to gain experience and skills for young doctors.
	Suitable working condition	1. Regular and suitable working hours and having more free time compared with doctors who work in hospitals. 2. FPs do not have working shifts. 3. Timely payment to the doctors who work in the governmental FP centers. 4. Peace of mind in the work environment of FPs. 5. Gaining a variant work experience by FPs. 6. FPs' team members have a job position that is related to the field of their academic study. 7. Not moving away from the educational environment by providing up-to-date information and practical and appropriate training classes.
	Provided motivation	1. Giving a prize by insurance to the exemplary doctor. 2. Improving the occupational identity of the doctor compared with the emergency doctor.
Curbing the costs of the health system	Reducing the cost of the health system	1. Reducing the cost of hospitals because of implementing UFPP. 2. Preventing unnecessary tests because of the doctor's previous familiarity with patients.
Capability of application of new technologies	Electronictechnologies as an opportunity in UFPP	1. Using e-prescription system by FPs is an opportunity for applying a better medical care for patients. 2. UFPP has the potentials for using e-health and other new technologies such as Artificial Intelligence (AI) for improving quantity and quality of health care.

visiting a general practitioner and a specialist at a low cost, insurance coverage of drugs which are prescribed by FPs, and performing para-clinical tests for free or at a very low cost. This has helped to move towards justice in the health care services. Another advantage of UFPP is the lack of financial communication between the doctor and the patient, which prevents many consequences.

Theme 4: Improved health workforce conditions

Creating opportunities for young doctors, suitable working conditions, and providing motivation are three subthemes in this group. The participants have different opinions about health workforces, some stated that improvements have been made in the training classes for FPs' teams. An interviewee expressed; *"the latest and most up-to-date health information is conveyed in the training classes, and subsequently they were passed to our patients."* Creating opportunities for young physicians to experience working with people and having a regular working schedule were among the other strong points of UFPP*." Being as a FP will introduce me (as a young doctor who just started work) to the local people especially if I want to work there as a general practitioner who may not cooperate with the UFPP in the future."*

Theme 5: Curbing the costs of the health system

This theme included the subtheme of reducing the cost of the health system. According to some of the FPs, UFPP causes a reduction in the costs of health system by improving the prevention of diseases, implementing the referral system, and also preventing prescribing repeated tests and drugs. *"…I think assistants place is in heaven because I saw exactly how hard they work. We [FPs] also were able to treat blood pressure and vitamin D deficiency. I have personally treated about one thousand of vitamin D deficiency patients and this will reduce the burden of the hospital admission due to bone fracture."*

Theme 6: Capability of application of new technologies

The subtheme of this theme is electronic technologies as an opportunity in the UFPP. Electronic prescription (e-prescription) system as a replacement for former traditional paper-based prescription is used by FPs and is providing a better care for patients. Coverage of the internet and the percentage of persons who use intelligent phones in the Fars province are high and this creates a great potential and opportunity for improving service provisions in the UFPP. Artificial Intelligence (AI), also should not be neglected due to its capability to improve the quantity and quality of health services.

Discussion

This content analysis-based qualitative study was conducted in the Fars province, the fourth most populous province of Iran with five million population. The main aim of this study

was to determine the views of FPs and their teams about the strengths and challenges of UFPP, after its first decade of age. Interviews were performed with 58 members of FP teams from ten cities. The themes of challenges were: Inefficient governance and leadership, challengeable and nontrustable information system, Inappropriate and fragile financing system, Inefficient service provision, inefficient health workforce and resources' limitations, and inadequate medical products, vaccines, and technologies. Six themes of strengths were: Improving governance, comprehensive information system, improved quality of service delivery, improved health workforce conditions, curbing the costs of the health system, and better application of medicine and technology. The bulk of views were toward challenges compared with the strengths.

Challenges of UFPP

According to the previous studies about UFPP, sociocultural and economic challenges, interpersonal communication difficulties, and inefficient management in UFPP were highlighted.[11] Because of the results of another study, the problems of UFPP in Iran were classified into seven categories including financial, cultural, educational, motivational, structural, administrative, and contextual problems.[12] Policymakers believe that the most common challenges of UFPP are: 1) organization (ununited stewardship function of the Ministry of Health, weak management and planning, inadequate training of human resources, and a weak referral system); 2) financing (fragmented insurance funds, insufficient financial resources, and instability of financial resources); 3) payment (inappropriate payment mechanisms and delay in payments); 4) regulation (cumbersome laws and unclear laws); and 5) behavior (cultural problems and conflict of interests).[18]

Another study remarked that despite the ambitious goals, implementing UFPP has not been without challenges. Poor management, weak infrastructure, sociocultural and economic barriers, diversity of insurance organizations, inefficient referral system, and defects in the electronic file were enumerated as challenges of this program.[10-13] Professor Imanieh (SUMS' president at the time of starting UFPP), explained the constraints of UFPP as: The governmental and parliamentary decision-makers' faith in this initiative was insufficient, centralization and decision-making in Tehran (the capital city of Iran), absence of an electronic health record platform and lack of cooperation between health and insurance authorities in developing appropriate software. He added other challenges of UFPP as poor cooperation of some specialists/subspecialists with the program, preference of some citizens to immediate referral to the specialists/subspecialists (they assume FPs as barriers to direct referrals), lack of regular decision-making meetings in Tehran to update and modify the program, inconsistent payment to FPs, impatience of some FPs and their withdrawal from the program, and the refusal of some parliamentarians to cooperate with this program.[9]

According to one study which was conducted in the first five years of implementation of UFPP in the Fars province, Iran, people were not highly satisfied with UFPP,[19] whereas two other studies showed that people did not have appropriate knowledge and practice toward this program.[20,21]

Studies about the challenges of FPs in other countries show more or less similar findings to this study. A study in Alberta, Canada showed key challenges that affect FPs. These challenges were workload and time pressures and meeting demands; the need to promote the rewards of family practice to those considering joining the profession; overhead and income inequities; getting respect from specialists; the need to ensure that the rewards identified are not adversely affected by primary care reform; lack of availability of specialists, procedures, tests, and other resources; running a practice as a small business; paperwork, telephone calls, and forms; maintaining and acquiring skills and knowledge; patients' expectations; and medicolegal issues and insurance paperwork.[22] Challenges of family doctors in Singapore included four domains: people, processes, systems, and networks.[23]

Another study in India revealed the need for clear guidelines that integrate and promote family medicine practices at the point of care and also recommended interdisciplinary synergy across related disciplines through the integration of teaching, training, and practice of the FPs as a whole.[24] Family medicine in Uganda has not yet found a stable niche within the healthcare system because of the lack of proper institutionalization of it in the healthcare system of that country.[25]

Strengths of UFPP

Along with the many challenges of the project during the interviews, health teams also mentioned significant benefits. According to the interviewees, among the important positive features of UFPP are: improved community health knowledge, and improved prevention and treatment services. Professor Imanieh (the former president of SUMS and manager of UFPP in 2012) mentioned that UFPP has several achievements as access to free or low-cost services for low-income patients, better distribution of physicians, pharmacies, laboratories, and other health facilities, identifying 10,000 cases of occult diseases such as hypertension and type 2 diabetes, raising the value of general practitioners by encouraging patients to refer to them and if necessary, referring the patient to a specialist and employment of a large number of general practitioners, nurses, midwives, and other health personnel. He also added that in most cases, an increase in FP's income and a gradual shift away from treatment-based medicine toward health-based medicine happened, whereas most physicians' knowledge was being updated, and this program gave medical students optimism for their future positions and job.[9] According to one study in Alberta, Canada, key rewards that affect FPs were providing comprehensive and

preventive care; having a good interaction with patients and their families; being an immersed witness to the human condition; providing continuity of care and receiving ongoing feedback; having flexibility and control of practice and job security; maintaining and acquiring skills and knowledge; teaching and sharing knowledge and gaining experience and mentoring.[22]

Solutions

To combat the challenges of UFPP, a fundamental reform in the different aspects of this program is needed. Some recommended solutions are doing evidenced-based and evidence-informed reforms without conflict of interest, making transparency in the policies and plannings, more attention to the prevention and giving priority to it over treatment, continuous culturalization of and trust building in the people about UFPP and more communication of policymakers and managers of UFPP with FPs teams and people and attention to their voices about this program. Furthermore, coverage of UFPP by all basic insurances, strengthening of infrastructures, observance of meritocracy in the selection of managers, directors, and FPs teams, stability in the managers and regulations, more intra and inter departments cooperation and coordination and reform and transparency in the payment system are recommended. However, need to improve the referral system at all levels, focus more on human resources and advocate them to prevent their burnout, modify training and retraining courses for FP teams, supervision on trainers of FP teams and establishment of an encouraging, motivational, and quality-based monitoring and evaluation systems should not be overlooked. Furthermore, integration and accreditation of information systems, reliving shortages of SIB and e-prescription systems, providing medical drugs, facilities, and equipment to provide better and fair accessibility to health services and followings; especially for disabled and chronic patients, and using technologies such as e-health and artificial intelligence (AI) in the process of education, empowerment and healthcare provisions are important for consideration reform in the UFPP. Similarly, another study recommended some of the above solutions to improve the implementation of UFPP; such as enhancing the role of government; improving the referral system; providing comprehensive training for UFPP providers; considering sustainable financial resources; moving toward mixed-payment mechanisms; employing appropriate legal and regulatory frameworks; enhancing community awareness; and elevating incentive mechanisms.[18] Another study emphasized educational planning for public culture-making, revision on the number of people that are covered by each doctor, aggregation of insurance, and legal requirements for specialists to cooperate effectively to improve UFPP.[26]

A qualitative study in Mazandaran province of Iran concluded that for improvement of UFPP, changes in five domains of financing, financial payments, regulations, organizing, and behavior are needed.[27]

Strengths, Limitations, and Recommendations

As the strength points, conducting this qualitative study after the first decade of implementation of UFPP in Iran provided valuable insights about ups and downs of this program from the perspectives of different members of UFPP teams. These evidences would be beneficial for improvement and nationalization of this program. As a limitation, this study was conducted through phone interviews but not as face-to-face interviews. Apart from the possible impact of the absence of nonverbal cues on findings, telephone interviews are shorter or less comprehensive than face-to-face interviews. As recommendations, we recommend to study also on the viewpoints of other stakeholders in the UFPP; including patients, policymakers, and members of the community. Enhancing the qualitative findings of this study with next quantitative study would address to a more comprehensive understanding and general representations of the UFPP's strengths and weaknesses.

Conclusions

Regardless of some contradictory opinions among family physician team members, challenges of UFPP outweigh its strength points. Therefore, this program needs a fundamental reform. This reform should include, the priority of prevention over treatment, culturalization in people, communication of policymakers with FPs teams and people, coverage of UFPP by all insurances, strengthening of infrastructures, and meritocracy and stability in this program. Furthermore, intra and interdepartments coordination, reform in the payment system, improving referral system, advocate health workforces, modifying trainings, supervision on trainers, integration and accreditation of information systems, providing more facilities in the health services, and using new technologies should also be regarded in this reform.

Acknowledgments

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Ethical considerations

The 1964 Helsinki Declaration was considered in this study (17). Before each interview session, participants were informed about the objective of this study and verbal consent was obtained from each of them. Furthermore, all interviewees were made aware that their participation in the study was voluntary and that they could withdraw at any point. Additionally, interviewees were given the assurance that their interviews would be kept confidential, and stored anonymously, and after the article's publication, the audio recordings would be completely deleted.

Code of Ethics

The ethics committee of SUMS approved the study's proposal, encoded IR.SUMS.REC.1401.330.

Authors contribution

Conceptualization, and Project administration: BH and KBL. Data collection: ZZJ, NRR, YK, FS, FZJ, and MH. Data analysis and interpretation: HJ, SS, MAM, MNK, ZZJ, NRR, YK, and FZJ. Writing the manuscript: BH, KBL, HJ, SS, MAM, MNK, ZZJ, NRR, YK, FS, MH and FZJ.

Also, all authors approved the final version of the manuscript and are responsible for the whole of that.

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Conflicts of interest

There are no conflicts of interest.

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Urban Family Physician Program after a Decade of Implementation from the Perspective of People: A Qualitative Study from Iran

Original Article

Urban Family Physician Program after a Decade of Implementation from the Perspective of People: A Qualitative Study from Iran

Abstract

Background: A decade after the implementation of the Urban Family Physician Program (UFFP) in Fars province, southern Iran, we aimed to reveal people's opinions regarding the strengths and challenges of this program, which help policymakers for evidence-based improvement of this program. **Methods:** In this thematic content analysis qualitative study, which was performed in 2023, one adult individual of each family under the coverage of UFPP was selected using a purposeful sampling method. Then, an in-depth and semi-structured phone interview was conducted with each participant. Interviews were continued until the achievement of data saturation. The trustworthiness of data was checked according to Guba and Lincoln criteria. Data analysis was accomplished using MAXQDA software version 10. **Results:** A total of 25 participants with a mean age of 41 ± 12 years old were interviewed. Extracted strengths points of UFPP consisted of 390 meaning units, 41 open codes, 16 subcategories, 9 categories, and 3 themes, of which the main themes consisted of proper governance, adequate service provision, and promoting community health. In contrast, the challenges of this program comprised 127 meaning units, 54 open codes, 17 subcategories, 7 categories, and 3 themes, the main themes of which included weak governance, inefficient service provision, and limitation of resources. **Conclusions:** After a decade of implementation, people demonstrated contradictory opinions about many aspects of UFPP. Strength points should encourage policymakers to advocate more for this program and extend it to the other provinces of Iran, whereas weak points should be used for its revisions and improvement.

Keywords: *Challenges, family physician, Iran, qualitative study, strengths*

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Introduction

The Family Physician Program (FPP) was established to improve both efficiency and effectiveness, establish justice, and provide universal access to healthcare services.[1,2] More than 80 countries are members of the World Organization of Family Doctors (WONCA).[3] As a result of the implementation of FPP, a comprehensive and prevention-based approach to health and improving health at the individual, family, and community levels was achieved in some pioneer countries.[1,3,4] In Iran, FPP was implemented in rural areas and small towns in 2005, and following its reported success,[5,6] the pilot phase of the urban family physician program) UFPP (was implemented in the cities of Fars and then Mazandaran provinces in 2012, which is still ongoing.[7] Evidence showed that implementing FPP in the cities can be more challenging than in rural areas due to more differences in cultures and populations.[8] Most UFPP studies in Iran focus on policymakers and staff, neglecting people's point of view who are the program's primary beneficiaries. This study was conducted to determine the current public opinion on the strengths and challenges of the UFPP in Fars province, which can help policymakers improve the program.

Materials and Methods

Study design and setting

This qualitative study was conducted in 2023 in Fars, Iran. In this study, thematic content analysis was applied to explore people's opinions about the strengths and challenges of UFPP.

Study participants and sampling

First, the cities of Fars province were divided into two groups based on their population: populous cities (over 50,000 people) and small cities

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(less than 50,000 people). Then, in addition to Shiraz City (the capital city of Fars province), eight other cities (four populous and four small cities) were randomly chosen considering their geographical directions. After negotiations with the health deputy of Shiraz University of Medical Sciences (SUMS), we received a list of names and contact information for our target population. As inclusion criteria, the target population consisted of Iranian adults over 18 years who were residents of Fars province for the past 2 years and were under the coverage of UFPP. Then, considering high variation, purposeful sampling was applied, and interviewees were selected. Each interviewee was from one family; no exclusion criteria existed except non-willingness to join this study.

Data collection tool and technique

Due to the wide geographical distribution of the target population, logistic difficulties in face-to-face interviews, and the importance of the observance of homogeneity in the data-gathering method, we performed all interviews through phone contacts. Interviews were performed by a trained interviewer who had experience in conducting qualitative studies. After introducing and explaining the aims of this study and obtaining verbal consent for participating, phone interviews were performed at participants' preferred time according to the appointments. Afterward, general questions (age, level of education, marital status, job status, being the head of family, living place in the Fars province, and years of being covered by UFPP) were asked of the participants. Then, an in-depth and semi-structured interview was conducted with each participant. In interviews, the participants were first asked about their experiences with UFPP as open encoded questions. Next, they were asked to explain their positive and negative experiences with this program. We also requested follow-up/probing questions such as "What?" "How?" "Why?" and "May you explain more?" to obtain much more information in each interview. Furthermore, notes were taken during the interviews, and two voice recorders were used to ensure that no problem could occur while recording the interviewees' voices. The interviews continued until data was saturated; no new information and codes could be extracted.

Data analysis

Data collection and analysis were performed concurrently. After each interview, the audio file was transcribed into meaning units. The transcripts and notes were reviewed multiple times to gain a general understanding of them. The Erlingsson and Brysiewicz content analysis approach[9] and MAXQDA software version 10 were utilized to analyze the data. In this way, texts were reviewed, and meaning units were extracted. Then, open codes were shaped, and we categorized them into subthemes. Afterward, the main themes were created via the interpretation of subthemes.

Trustworthiness and rigor of the study

The trustworthiness of the data was approved based on the four criteria offered by Guba and Lincoln, including transferability, credibility, confirmability, and dependability.[10] The transferability of the data was guaranteed through providing an inclusive explanation of the subject, and the characteristics of the interviewees and gathering and analyzing the data. Moreover, utilizing purposive and theoretical sampling methods heightened transferability. The credibility was considered through semi-structured interviews, field notes, and extensive involvement with the subject matter accompanied by constant peer probing as well as expert and member checking. Data confirmability was warranted by the lead researcher, who conducted several comprehensive meeting reviews to gather concepts and ideas from other research teams and kept records of the relevant study documents. Also, an audit trail was performed by several researchers familiar with the healthcare system and qualitative research. Finally, dependability was addressed through in-depth negotiations with experts and a review by the interviewees and other researchers.

Ethical considerations

The ethics committee of SUMS approved the study's proposal, which was encoded as IR.SUMS.REC.1401.347. Also, the 1964 Helsinki Declaration was considered in this study. All participants were provided with enough information about the study's aims. Furthermore, verbal informed consent was obtained from each participant before attending the interview session. In addition, all interviewees were informed about the voluntary participation and the possibility of withdrawing from the study at any stage. Moreover, interviewees were assured that the interviews would be confidential and stored anonymously, and after the article's publication, the audio would be deleted entirely.

Results

In this qualitative study, we interviewed 25 participants with a mean age of 41 ± 12 years old (min: 18, max: 67), including 16 female and nine male participants. The mean years they have lived in Fars province was 21 ± 20 years. The mean family size was four individuals, and basic insurance systems covered all, whereas 8 (32%) were under the coverage of supplementary insurance. Other characteristics of the interviewees are shown in Table 1.

Strengths of UFPP

The strengths of UFPP consisted of 390 meaning units, 41 open codes, 16 subcategories, nine categories (subthemes), and 3 themes. As Table 2 shows, the main themes consisted of proper governance, adequate service provision, and community health promotion. Categories included appropriate legislation, high financial protection,

Table 1: Participants' characteristics in this study

ID	Gender	Age (year)	Level of Education	Marital Status	Job Status	Being the head of the family	Living Place in the Fars Province	Years past from being covered by UFPP†
≠1	Female	27	Bachelor	Married	Unoccupied	No	Shiraz	9
≠2	Female	39	Diploma	Married	Unoccupied	No	Abadeh	9
≠3	Male	46	Diploma	Married	Occupied	Yes	Abadeh	9
≠4	Male	25	Master	Single	Occupied	Yes	Abadeh	5
≠5	Female	50	Diploma	Married	Unoccupied	No	Abadeh	8
≠6	Male	43	Bachelor	Married	Occupied	Yes	Lamerd	10
≠7	Female	44	Diploma	Married	Unoccupied	No	Lamerd	8
≠8	Female	37	Bachelor	Married	Occupied	No	Lamerd	6
≠9	Female	35	Diploma	Married	Unoccupied	No	Kazeroon	11
≠10	Female	32	Diploma	Married	Unoccupied	No	Kazeroon	10
≠11	Male	62	Diploma	Single	Retired	Yes	Neyriz	5
≠12	Male	63	Diploma	Married	Retired	No	Neyriz	9
≠13	Female	55	Under diploma	Married	Occupied	Yes	Neyriz	10
≠14	Female	67	Diploma	Married	Occupied	Yes	Neyriz	10
≠15	Female	18	Diploma	Single	Unoccupied	No	Rostam	10
≠16	Female	50	Diploma	Married	Unoccupied	Yes	Rostam	11
≠17	Female	38	Bachelor	Single	Unoccupied	No	Pasargad	11
≠18	Male	40	Diploma	Married	Occupied	Yes	Pasargad	11
≠19	Female	37	Diploma	Married	Unoccupied	No	Qir karzin	8
≠20	Male	30	Bachelor	Married	Occupied	Yes	Sepidan	4
≠21	Female	21	Diploma	Married	Unoccupied	Yes	Sepidan	10
≠22	Female	34	Bachelor	Married	Occupied	No	Shiraz	11
≠23	Female	53	Diploma	Married	Occupied	Yes	Shiraz	11
≠24	Male	41	Master	Married	Occupied	Yes	Shiraz	10
≠25	Male	42	Bachelor	Married	Occupied	Yes	Shiraz	10

†UFPP: URBAN Family Physician Program

high responsiveness, optimal delivery of services, comprehensive accessibility, appropriate health systems, client-based services, improving public literacy about UFPP, and appropriate preventive services.

Some examples of quotes about the strengths of UFPP

Proper governance

An example of quotes about proper governance was providing affordable services and financial protection. A 46-year-old male patient mentioned that: *"The costs of being visited by a FP are much more reasonable than an independent doctor. Well, in this bad economic situation, it is really better and affordable for us. Medical drugs are also cheaper this way."*

Adequacy of service provision

As it was revealed in Table 2, the adequacy of service provision in UFPP was also addressed by people in different aspects, such as reserving patients' dignity through the good manner of the FP team toward people. This was mentioned by multiple participants, such as: *"In terms of the behavior of the family doctor, their behavior was good, yes, it was appropriate. The behavior of the doctor and health care team where we were was good and excellent... (a 42-year-old male participant)."*

Promoting community health

People also believed that UFPP promotes community health through the implementation of appropriate preventive services such as providing necessary supplements for each age group as a participant mentioned it: *"My vitamin D was always good... maybe that's why they didn't give it to me... but my mom was older, I saw that they gave her vitamin D... (a 34-year-old female participant)."*

Challenges of UFPP

The challenges of the UFPP program comprised 127 meaning units, 54 open codes, 17 subcategories, 7 categories, and 3 themes. The main themes included weak governance, inefficient service provision, and limitation of resources. As Table 3 shows, categories (subthemes) included problems in the legislation of UFPP, poor financial protection, low transparency, low responsiveness, low accessibility, problems in the sub-structures, and shortage of medical products and equipment.

Some examples of quotes about the challenges of UFPP

Weak governance

Facing bureaucracies that result from weak governance was the cause of dissatisfaction toward UFPP in some people.

Table 2: Strengths of urban family physician program from the viewpoint of people

Theme	Category	Subcategory	Open codes
Proper Governance	Appropriate legislation	Logical referrals	• Reducing unnecessary visits by specialists
	High financial protection	Low visiting Fee	• Providing affordable services
Adequacy of Service Provision	High responsiveness	Having choice	• People have a choice in choosing their FPs[1]
		Preserving patient's dignity	• Good manners of FP
			• Good manners of the FP team members
		Respecting patient's confidentiality	• Preserving patients' privacy
		High Quality of care	• The FP's patience during the examination
			• Detailed examination of the patient by FP
			• Re-checking the medicines by the FP in each visit
			• Providing appropriate treatment for various diseases
			• Providing complete explanations and counseling about the disease
			• Providing complete explanations on how to take the prescribed drugs
			• More accurate diagnosis and clinical excellence of FPs compared with non-FPs and some specialists
		Providing necessary amenities	• Cleanliness of the FP clinic
			• Proper ventilation of the FP clinic
			• FP clinic is equipped with an elevator
		Continuous Follow-ups	• Continuous follow-ups after treatments of patients
			• The seriousness of the FP and FP team for follow-up the patients with chronic diseases
			• Continuous follow-ups in terms of the health status of non-patient people
	Optimal delivery of services	Providing virtual access	• Easy appointment-making by phone
			• Constant availability of healthcare workers through calls, SMSs[2], or available social networks
			• Phone counseling by FP in urgent situations
	Comprehensive Accessibility	Providing in-person access for all groups of the population	• Providing home visits by FP in smaller cities
			• Easy and fast referral to specialists
			• Long working hours of UFPP[3]
			• Nearness of place of residence to the FP service delivery place
		Comprehensive HIS[4] website	• Documentation of disease history for each patient
			• Documentation of medical drug history for each patient
			• Documentation of the health status of each patient
	Appropriate health systems	Appropriate electronic prescribing	• Mitigation of medical errors
			• A good alternative for FPs different handwriting
			• Less commuting between clinic and pharmacy for the FP bad handwriting
	Client-based Services	People's positive feelings about UFPP	• Having more trust in the FP compared with non-FPs
			• Being satisfied with treatment methods which are applied by FPs
Promoting community health	Improving public literacy about UFPP	Providing appropriate education	• Providing effective educational materials
			• Creating question/answer groups in social networks
			• Training the community health volunteers
	Appropriate preventive services	Preventive supplies	• Providing necessary supplements for each age group
		Preventive procedures	• Periodic check of different items of health status
			• Providing vaccinations
			• Providing screening services

[1]FP: Family Physician.,[2]SMS: Short Message Service, [3]UFPP: Urban Family Physician Program., [4]HIS=Health Information System

Table 3: Challenges of urban family physician program from the view point of people

Theme	Category	Subcategory	Open codes
Weak Governance	Problems in the legislation of UFPP[1]	Issue with health services	• Focusing on treatment rather than prevention
			• Not covering of some of the insurance systems by UFPP
			• Unreasonable cost of services
			• Too many bureaucracies
			• Obligatory joining of people to UFPP
	Poor financial protection	Poor supervisions	• Non-free patients' visiting fees
			• A periodic increase in the visiting-fees
			• Illegal Paying for injections
			• Illegal Paying for the visiting by substitute FPs[2]
			• Full payment for insurance-covered medical drugs if there is an interruption in the electronic prescription system
	Low transparency	Insufficient literacy of people about UFPP	• Inadequate information of people about the goals of UFPP
			• Inadequate information of people about the services of UFPP
			• Inadequate information of people about substitute FPs
			• Inadequate information of people about their rights and entitlement in the UFPP
			• Inadequate education of People about the place which they should refer or phone number which they should contact in case of any complaint about UFPP
			• Shortage of educational books and brochures about UFPP
			• Small number of face-to-face health-related educational classes
		Non-qualified educations	• Low quality of educational classes
			• Non-expert instructors
Inefficient Service Provision	Low Responsiveness	Lack of prompt attention	• Long waiting time for visiting by FP
		Undignified care	• Bad manners of FPs and team members
			• Being disregarded by FPs
			• Moodiness of the FPs
		Non-confidentiality	• Ignoring patients' privacy by FP due to concurrent visits of different patients
			• Ignoring patients' privacy by the FP team members due to their shared rooms
		Lack of autonomy	• Not asking patients' opinions about the treatment process
		Inadequate medical knowledge and expertise	• Inadequate knowledge of FPs and FP team
			• Lapses in the clinical skills of FPs
			• Inaccurate diagnosis by FPs
			• Quick and careless examination of patients by FPs and FP team
			• Prescribed unnecessary tests
			• Quick prescribing of drugs by FP without a complete examination
			• Prescription of inappropriate and ineffective drugs
			• Improper treatment of complicated diseases
		Inefficient service delivery	• Inadequate follow-ups
		Insufficient amenities and facilities	• Small FPs clinics' waiting room space
			• Not enough seats for the patients in the FPs clinics' waiting room
			• No water dispenser machine in the FP clinic
		Negative perception about UFPP	• Being dissatisfied with FPs and their substitutes' presented care
	Low accessibility	Limitations in virtual access to the FPs	• The impossibility of making phone appointments
			• Lack of constant communication with healthcare workers through calls, SMSs[3] or available social networks

Contd...

Table 3: Contd...

Theme	Category	Subcategory	Open codes
		Limitations of in-Person access to the FPs	• Short availability of FPs during the scheduled working hours of the UFPP
			• A limited number of patients are visited daily by FPs
			• Limited daily working hours of the FP clinic
			• Limited allocated visiting time for each patient
			• Long distance from the FP's clinic to the pharmacy
			• Limited access to the various specialists
			• Low access to a fixed FP due to the high turnover of FPs
			• Lower access of men (compared to women) to FPs
	Problems in the sub-structures	Problems in the integrated electronic health record system	• Low speed and other problems in the electronic health record system (Sib[4] website)
		Problems in the electronic prescribing system	• Software problems in the e-prescription system
			• Hardware problems in the e-prescription system
Limitation of resources	Shortage of medical products and equipment	Poor medical supplies	• Insufficient necessary equipment for service delivery such as screenings and vaccinations
			• Insufficient supplies of necessary supplements for each age group

[1]UFPP: Urban Family Physician Program, [2]FP: Family Physician, [3]SMS: Short Message Service. [4]Sib: Due to the need to provide inter-organizational non-attendance services, the Ministry of Health of Iran launched an integrated electronic health record system called Sib (a Persian backronym meaning apple)

For example, one interviewee mentioned: *"I came for a test at a laboratory, they said that it (insurance card) must be stamped by the family doctor so that we can calculate it by insurance tariff; otherwise, the cost of the test will be calculated as non-insurance (a 53-year-old female participant)."* Compulsory joining of people to UFPP was another aspect of poor legislation and weak governance in UFPP that many of the participants mentioned, as one interviewee said: *"… the family doctor will reduce only a series of costs and a series of parameters, mostly because of this reason that we joined… (a 53-year-old female participant)."*

Inefficient service provision

Inefficient service provision was one of the themes, which was extracted about the challenges of UFPP, in this study. Inappropriate patient's examination by FPs was one of the examples of this theme, as one interviewee explained: *"I think since we pay the FP a small amount of money for the visit, the doctor does not give enough time to accurately examine us and he disregards our questions. When we ask more than one or two questions, he said that we don't get paid enough to answer more to your questions (a 37-year-old female participant)."*

Limitation of resources

Resources' limitation was another extracted theme regarding problems in UFPP. Among peoples' concerns were insufficiency and inefficiency of medical services; as one person mentioned: *"… because their facilities are limited and they don't diagnose well, people are forced to go to Isfahan (another province) to visit by a specialist doctor (a 50-year-old female participant)."*

Discussion

This qualitative study aimed to investigate the strengths and challenges of UFPP after one decade of its implementation from the people's point of view in Fars Province, Iran. Twenty-five individuals were interviewed. The three extracted themes about the strengths of UFPP consisted of proper governance, adequate service provision, and promoting community health, whereas three extracted themes regarding challenges included weak governance, inefficient service provision, and limited resources. Overall, people believed more in strengths than challenges in UFPP, however discrepancy and in many aspects a contradictory opinion toward UFPP was found. Some of these conflicts may come from Fars province's varied geography and huge cultural heterogeneity. However, these conflicts may also come from a large gap in populations' literacy toward this program, the provision and sustainability of resources, the appropriateness of infrastructures, and FPs 'motivations and experiences in the different regions. Furthermore, mismanagement in different aspects of UFPP should not be overlooked. In the following, we discuss these aspects and investigate all extracted themes.

Strengths of UFPP

Proper governance

The UFPP in Iran aims to provide cost-effective primary healthcare (PHC) services to the population, reducing the need for specialist visits and improving healthcare provision. Furthermore, by providing accessible, affordable, comprehensive, and patient-centered care, the UFPP can improve the health outcomes of the Iranian population. All

these items were addressed by some of the interviewees in this study. Furthermore, by providing affordable services and financial protection, this program can reduce out-of-pocket expenses for medical services. Other studies also emphasized the role of scientific governance strategies in the efficacy of FPP.[1,11]

Adequacy of service provision

This study identified several strengths of the UFPP, including good manners of FPs and their team members and preserving patients' privacy and dignity. This is important in building trust between patients and FPs, which subsequently gives people the feeling of having access to comfortable healthcare services and also brings positive healthcare experiences for FP teams, as another study also remarked.[12] Goldman believes that protecting privacy improves the healthcare system.[13] Participants in this study reported that they have more satisfaction about and trust in the clinical judgment and skills of FPs compared to non-family physicians. They explained that their FPs conduct detailed examinations of patients and provide appropriate treatment for them. These are important in building a strong patient-physician interaction and ensuring patients that they receive appropriate and effective care. Participants also reported that FPs and their teams were serious about following up on the status of patients with chronic diseases, which ensured the patients received appropriate and timely care for their chronic conditions. Another survey insisted on the positive roles of family doctors for follow-ups of patients, family history taking, reasonable referrals to specialists, and money savings.[14] As the other strengths of UFPP in Iran, people mentioned virtual and in-person access to healthcare services, which include easy appointment-making by phone, availability of healthcare workers through calls, SMSs, and social networks, and phone counseling with FPs in urgent situations. Home visits by FPs in the smaller cities and the nearness of living places to the FPS' clinic were also among the other positive views of people toward UFPP. These findings ensure patients that can access healthcare services easily and conveniently. In a study by Jahromi *et al*.,[15] FP accessibility was studied considering patients' perspectives and they found that most patients were satisfied with the visiting hours in non-holidays and mostly had received medical care in less than an hour. Electronic documentation of medical history and patients' diseases in the UFPP led to the less medical errors. It can also result in less-needed commuting between FPs' clinics and pharmacies due to bad handwriting of prescriptions, which was problematic in the previous traditional paper-based prescription. Some studies concluded that electronic prescription of medical drugs significantly reduced the rate of prescription errors.[16,17] Cleanliness and proper ventilation of FPs clinic, which were mentioned by some of the interviewees in our study, were among other strength points of UFPP. Vosgan studied the microbiota of the FP's office and found that the treatment room has the highest germs, and concluded that proper air ventilation is crucial for the FP's office.[18]

Promoting community health

Educating patients using health-related brochures, booklets, classes, and social networks was mentioned as another of UFPP's strengths. FPs build a long-term trusting relationship with people and encourage and reinforce them to improve their health behavior.[19] For example, in fighting against COVID-19, FPs showed a determining role in providing information about this infection and guiding people in timely referring for diagnosis and treatment.[20,21] Periodic checking of different items of peoples' health status, providing necessary supplements for each age group, and providing vaccination and screening services were among the other mentioned strengths of UFPP in our study.

Challenges of UFPP

Weak governance

Some people were concerned about illegal issues, low transparency, poor official supervision, and low responsiveness in the UFPP. Frequent changing and increasing trends of service fees, which were previously free, caused the cost of provided services to become unreasonable and make them unaffordable, especially for deprived individuals and families; as some interviewees declared. Lack of coverage of UFPP by some insurance systems, and spending a lot of time and money due to multiple visits are among other UFPP challenges that a group of interviewees are concerned. In line with our study, another study revealed that lack of insurance coverage is a major barrier to healthcare for low-income families.[21] Mehrolhassani *et al*.[22] found that the diversity of insurance organizations in Iran confronted the FPP with some obstacles. Insufficient fostering of a health-based culture was another outcome of low transparency, resulting in poor governance. Low levels of public knowledge and education about UFPP after 5 years of its implementation in Iran, especially in lower-income populations, were shown in other studies.[23,24] Lack of transparency in the health system can lead to suspicion, mistrust, and even corruption. The low transparency in the UFPP is not limited to the lack of information or misinformation about this program but it also extends to some illegal expenses that people should incur.[24] Bureaucracy in the healthcare system can lead to excessive administrative burdens, which in turn is costly and time-consuming for patients and healthcare providers. To address the mentioned challenges, it is important to improve management and planning and increase access to educational resources and opportunities for patients and healthcare providers.[25,26] Some interviewees in our study also expressed that men have difficulties in access to their FPs, which may be due to far distance of FPs' clinics from their place of employment.

Inefficient service provision

According to some interviewees' statements, lapses in clinical skills, quick and careless clinical examination, inaccurate diagnosis, and inadequate follow-ups of patients by FPs are among the challenges of service provision in UFPP. These challenges can lead to prescribed unnecessary tests, improper treatment of complicated diseases, and prescription of inappropriate and ineffective drugs. Similarly, Golalizadeh and Fardid mentioned that insufficient knowledge of the FPs is the main challenge that patients face.[8,27] To address these challenges, it is important to improve the quality of care by FPs including holding feedback and ensuring patients receive appropriate and necessary care.[19,20] Some participants in this study complained about the impossibility of making phone appointments with FPs and the lack of constant communication with FPs' team through calls, SMSs, or available social networks. They also were dissatisfied about poor availability of FPs during the scheduled working hours, limited working hours of FPs, limited number of patients that are visited daily by each FP, and limited visiting time for each patient. Long distance from the FP's clinic to the pharmacy, limited access to the various specialists who are involved in the UFPP and insufficiency of their cooperation with general FPs, and low access to a fixed FP (due to high turnover of FPs) were among other negative opinions of people toward UFPP. Another study also reported a lack of cooperation of specialists with UFPP.[27] Above mentioned challenges can lead to poor communication between FPs and people, increase dissatisfaction in people, cause inefficient use of resources, result in overwork and burnout of physicians, and finally induce a high economic burden on the health system. To combat some of these challenges, it is important to improve communication between FPs and patients by considering different cultures, applying professional skills, and integrating telemedicine into the healthcare system.[1,28] Fitzsimon *et al*.[14] presented an innovative, community-based, hybrid model; the Virtual Triage and Assessment Center (VTAC) that combines virtual care with in-person care, and they found that this model was effective in improving access to healthcare and reducing waiting times. As the other challenges of service provision in UFPP, some people complained about problems in the Sib and electronic prescribing systems and lack of information technology specialists in the health centers, as other studies similarly emphasized.[8,29]

Limitation of resources

The UFPP faces challenges related to the low amount of necessary equipment for screenings and vaccinations and the low amount of necessary supplements for each age group, as some people in this study stated. These challenges can lead to inadequate patient care and treatment, which can result in negative health outcomes. The lack of necessary equipment and supplements can also lead to increased healthcare costs and decreased patient and clients' satisfaction. Another study remarked that the most common barriers in UFPP were poor organization, weak management and planning, inadequate resources, limited number of general practitioners, limited access to various specialists, and limited access to technology.[19]

Strengths, limitations, and recommendations

In this study, we explored both strengths and challenges of UFPP from the people's point of view, after the first decade of its implementation. This evidence can be the background of the next large quantitative studies toward making more representative evidence for the improvement and nationalization of this program. As a limitation, and because of logistic shortages, the wide geographical distribution of the target population, and the importance of homogeneity in data gathering, we had to perform phone interviews instead of face-to-face interviews. As a recommendation, considering the opinions of FPs and their teams, policymakers, para-clinic services staff, and insurance systems is also needed to improve and extend UFPP.

Conclusion

After a decade of implementation, UFPP is at a critical point. People demonstrated contradictory opinions about many aspects of UFPP. Strength points should encourage policymakers to advocate more for this program and extend it to the other provinces of Iran, whereas weak points should be used for its revisions and improvement.

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Conflicts of interest

There are no conflicts of interest.

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Five Years after Implementation of Urban Family Physician Program in Fars Province of Iran: Are People's Knowledge and Practice Satisfactory?

Original Article

Five Years after Implementation of Urban Family Physician Program in Fars Province of Iran: Are People's Knowledge and Practice Satisfactory?

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Abstract

Introduction: Urban family physician program (UFPP) was launched in Fars province of Iran in 2012. We aimed to assess the knowledge and practice of people toward this 5-year-old program. **Methods:** In this population-based study, through a multistage random sampling from 6 cities of Fars province, 1350 people older than 18 years were interviewed. For data collection, a questionnaire consisting of sociodemographic characteristics and items about knowledge and practice toward UFPP was used. **Results:** The mean age of the interviewees was 42.4 ± 14.2 years; male (674; 49.9%)-to-female (651; 48.2%) ratio was 1.03. Mean score of knowledge was 4.2 ± 1.7 (out of 14), while 961 (71.1%) had <50% of the desirable knowledge. Mean score of practice was 4.4 ± 1.3 (out of 9), while only 443 (32.8%) had a good performance toward this program. Knowledge and practice did not show a significant correlation (r = 0.06, P = 0.05). Among cities, the highest and the lowest mean of knowledge belonged to Pasargad (5.6 ± 2.1) and Lar (3.0 ± 1.0) (P < 0.001), respectively. Pasargad (4.8 ± 1.4) had also the highest level of practice compared to Farashband (3.8 ± 1.4) which had the lowest score (P < 0.001). Multivariable analysis showed that supplemental insurance coverage (odds ratio [OR] = 2.5, %95 confidence interval [CI]: 1.6–3.9), female gender (OR = 1.9, %95 CI: 1.2–2.9) and higher level of education (OR = 1.7, %95 CI: 1.1–2.5) were the significant determinants of knowledge, while practice in those who were not covered by supplemental insurance was better (OR = 1.6, 95% CI: 1.2-2.5). **Conclusions:** After 5 years of implementation of UFPP, knowledge and practice of people toward UFPP are not satisfactory. This finding calls for a serious revision in some aspects of UFFP.

Keywords: *Family physician program, knowledge, practice, urban population*

Introduction

According to the World Organization of Family Doctors (WONCA) Europe, family physicians (FP) are primarily responsible for the comprehensive and continuing care provision to everyone irrespective of age, sex, and illness.[1] In other words, FP program (FPP) is a comprehensive health program with a preventive, continuing, and cost-effective approach, to facilitate providing health-care services.[2,3] WONCA supports FPP in many countries to achieve primary health-care targets.[2] Accordingly, many countries have positive and negative experiences toward implementation of this program.[4] In Iran, FPP was launched in rural areas and cities with a population <20,000 in 2005.[5,6] Following that and due to Iran's fifth development program (I5DP) in health sector[7] and considering positive experiences from FPP in rural areas,[8] urban FPP (UFPP) was planned and has been piloted in Fars and Mazandaran provinces of Iran, since 2012.[5] According to evidence, knowledge and practice of people toward FPP have a key role in achieving its goals.[9,10] The knowledge of people toward rural FPP was poor to moderate in >80% of participants in studies.[9,10] Up to the best of our knowledge, there is no report about knowledge and practice of people toward UFPP at province level. Therefore, this population-based study was the first study to assess the knowledge and practice of people of Fars province toward UFPP after 5 years of its implementation.

Methods

Study design and participants

This population-based study, through a multistage random sampling, was conducted in Fars province of Iran from October 2016 to January 2017. The 4.8 million population of Fars

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province is distributed across 29 cities with a range of population from 50,000 to 18,00,000. Fars province has 4.5 million population and 1230 FPs. The sample size was calculated as 1000, expected level of knowledge of people toward FPP as 10%, dropout rate of 30%, design effect of 2, precision of 5% and a confidence level of 95%. Multistage (stratified, proportional, and cluster) randomized sampling was used. Six cities were selected by simple randomization, including 3 cities with population over 2,00,000 (Lar, Abadeh, and Kazeroon), 2 cities with population between 80,000 and 2,00,000 (Estahban and Farashband) and one city with population < 8,00,000 (Pasargad). In the next step, the proportion of sample in each city was determined as Lar 300, Abadeh 150, Kazeroon 330, Estahban 100, Farashband 70, and Pasargad 50). Then, each city was divided according to postal code areas, and several clusters were selected by randomization in each area. Afterward, head clusters were chosen by simple randomization and 10 postal codes in each head cluster were selected. In the following, in each address, the breadwinner was asked to answer face-to-face interview questions. In cases where the breadwinner was absent, the second oldest person above 18 years was asked to participate in the study and in cases where we could not interview anyone, we replaced the postal code by the next one. Those who were not willing to participate in the study or were living in the city for < 2 years were excluded from the study.

Study instruments and variables assessment

The questionnaire included a brief introductory paragraph about this study emphasizing voluntary participation and preserving privacy.

Demographic and socioeconomic information was collected including age, gender, marital status, level of education, position in the family employment status, monthly income, UFFP coverage, and coverage by main and supplementary insurance systems. The questionnaire also contained questions about knowledge and practice of people toward UFFP program. In the knowledge section, we asked 14 questions under the topics of choosing and changing the FP, condition of clinic, FP working hours in weekdays and weekends, place of referral or the phone number for complaints or getting information, electronic record form, and visit charge. Nine questions were also allocated to practice of people including referring to FPs and non-FPs, phone consultation with FPs and practice in the case of complaints, need to get information or in the case that the FP is absent. Reliability (Cronbach's alpha for knowledge section = 0.65 and Cronbach's alpha for practice section = 0.63) and validity (UFFP managers' opinion were applied, and indeed a kind of expert opinion was the basis to provide content validity) of the questionnaire was measured and reported by another study.[11]

Statistical analysis

All data were entered into IBM SPSS software version 20 (SPSS, Chicago, IL, USA) statistics 20. The accuracy of data entry in the SPSS software was checked. Descriptive analysis (mean, standard deviation, median, maximum, minimum, and frequency), independent *t*-test (for comparing two groups of continuous variables) and Chi-square (for comparing categorical variables), Pearson correlation (for detection the correlation between two continuous variables), and logistic regression analysis (Backward Wald) for multivariable analysis were used. Acceptable or satisfactory level of knowledge and practice was considered ≥50% of total scores and the $P < 0.05$ were considered statistically significant.

Ethics statement

Voluntary participation in this study, designing an anonymous questionnaire, possibility of access to researchers of this study, and preserving privacy in all aspects of research were among ethical aspects of the study. Furthermore, the research protocol was approved by the Ethics Committee of University of Medical Sciences, Iran, by registry number 1394165.

Results

The mean age of 1352 participants in this study was 42.4 ± 14.2 years, while 651 (48.2%) were female, 1075 (79.5%) were married, 382 (28.3%) held a university degree, and 657 (48.6%) were employed. Moreover, 620 (45.9%) of interviewees were breadwinners of their families and their mean reported income was 340 ± 235 dollars/month. One thousand and three hundred four (96.4%) were under the coverage of one of the main insurance systems and only 266 (19.7%) had supplemental insurance coverage. The total coverage of UFFP was 1281 (94.7%) [Table 1]. Mean score of knowledge about UFPP was 4.2 ± 1.7 (out of 14) and 961 (71.1%) had low level of knowledge about this program. Eight hundred and fourteen (60.2%) said that FP selection should be based on the nearest address. However, 73 (5.4%) knew that every family member over 18 years can select FP by him/herself, 610 (45.1%) knew that every person can change his/her FP, and 136 (10.1%) correctly answered that FP can be changed twice a year. Sixty-five (4.8%) had correct information that FPs should provide both preventive and medical services for their clients and 27 (2%) knew about the phone number of UFFP's investigation center. Sixty-one (4.5%) also knew about electronic health record and 488 (36.1%) knew that the FP should fill the files by her/himself. About 942 (69.7%) explained about the conditions of FPs' clinics should have and 139 (10.3%) had knowledge about where they should refer if their FPs were absent. Forty-nine (3.6%) said that FP visit should be free of charge [Table 2].

Univariate analysis showed that knowledge about UFPP was higher in females (4.5 ± 1.8) comparing to

Table 1: Sociodemographic characteristics of people in a study to assess their knowledge and practice toward urban family physician program in Fars province of Iran

Item		Item	
Age (year)		Insurance coverage *n* (%)	
Mean±SD	42.4±14.2	Yes	1304 (96.4)
Minimum-maximum	18-90	No	23 (1.7)
Gender *n* (%)		Supplemental insurance *n* (%)	
Male	676 (49.9)	Yes	266 (19.7)
Female	651 (48.2)	No	1060 (78.4)
Level of education *n* (%)		FPP coverage *n* (%)	
≤12 years	944 (69.8)	Yes	1281 (94.7)
>12 years	382 (28.3)	No	44 (3.3)
Marital status *n* (%)		City of study *n* (%)	
Single	252 (18.6)	Lar	496 (36.7)
Married	1075 (79.5)	Kazeroon	319 (23.6)
Job status *n* (%)		Abadeh	180 (13.3)
Employed	667 (49.3)	Farashband	129 (9.5)
Unemployed	657 (48.6)	Estahban	129 (9.5)
Income (dollars/monthly)		Pasargad	74 (5.5)
Mean±SD	340±235		

FPP=Family physician program, SD=Standard deviation

males (4 ± 1.6) (P < 0.001), people with an academic degree (P < 0.001), unemployed people (P = 0.004), and those covered by supplemental insurance system (P < 0.001). Multivariable logistic regression showed that coverage by supplemental insurance (odds ratio [OR] = 2.5, 95% confidence interval [CI]: 1.6–3.9), being female (OR = 1.9, 95% CI: 1.2–2.9), and higher level of education (OR = 1.7, 95% CI: 1.1–2.5) had a significant effect on knowledge of people toward UFFP [Table 3].

Moreover, regarding studied cities, the highest mean score of knowledge belonged to Pasargad (5.6 ± 2.1), Farashband (5.6 ± 2.0), and Estahban (5.5 ± 1.5) and the lowest mean score of knowledge belonged to Lar (3.0 ± 1.0) (P < 0.001). Mean score of Knowledge in Kazeron and Abadeh was 4.8 ± 1.5 and 4.81 ± 1.5, respectively.

On the other hand, mean score of practice toward UFPP was 4.4 ± 1.3 (out of 9), while only 443 (32.8%) had a good performance about this program. Of 1079 (79.8%) that had become sick during 1 year to this study, 982 (72.7%) had at least one time visited their FPs and 530 (50.4%) had at least one time visited physicians out of UFPP. The median number of referrals to FPs was three, and the total person-referrals to FPs was 5366, while these figures for referrals to physicians out of UFFP were 0 and 1860 during 1 year to this study, respectively. Moreover, our findings indicated that 66 (4.9%) had phone consultation with their FPs, while 399 (29.5%) and 458 (33.9%) did correctly in case of any need to receiving information or reporting complaint(s) about UFPP, respectively. In the absence of FPs (for example in the holiday times), 804 (59.9%) referred correctly to alternative physicians that have already been introduced [Table 2].

Univariate analysis showed that people covered by UFPP (P = 0.02), those who were not under the coverage of supplemental insurance (P < 0.001), younger age groups (P = 0.01), and employed people (P = 0.03) had a better practice toward this program. Practice score of males (4.4 ± 1.3) and females (4.3 ± 1.3) were not significantly different (P = 0.4). However, in multivariable logistic regression, the only factor that was associated with practice toward UFPP was supplemental insurance coverage (OR = 0.59, 95% CI: 0.4–0.8) [Table 3].

Among the studied cities, Pasargad (4.8 ± 1.4) and Lar (4.7 ± 1.3) had the highest mean score for practice, while Kazeroon (3.9 ± 1.0) and Farashband (3.8 ± 1.4) had the lowest mean score for practice (P < 0.001). Practice scores of Estahban and Abadeh were 4.13 ± 1.1 and 4.25 ± 1.2, respectively. Our analysis also remarked that knowledge about UFFP had no significant correlation with their performance toward this program (r = 0.06, P = 0.05).

Discussion

After 5 years of implementation of UFPP in Fars province of Iran, our findings showed that despite 95% coverage, nearly two out of three people did not have a satisfactory level of knowledge toward this program. On the other hand, only one out of three had an acceptable level of practice toward this program. Furthermore, during the 1 year to this study, one out of two persons at least one time visited physicians who were out of UFPP and one of five people did not visit her/his FPs even one time in that year. Furthermore, only one out of 20 people knew that FPs should provide both preventive and clinical services.

This study showed that knowledge of people toward UFFP was nearly two times in females, in those with an academic degree and in those who were under the coverage of supplementary insurance. We believe that most of the women who participated in this study were homemakers and had more time to know about this program. Similarly, more educated people had a better understanding of UFFP and those who were under coverage of supplemental insurance had a higher level of knowledge about this program due to the need for financial supports for their diseases. Alidosti *et al*. concluded that knowledge of rural population toward FPP in shahrekord, west of Iran, was poor to moderate in 84.4% of participants, a significant negative correlation was existed between knowledge and age and a positive association was existed between knowledge and education.[10] Another survey in Shiraz showed that 89.2% of people had

Table 2: Knowledge and practice about urban family physician program in people of Fars province of Iran

Item	Question	*n* (%)	Question	*n* (%)
Knowledge	FP* should be chosen by		Do you know about electronic health record?	
	Family breadwinner	861 (63.7)	Yes	61 (4.5)
	Every person of family for him/herself	73 (5.4)	No	1253 (92.6)
	Health system	312 (23.1)	Filling the information record in the FP office should be done by	
	I do not know	47 (3.5)	FP	488 (36.1)
	Choosing of FP should be based on		FP crews	368 (27.2)
	Proximity to place of living	814 (60.2)	I do not know	193 (14.3)
	Proximity to workplace	49 (3.6)	Is it possible legally to change your FP?	
	It is no matter to be closer to place of living or workplace	285 (21.1)	Yes	610 (45.1)
	I do not know	96 (7.1)	No	234 (17.3)
	Responsibilities of FP should include		How many times is it possible to change your FP annually?	
	Preventive care	2 (0.1)	0 time	4 (0.3)
	Medical care	743 (55)	1 time	216 (16)
	Both preventive and medical cares	65 (4.8)	2 times	136 (10.1)
	I do not know	208 (15.4)	≥3 times	59 (4.4)
			I don't know	11 (0.9)
	FP working time in nonholidays may be at		In the absence of your FP. Where should you refer if have any need?	
	Afternoon	3 (0.2)	I will refer to substituted FP	139 (10.3)
	Both morning and afternoon	440 (32.5)	Other answers	50 (3.7)
	I do not know	874 (64.7)	No	1111 (82.2)
	FP working time in holidays may be at		What is the phone number of FP handing unit	
	Morning	1 (0.1)	Correct	27 (2)
	Afternoon	1 (0.1)	Incorrect	4 (0.3)
	Both morning and afternoon	116 (8.6)	I do not know	1118 (82.7)
	I do not know	1200 (88.7)		
Practice	Did you become sick during the previous year?		How far is your FP office from your home?	
	Yes	1079 (79.8)	<1 km	932 (68.9)
	No	213 (15.8)	>1 km	336 (24.9)
	If you got sick during the previous year, how many times was it?		I don't know	48 (3.5)
	Mean±SD	4.5±4.8	Did you have any phone counseling with your FP during the previous year?	
	Median	3	Yes	66 (4.9)
	How many times did you refer to your FP during the previous year?		No	1203 (89)
	Mean±SD	4.3±5.0	No answer	47 (3.5)
	Median	3		
	How many times did you refer to physicians, who were outside of FP program, during the previous year?			
	Mean±SD	1.5±2.8		
	Median	0		

*FP=Family physician, SD=Standard deviation

a low level of knowledge about UFPP and knowledge was correlated positively with being under the coverage of FPP and being covered by one of the main insurance systems.[11] In our study, the level of practice was nearly half in people who were under the coverage supplemental insurance. It may be due to a kind of self-assurance about financial supportive care by supplemental insurance in the first group and lack of need to FPP. Honarvar *et al*. in their study found that 74%

Table 3: Multivariable logistic regression model for the knowledge and practice of people toward urban family physician program in Fars province of Iran

	Item	ß	OR*	95% CI	*P*
knowledge	Supplementary Insurance	0.93	2.5	1.6-3.9	<0.001
	Gender	0.66	1.9	1.2-2.9	0.003
	Education (>12 years)	0.53	1.7	1.1-2.5	0.01
	Age	−0.01	0.98	0.97-1	0.11
	Job status	−0.37	0.96	0.62-1.4	0.86
Practice	Supplementary insurance	−0.5	0.59	0.4-0.8	0.005
	Age	0.007	0.99	0.98-1	0.15

*OR Compares group with acceptable level of knowledge and practice with nonacceptable counterpart. CI: Confidence interval, OR: Odds ratio

of participants had poor performance toward UFFP, and this index was correlated positively with being under coverage of this program and having higher than 1000$ monthly income.[11] In our study, we found that practice and knowledge of people toward UFPP had no significant correlation with each other. This finding is in line with some studies that mentioned more knowledge did not necessarily cause a better performance in FPP.[11-13] These results show that strategies for increasing people's level of knowledge toward UFFP should be revised and complemented by an improved level of performance to achieve the goals of this program. As a limitation, we did not have the baseline level of knowledge and practice of people at the beginning of UFPP. However, the findings of this study can be the baseline for the future studies. We also measured the knowledge and practice of one person in every house and do not know about the knowledge and practice of other households. Instability of Urban family physician (UFP) regulations and guideline prohibited us from having a longtime applicable questionnaire. Moreover, it is recommended to conduct another study to show the causes of visiting physicians out of UFFP by those who are already under the coverage of UFPP.

Conclusions

UFFP of Iran is in infantile stage. Coverage has reached to an acceptable level, but achievement of targets needs a multidimensional and comprehensive approach in different aspects. As one of the priorities, paying attention to increasing knowledge and practice of people toward this program should be regarded, while the strategies that have been used so should be revised and changed according to observed weaknesses.

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Conflicts of interest

There are no conflicts of interest.

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Knowledge and Practice of People toward their Rights in Urban Family Physician Program: A Population-Based Study in Shiraz, Southern Iran

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Knowledge and Practice of People toward their Rights in Urban Family Physician Program: A Population-Based Study in Shiraz, Southern Iran

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ABSTRACT

Background: Urban family physician program has been launched as a pilot in Fars and Mazandaran provinces of Iran since 2012. Attitudes of policy makers and people toward urban family physician program have become challenging. This study shows what people know and practice toward this program.

Methods: This cross-sectional population-based study was conducted by a multistage randomized sampling in Shiraz, Southern Iran. Knowledge and practice of adults toward urban family physician program were queried through filing the questionnaires. Single and multiple variable analyzes of data were performed.

Results: Participation rate was 1257 of 1382 (90.9%), and the mean age of the respondents was 38.1 ± 13.2 years. Of 1257, 634 (50.4%) were men and 882 (70.2%) were married. Peoples' total knowledge toward urban family physician program was 5 ± 2.7 of 19, showed that 1121 (89.2%) had a low level of knowledge. This was correlated positively and in order to being under coverage of this program ($P < 0.001$), being under coverage of one of the main insurance systems ($P = 0.04$) and being married ($P = 0.002$). The mean score of people's practice toward the program was 2.3 ± 0.9 of total score 7, showed that 942 (74%) had poor performance, and it was correlated positively and in order to being under coverage of this program ($P < 0.001$) and having higher than 1000$ monthly income ($P = 0.004$). Correlation of people's knowledge and practice toward the program was 24%.

Conclusions: Current evidences show a low level of knowledge, poor practice and weak correlation of knowledge-practice of people toward urban family physician program.

Keywords: Family physician program, knowledge, people, population, practice, right

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INTRODUCTION

Iran by a population of 78 million, 30 provinces, 400 districts and more than 65,000 villages comprises of a 65% of the population that are living in urban areas.

According to the 4th 5-year national development plan the family physician reform should be extended to the

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whole country.[1,2] Therefore, family physician program was launched for the first time in 2005 in rural areas and cities with a population below 20,000.[3] After that and toward extension of this program in urban areas, two provinces of Fars, in the south of Iran with a population around 4.4 million, and Mazandaran, in the North of Iran with an approximate population of 3 million, were selected for pilot this program from 8th of July 2012.

Similar to any other project, family physician program has its advantage and disadvantages which have to be evaluated in order to get an optimum result.[4,5]

This study as the first population-based study in this issue, aimed to measure the knowledge and practice of people lives in Shiraz toward family physician program to present an evidenced-based feedback to national and regional policy makers to improve planning and management of this program.

METHODS

This cross-sectional, questionnaire-based study was conducted from October to December 2014 in Shiraz, South of the Iran. The 1.5 million population of Shiraz is distributed in seven main postal zones. The sample size was calculated as 1382, supposed level of knowledge of people toward family physician program as 50%, dropout rate of 20%, design effect of 3, 5% precision level and a confidence level of 95%. Multistage randomized and proportional to size sampling was used. In each address, one person who was at least 18 years and was a resident at Shiraz for at least 2 years was asked to fill the questionnaire. The coded anonymous questionnaire comprised of a brief introductory paragraph about title, aims identification and phone call number of the executor of this study, followed by consent form that emphasized on voluntary participation and keeping confidentiality. They asked about their demographic and socioeconomic information including age, gender, level of education, marital status, job status, position in the family (as breadwinner of family or other family member), number of family members and monthly income. Being under the coverage of main and supplementary insurance systems and also family physician program was queried. The questionnaire contained questions about knowledge and items about practice of people regarding urban family physician program. In the knowledge section, participants were asked about choosing and changing family physician, family physician addresses, tasks of family physician, work time of family physician in holidays and nonholidays, address of reference and proper action in cases of having complaints or need to more information, electronic record form, referral form and visit-fee. In the practice section, reference to family physician and nonfamily physician, waiting time in the family physician's waiting room, phone counseling with family physician, average of payment upon each referral to family physician, having problem in obtaining prescribed drugs by family physician, having problem in accessing the specialist family physician and being interviewed and examined completely by family physician in each visit were queried. The questionnaire was validated by two experts in family physician program and its reliability according to Cronbach's alpha was calculated as 0.64 through pilot testing of the questionnaire. All data were entered into SPSS version 20 software (SPSS, Chicago, IL, USA). The accuracy of data entry was ensured by randomly selecting and checking completed questionnaires against their corresponding data in the SPSS software. Chi-squared, *t*-tests, Pearson correlation and stepwise linear regression model were used. $P < 0.05$ were considered significant.

Ethics statement

Voluntary participation in this study, designing of an anonymous questionnaire, possibility of access to executives of this study via two exclusive phone lines and keeping confidentiality in all aspects of research were some ethical aspects that were applied. Furthermore, the research protocol as described here was approved by the Ethics Committee of the Health Policy Research Center affiliated with Shiraz University of Medical Sciences.

RESULTS

Participation rate of participants was 1257 of 1382 (90.9%) and 997 (79.3%) filled the questionnaire at home addresses [Table 1]. Mean age of participants was 38.1 ± 13.2 years and of total 1257, 634 (50.4%) were men, 882 (70.2%) were married and 474 (37.7%) had associate or bachelor degree of education [Table 1].

Six hundred seventeen (49.1%) had job with mean income 1000$/month [Table 1]. The mean family member was 3.9 ± 1.5 and 539 (42.9%) were breadwinners of their families. One thousand hundred nineteen (89%) and 479 (38.1%) were under the coverage of one of the main and supplementary insurance systems respectively [Table 1].

One thousand fifty-eight (84.1%) of respondents and 1012 (80.5%) of their families members were under the coverage of urban family physician program [Table 1].

Peoples' total knowledge toward urban family physician program was 5 ± 2.7 of 19, showed that 1121 (89.2%) had a low level of knowledge [Table 2].

Of total, 879 (69.9%) of people knew about family physician choosing rules but 880 (69.9%) did not know that, it is possible to change their family physician

Table 1: Social and demographic characteristics of participants in the population-based study aimed to determine correlates of knowledge and practice toward urban family physician program in Shiraz, Southern Iran (*n*=1257)

Characteristics	Amount or *n* (%) of total	Characteristics	Amount or *n* (%) of total
Age (year)		Median	4
Mean±SD	38.1±13.2	Minimum	0
Median	35	Maximum	13
Minimum-maximum	18–90	95% CI	3.83±4
95% CI	37.4±38.9	Position of respondent in family	
Gender		Breadwinner	539 (42.9)
Male	634 (50.4)	Other family member	651 (51.8)
Female	540 (43)	Living alone	32 (2.5)
χ^{2*} (*P* value)	7.5 (0.006)	χ^{2*} (*P* value)	534.1 (<0.001)
Marital status		Type of main insurance coverage	
Single	295 (23.5)	Social security	764 (60.8)
Married	882 (70.2)	Iran health	262 (20.8)
Divorced	26 (2.1)	Ministry of defense	47 (3.7)
Widowed	25 (2)	Others	46 (3.7)
χ^{2*} (*P* value)	1593.6 (<0.001)	No insurance	108 (8.6)
Education		χ^{2*} (*P* value)	1496.4 (<0.001)
Illiterate	34 (2.7)	Supplementary insurance coverage	
Primary school	92 (7.3)	Yes	479 (38.1)
Secondary school	167 (13.3)	No	743 (59.1)
High school	402 (32)	χ^{2*} (*P* value)	57 (<0.001)
Associate or Bachelor degree	474 (37.7)	Place of inquiry	
Master or Ph.D. degree	55 (4.4)	Home	997 (79.3)
χ^{2*} (*P* value)	868.2 (<0.001)	Work place	193 (15.4)
Job status		χ^{2*} (*P* value)	543.2 (<0.001)
Self-employed	405 (32.2)	Family physician coverage	
Employed	212 (16.9)	Yes	1058 (84.1)
Jobless†	514 (40.9)	No	131 (10.4)
χ^{2*} (*P* value)	124 (<0.001)	Unclear	68 (5.4)
Income per month ($)		χ^{2*} (*P* value)	1159.1 (<0.001)
Mean±SD	1065.4±1232.7	Family physician coverage of family's members	
Median	800	Yes	1012 (80.5)
Minimum-maximum	0–20,000	No	165 (13.1)
95% CI	961±1169	Un-clear	80 (6.3)
Family size		χ^{2*} (*P* value)	2809.8 (<0.001)
Mean±SD	3.9±1.5		

*Chi-squared test, †Including homemakers, students, soldiers. SD=Standard deviation, CI=Confidence interval

and 59 (4.6%) stated that family physicians should present both preventive and medical services to their clients. Four hundred seventy-fours (37.7%) knew about their family physicians' substitutes and 58 (4.6%) were informed about where they should refer in the absence of their family physician. Three hundred and fifty-three (28%) and 2 (0.1%) knew correctly about how much they should pay to general and specialist family physician in each visit, respectively. Of 1257, 22 (1.8%) knew that where they should refer if need any information or have any complaint about family physician program while 1173 (93.2%) did not know or could not correctly tell the 4 digits phone number of unit responding to complaints about family physician program. A few of people were informed about referral form (233; 18.5%), about what they should do with filled referral forms (154; 12.3%) and about electronic health record (11; 0.8%). Family physician office distance to home was less that 1 km in 538 (42.8%) of the responders [Table 2].

Univariate analysis showed that knowledge toward family physician program was lower in younger than 30 and older than 60 years people, in males, in singles, in whom with <8 years of education, in whom that were not under

Table 2: Knowledge of people toward urban family physician program in Shiraz, southern Iran (*n*=1257)

Question	*n* (%)	χ^2 (*P* value)	Question	*n* (%)	χ^2 (*P* value)
Family physician should be chosen by			Do you know about referral form?		
Family breadwinner	665 (52.9)	585 (<0.001)	Yes-completely	233 (18.5)	1019.5 (<0.001)
Every person of family for him/herself	199 (15.8)		Yes-incompletely	78 (6.2)	
Health system	97 (7.7)		No	944 (75)	
I do not know	296 (23.5)		Do you know about electronic health record?		
Address of chosen family physician is based on			Yes-completely	11 (0.8)	2407.1 (<0.001)
Proximity to place of living	879 (69.9)	1407.9 (<0.001)	Yes-incompletely	7 (5.5)	
Proximity to workplace	52 (4.1)		No	1239 (98.5)	
It is no matter to be closer to place of living or work place	96 (7.6)		Filling the information record in the family physician office should be done by		
I do not know	230 (18.2)		Family physician	565 (44.9)	200 (<0.001)
Responsibilities of family physician include			Family physician crews	185 (14.7)	
Preventive care	17 (1.3)	1792.1 (<0.001)	I do not know	507 (40.3)	
Medical care	232 (18.4)		What must you do with filled referral form by specialists family physicians?		
Both preventive and medical cares	59 (4.6)		Returning it to my family physician	154 (12.3)	1225.1 (<0.001)
I do not know	949 (75.4)		Other answers	99 (7.9)	
Family physician working time in nonholidays may be at			I do not know	1002 (79.7)	
Morning	57 (4.5)	1011.2 (<0.001)	Is it possible legally to change your family physician?		
Afternoon	43 (3.4)		Yes	377 (29.9)	206.9 (<0.001)
Both morning and afternoon	717 (57)		No	235 (18.6)	
I do not know	437 (34.7)		I do not know	645 (51.3)	
Family physician working time in holidays may be at			How many times is it possible to change your family physician annually?		
Morning	156 (12.4)	679.8 (<0.001)	1 time	96 (7.6)	2186.7 (<0.001)
Afternoon	63 (5)		2 times	93 (7.4)	
Both morning and afternoon	372 (29.5)		≥3 times	37 (2.9)	
I do not know	663 (52.7)		No answer	1031 (82)	
In the absence of your family physician, where should you refer if have any need?			How far is your family physician office from your home?		
I will refer to substituted family physician	58 (4.6)	1169.5 (<0.001)	<1 km	538 (42.8)	220.7 (<0.001)
Other answers	379 (30.1)		More than 1 km	546 (43.4)	
No	1234 (98.2)		I do not know	170 (13.5)	
Do you know about your substituted family physician?			Do you know how much should you pay in every general family physician visit?		
Yes	474 (37.7)	75.9 (<0.001)	Yes	408 (32.5)	154.7 (<0.001)
No	783 (62.3)		No	849 (67.5)	
What is the phone number of family physician's handling unit			Do you know how much should you pay in every specialist family physician visit?		
Correct	84 (6.6)	1843 (<0.001)	Yes	117 (9.3)	832.5 (<0.001)
Incorrect	37 (2.9)		No	1140 (90.6)	
I do not know	1136 (90.3)				

coverage of main or supplementary insurance systems and in whom were not under the coverage of family physician program [Table 3].

Stepwise linear regression model showed that peoples' total knowledge toward their rights in urban family physician program by adjusted R^2 0.18 and constant ß = 8.5 (95% confidence interval [CI] = 7.6–9.4, P < 0.001) was in order correlated to being under coverage of urban family physician program (ß = 2, 95% CI = 1.4–2.5, P < 0.001), being other family member (s) under the coverage of urban family physician program (ß =1.1,95% CI = 0.7–1.6, P < 0.001), being under the

Table 3: Single variable analysis of correlates of knowledge and practice of people toward urban family physician program in Shiraz south of Iran

Characteristic	Knowledge					Practice					
	Mean±SD*	Statistic (*P* value)	Characteristics	Mean±SD	Statistic (*P* value)	Characteristic	Mean±SD†	Statistic (*P* value)	Characteristics	Mean±SD	Statistic (*P* value)
Age (years)			Family size			Age (years)			Family size		
18-29	4.8±2.7	$F=4$, $P=0.003$	≤2	4.7±2.7	$F=0.5$, $P=0.8$	18-29	2.4±0.9	$F=2$, $P=0.05$	≤2	2.2±1	$F=0.5$, $P=0.7$
30-39	5.3±2.6		3-4	5.3±2.6		30-39	2.3±0.9		3-4	2.4±0.9	
40-49	5±2.7		≥5	4.8±2.7		40-49	2.2±0.9		≥5	2.2±0.9	
50-59	5.5±2.8		Position of respondent in the family			50-59	2.4±1		Position of respondent in the family		
≥60	4.6±2.5		Bread winner	5±2.7	$t=0.09$, $P=0.9$	60≤	2.1±1		Bread winner	2.3±1	$t=-1.4$, $P=0.1$
Gender			Other family member	5±2.7		Gender			Other family member	2.3±0.9	
Male	4.9±2.7	$t=-2$, $P=0.03$	Type of main insurance coverage			Male	2.2±0.9	$t=-2$, $P=0.04$	Type of main insurance coverage		
Female	5.2±2.7		Under insurance coverage	5.2±2.6	$t=7.4$, $P<0.001$	Female	2.4±0.9		Under insurance coverage	2.4±0.9	$t=7.1$, $P<0.001$
Marital status			No insurance	3.2±2.6		Marital status			No insurance	1.5±1	
Single	4.4±2.8	$t=-4.9$, $P<0.001$	Supplementary insurance coverage			Single	2.3±0.9	$t=-0.7$, $P=0.4$	Supplementary insurance coverage		
Married	5.3±2.6		Yes	5.2±2.6	$t=2$, $P<0.04$	Married	2.3±0.9		Yes	2.3±0.8	$t=1.1$, $P=0.2$
Education			No	4.9±2.8		Education			No	2.3±1	
≤8 years	4.5±2.6	$F=7.2$, $P=0.001$	Place of inquery			≤8 years	2.3±1	$F=0.8$, $P=0.5$	Place of inquiry		
9-12 years	5.2±2.7		At home	5.1±2.6	$t=2.8$, $P=0.005$	9–12 years	2.3±0.9		At home	2.3±0.9	$t=1.3$, $P=0.1$
>12 years	5.1±2.7		Work place	4.5±3		>12 years	2.3±0.9		Work place	2.2±1	
Job status			Being under coverage of family physician program			Job status			Being under coverage of family physician program		
Having job	5±2.7	$t=0.1$, $P=0.8$	Yes	5.5±2.5	$t=15.8$, $P<0.001$	Having job	2.3±0.9	$t=-1.2$, $P=0.2$	Yes	2.6±0.7	$t=29.9$, $P<0.001$
Jobless	5±2.6		No	2.4±2.4		Jobless	2.3±0.9		No	0.7±0.6	
Income per month ($)			Being of family member under coverage of family physician program			Income per month ($)			Being of family member under coverage of family physician program		
≤1000	5.1±2.7	$t=-0.7$, $P=0.4$	Yes	5.5±2.5	$t=14.5$, $P<0.001$	≤1000	2.2±0.9	$t=-1.2$, $P=0.2$	Yes	2.6±0.7	$t=25.9$, $P<0.001$
>1000	5.3±3		No	2.9±2.5		>1000	2.4±1.1		No	1±0.7	

*Of total score 19, †Of total score 7. SD=Standard deviation

coverage of one of the main insurance systems (ß =0.5, 95% CI = 0.01–1, *P* = 0.04) and being married (ß =0.4, 95% CI = 0.1–0.8, *P* = 0.002).

Peoples' practice toward urban family physician program has gained mean 2.3 ± 0.9 of total score 7 in this study, showed that 942 (74%) had poor performance while 86 (6.8%) had moderate and 3 (0.2%) had expected level of practice. Of total 1257, 882 (70.2%) stated that they became sick during previous year of this study and 700 (55.6%) referred to their family physician, showing 700 of 882 (79.3%) referral rate to family physicians. Eighty (6.4%) had phone counseling with their family physician in the similar period [Table 4]. Mean number of references to family physicians in whom that were under the coverage of family physician program was 2.4 ± 3.6 in the previous year of this study while mean number of references to nonfamily physicians in whom that were not under the coverage of family physician program was 2.4 ± 4.3 in the same year (*P* = 0.3) [Table 4]. One hundred seventy-eight (14.2%) had changed their family physicians during last year of this study and 152 (20.6%) paid higher than legally approved visit-fee to their family physician. Two hundred twelve (16.9%) had problems in providing drugs that were prescribed by their family physicians and 342 (27.2%) had problems in access to specialist family physician [Table 4]. Correlation of

Table 4: Practice and problems of people toward urban family physician program in Shiraz, Southern Iran (*n*=1257)

Question	*n* (%)	χ^2 (*P* value)	Question	*n* (%)	χ^2 (*P* value)
Did you become sick during the previous year?			What did you do with referral forms that filled by specialists family physicians?		
Yes	882 (70.2)	258.1	I returned them to my family physician	95 (7.6)	1392.7
No	324 (25.8)	(<0.001)	Other answers	119 (9.5)	(<0.001)
If you got sick during the previous year, how many times was it?			I do not know	1042 (82.9)	
Mean±SD	3.1±4	372	Have you had any phone counseling with your family physician during the previous year?		
Median	2	(<0.001)	Yes	80 (6.4)	1320.8
1-4 times	408 (53)		No	1025 (81.5)	(<0.001)
5-8	115 (14.9)		No answer	152 (12.1)	
≥9	54 (7)		Did you change your family physician during the previous year?		
How many times did you refer to your family physician during the previous year?			Yes	178 (14.2)	954.5 (<0.001)
Mean±SD	2.2±3.8	499.1	No	935 (74.4)	
Median	1	(<0.001)	No answer	144 (11.5)	
None	419 (41.4)		Compared to the legal limit, how much was the mean of your payments in referrals that you had to your family physician during the previous year?		
1-4 times	440 (43.5)		Lower	222 (30.1)	94
5-8	98 (9.7)		Equal	363 (49.3)	(<0.001)
≥9	54 (5.3)		Higher	152 (20.6)	
How many times did you refer to physicians, who were outside of family physician program, during the previous year?			Have you had any problem in providing the prescribed drugs by your family physician?		
Mean±SD	2.2±3.9	508	Yes	212 (16.9)	1037.5
Median	1	(<0.001)	No	804 (64)	(<0.001)
None	498 (48.3)		I do not need to any drug	122 (9.7)	
1-4 times	365 (35.4)		No answer	118 (9.4)	
5-8	110 (10.7)		Have you had any problem in access to specialist family physician?		
≥9	58 (5.6)		Yes	342 (27.2)	301
What did you do with referral forms that filled by specialists family physicians?			No	697 (55.4)	(<0.001)
I returned them to my family physician	95 (7.6)	1392.7	No answer	213 (16.9)	
Other answers	119 (9.5)	(<0.001)			
I do not know	1042 (82.9)				

SD=Standard deviation

people's knowledge and practice toward urban family physician program was 24%.

Univariate analysis showed that practice toward family physician program was lower in men, in whom which were not under the coverage of main insurance systems and in whom that were not covered by family physician program [Table 3].

Stepwise linear regression model showed that total practice of people toward their rights in urban family physician program by adjusted R square 0.54 and constant (ß = 4.6, 95% CI = 4.3–4.8, $P < 0.001$) was in order correlated to being under coverage of urban family physician program (ß = 1.2, 95% CI = 0.9–1.4, $P < 0.001$), being other family members under coverage of urban family physician program (ß = 0.9, 95% CI = 0.7–1.1, $P < 0.001$) and having higher than 1000$ income monthly (ß = 0.2, 95% CI = 0.05–0.3, $P = 0.008$).

DISCUSSION

After 9 years of establishment and modest achievements in rural family physician program in Iran, thought and policy of extension of this system to urban settings has been dominating in recent years as evidenced in health sector reform of this country. Therefore, as the pilot, this national project was launched in 2012 in two provinces of Iran, including 4.5 million populated Fars provinces in the south of the Iran. In Shiraz, the capital city of Fars province, with a population 1.5 million, 650 general family physicians and 300 specialist family physician were included in the family physician program.

Considering that urban family physician program is a complex and multi-disciplinary structure, it is necessary to monitoring its performance periodically from different aspects.[6,7] One of the important aspects of the monitoring could be regarded as the assessment of the trend of knowledge and practice of the people toward this program and before and after implemented interventions. Therefore, after 2.5 years of starting this program and as the first official report, this study was conducted to evaluate the knowledge and practice of the people toward family physician program. Present study demonstrated that the knowledge of the people about their rights in this program is generally low. The results also showed that only few people knew about what to do when they had any question or any complain about the program. This should be considered as an important obstacle toward improvement of the program since the policy makers may hardly get access to the voice of the people.[8,9] Furthermore, most of the people did not know what to do when their family physicians are absent and how to find an alternative one. This leads to ignore or delay to visit by the family physician and gradually results in mistrust to and outgoing from the program.[10,11] The results of the present study revealed that the lack of knowledge was more common among those who were not under coverage of any health insurance system and also among single people. Furthermore, results remarked that the practice of the people toward urban family physician program was so weak. A significant portion of the people had problems with providing drugs that were prescribed by their family physicians and also to access specialist family physicians. Furthermore, about one fifth of the people complained that they had paid higher that legally approved visiting fees. This matter could be solved if people get more informed about their rights meanwhile teach them how send their feed backs and complains.[12,13] However, establishment of an effective and continuous supervision system may also come to help in this regard. Another achievement of this survey was that, poor practice is common among those with lower outcome. We found that low knowledge toward this program was not related to level of income, therefore above result pointed that low economics may suffer from weaker infrastructures of family physician system in their areas although other studies are needed to prove such claim. Another finding was that practice of people toward urban family physician system had a poor correlation with their knowledge as it was endorsed in previous studies with emphasis on that educating alone may not lead into a better good level of practice.[14,15] Hence, strengthening the software and hardware resources are mandatory for the sake of good performance of this system. Present study marked that the reference rate of the patients to family physicians is high in the current system. However, this was not so different from those who were not under coverage of family physician and were referred to out of the family physician system doctors. There are few studies that demonstrate that the number of unnecessary patients' referrals to pharmacies, laboratories, and radiology centers has been increased as a result of running family physician program, it is needed to perform other studies about the cost effectiveness of the urban family physician program in our setting, as well as the efficiency of monitoring-evaluation system.[16,17]

Saying about limitations in this study, it should be clear that despite our effort to design the questionnaire simple and user friendly and also providing prepaid envelope for resending the filled questionnaires, approximately 10% of the people did not answer the questionnaire. It was half of dropout rate of 20% that we assumed for estimation of sample size and we also noticed that the nonrespondents did not show statistically difference among different postareas, therefore it is unlikely that it could have influence on the results and their representativeness. Another point was that this study was conducted in Shiraz, the most populated city of the Fars province that does not have exactly the same situation as the small cities of this province. However, by choosing participants

randomly and from different socioeconomic classes, the possible discrepancy may be faded.

CONCLUSIONS

This study showed that the knowledge and practice of the people toward family physician program are weak. Therefore, continuous education and effective training of people about their rights in this program could lead to a better performance of them and come into play for future outcome of this program. Howbeit, any intervention in this system needs a multidimensional plan. Last but not least, lessons from this project could help policymakers at national level before any decision to extension this program to whole the country or even may be, followed by neighboring and regional countries that look to Iran as a hub for regional health sector reforms.

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All authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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Family physicians in Iran: success despite challenges

laboratories that meet the biosafety level required for culture. Unless researchers adequately address the speciation of *Mycobacterium tuberculosis*, MODS should be implemented only in laboratories with appropriate biosafety measures for handling positive cultures of the tubercle bacilli in liquid media.

We declare that we have no conflicts of interest.

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Authors' reply

The first point raised in Anandi Martin and colleagues' letter relates to the speed of the nitrate reductase assay (NRA) method for detecting drug resistance in tuberculosis, and questions the accuracy of the text in panel 2 of our paper. Panel 2 was a summary of WHO policies and statements on tuberculosis diagnostics. According to the WHO policy statement on non-commercial culture and drug-susceptibility testing methods for screening of patients at risk of multidrug-resistant tuberculosis,[1] "NRA can be used as a direct test on smear-positive sputum specimens or as an indirect test on *M tuberculosis* isolates grown from conventional solid culture. Indirect testing using NRA is therefore not faster than conventional phenotypic DST using solid media."

The second issue raised by Martin and colleagues was whether there were special considerations for training, standardisation, optimisation, and quality assurance for non-commercial compared with commercial products. Undoubtedly there are. Although adequate training is crucial irrespective of what type of diagnostic is being used, well manufactured commercial assays (under ISO:13485 or similar standard) will have been standardised, optimised, and quality controlled by the manufacturer. The quality control process would include lot release testing, which is widely accepted as replacing the need for routine local media quality control by professional associations in developed countries.[2]

The issue with non-commercial culture methods is not whether they *can* perform well, but how they will perform well if use b ecomes widely disseminated, including into laboratories with limited human resource capacity. This potential for variability in performance of non-commercial assays could be compounded by the individual selection of assay components (antibiotics, plastics, media preparation reagents) for procurement by laboratories. These concerns apply not only to NRA, but to other methods such as colorimetric redox indicator (CRI), microscopic-observation drug susceptibility (MODS), and thin-layer agar.[3] As regards biosafety, the WHO policy recommends that NRA, CRI, and MODS are suitable for use at reference laboratory level, under strict laboratory protocols.[1]

In summary, although they might be substantially less expensive, one disadvantage of non-commercial culture systems highlighted by the limited WHO policy recommendations is that they transfer all the requirements for standardisation and quality assurance onto local laboratories, which are unfortunately often poorly equipped to do these tasks. Indeed, the WHO policy emphasises that "non-commercial methods are prone to errors related to lack of standardization and due to local variations in methodology."[1] This point serves to further emphasise the crucial need for strengthening laboratory capacity in countries with a high burden of tuberculosis.[4]

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Family physicians in Iran: success despite challenges

Although Keivan Shalileh and Abolfazl Mahdanian correctly mention the problems of being a family physician in Iran (Aug 14, p 515),[1] the current achievements of the Family Physician Project should not be overlooked. The number of physicians in rural areas (those with <20 000 inhabitants) has increased from less than 2000 in 2005 to more than 6000 in 2006, just 1 year after implementation of this programme,

and their income has increased from 1·5 million Iranian rials (US$150) to 15 million ($1500) per month.[2]

Nearly 50% of health centres now have acceptable residential places for family physicians, and health-care access has strikingly improved in rural areas; for the first time after reaching a plateau in neonatal and maternal mortality since the 1990s, up to a 35% reduction in both indices has been achieved in some remote rural areas.[2]

One main issue in Iran's family physician programme is that physicians are not trained for the responsibility of working in rural areas. To overcome this problem, a short mandatory course is arranged at the beginning of the contract, with a continuous professional development programme recently expanded by means of internet-based virtual learning. Arrangements have been made for those working as family physicians for at least 3 years to enter specialty training.

However, financing is still a challenge to this programme. The newly established Ministry of Welfare was assigned to establish the infrastructure and payments for the family physician programme instead of the Ministry of Health, and the programme encountered some major obstacles in the beginning. The situation has improved since, but it is far from ideal.

Recently, parliament has passed legislation to expand the programme to cities with fewer than 100 000 inhabitants. We hope that the lessons learned from the previous stage will be applied to the new one.

We declare that we have no conflicts of interest.

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Keivan Shalileh and Abolfazl Mahdanian[1] depict the status of family physicians in Iran, which requires improvement but is also an immense success in light of the current health-care picture in Iran. Many of the problems are not limited to physicians working in rural areas and are a reflection of the overall limitations of resource allocation and policy-making to the extent that some authorities consider it to be crisis management.[2]

Among the preset goals, the Family Physician Project was set up to bring health care into deprived areas, and monetary bonuses were added to compensate for the drawbacks of living and working in these areas. At some centres, the capitation method of payment (ie, that not related to performance) is thrice the base payment of a professor in the best universities.[3] Most general practitioners get into the project only as part of their obligatory 2-year public service. For male physicians who do their military service concomitantly with their public obligations, working as a family physician will increase the capitation income 40-fold compared with military physicians serving in the same area. We should add that other bonuses and an additional pay-for-performance system of payment are in place at some centres. These incentives make the programme very competitive and at times recommendation letters and connections are sought to get in.

Another challenge to be tackled by the authorities is the huge gap between the income of specialists and that of general practitioners. This disparity still makes residency programmes more attractive than the Family Physician Project. Still, many family physicians save their incomes as support for later residency life or so that they can leave the country and enjoy plenty of free time getting ready for their future professional career.[4]

We declare that we have no conflicts of interest.

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Membership exams overseas in light of new global code of practice

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We endorse the importance of the issues raised in the Correspondence from Kate Mandeville and Delan Devakumar (Aug 21, p 594),[1] but reject their conclusion. The Royal College of Paediatrics and Child Health (RCPCH) collaborates with overseas colleagues in 20 centres, holding our clinical examination in six countries. All our work overseas is part of a joint initiative and can only succeed if shared by both agencies: the RCPCH and our partner organisation in the host country.

Clearly MRCPCH or other examinations must complement assessment in the overseas setting. Feedback offers strong support to the notion that the UK clinical examination offers focus on a patient-centred approach to clinical problem solving, a feature that naturally sits well with the high standards of knowledge