Jie Chen: promote population health and reduce health disparities through care coordination

Editor's note

Across the United States, reducing readmissions has been a concern of most hospitals, some of which have been at risk for having a higher than expected, 30-day readmission ratio for a particular physical health condition. A recent review conducted by Ms. Ivy Benjenk and Prof. Jie Chen from School of Public Health, University of Maryland has shown that care coordination between hospital and community after the discharge, which includes mental health therapy and community mental health services and educations, can significantly reduce the 30-day readmission rate (1). An integrated mental health care system, therefore, is necessary to promote care coordination and improve population health. *Journal of Hospital Management and Health Policy* (*JHMHP*) is pleased to interview Prof. Chen in regard to this recent work and her research in health care delivery system and policy (*Figure 1*).

Expert's introduction

Jie Chen currently serves as the Associate Professor of Health Services and Administration at the School of Public Health, University of Maryland, College Park, USA. Prof. Chen's research fields include health care disparities, health care delivery system and policy, behavioral health, and economic evaluation. Her work uses a multidisciplinary perspective and involves collaboration with clinical leaders, community partners, and organizational decision makers. Her research on behavioral health focuses on the integration of health care organizations to promote behavioral health of vulnerable populations.

Prof. Chen has conducted research on patient-centered medical homes, including using mixed methods to design personalized activation and empowerment strategies to engage patients and reduce health disparities (PI of the Pilot Project, 5R24HS022135-02). She is leading a project (PI, R21MH106813-01) to investigate the impact of public

Figure 1 Prof. Jie Chen.

health-integrated health care on health care access among people with mental illness and co-existing conditions.

Based on the encouraging finding of the National Institute of Mental Health (NIMH) project, Prof. Chen and her team further developed Project System-level Multidisciplinary Integration for popuLation health and Equity (SMILE) (1R01MD011523-01, Chen PI) to systematically examine care coordination practices between hospitals and communities, and evaluate their impact on hospital use for people with mental illness. An additional field of her research involves economic evaluation, including cost-effectiveness and cost-benefit analysis of community intervention and state/federal policies. She has more than 15 years of research experience developing, refining, and applying analytical methods to evaluate the impact of health policy and the health care delivery system on population health outcomes. Prof. Chen has been working closely with local health departments, hospitals, and community partners to design, develop, and evaluate care coordination interventions.

Interview

JHMHP: How do you see the current level of health care delivery system and policy in the US?

Prof. Chen: The health care delivery system has triple aims: improve health care access, quality and reduce cost. Meanwhile, "cost, access, and quality" are considered as the three-legged stool of the health care. Trade-off among these 3 components is inevitable in the short run, in my perspective. In the long run, we expect to identify practices that can achieve the triple aims simultaneously. Such practices include health care integration and care coordination. Policy initiatives of the Accountable Care Organizations and payment reforms are expected to facilitate the adoption of such practices.

JHMHP: In a recent review, your team has examined the impact of mental-health interventions on readmissions for physical conditions. What were your major findings?

Prof. Chen: Mental health care system is a typical example. The current mental health care system works in a silo. Patients face substantial barriers to access mental health care. Social stigma is another major barrier, especially among patients who are racial and ethnic minorities. Mental illness is a common condition. Over two thirds adults who have physical conditions, such as heart disease, hypertension, or diabetes, have co-existing mental illness. Under-diagnosis and -treatment are very common. Promoting mental health care can benefit mental health and physical health overall. Our systematic review shows that care coordination between hospital and community after the discharge can significantly reduce the 30-day readmission rate. Individual or group mental health therapy, and community mental health services and educations are great examples of post-discharge follow-up. Finding suggests that an integrated mental health care system is necessary to promote care coordination and improve population health.

JHMHP: What insights can these findings bring to facilitate future studies in similar areas?

Prof. Chen: Our study shows the evidence of the providing mental health prevention and services at the primary care which can drive down the huge hospital cost in the long run. Care coordination is cost effective and is highly needed. I want to note that it's not just the care coordination among health sectors. We also need care coordination across sectors, like education-, transportation-, and environment-agencies. In addition, one size can't fit all. Care coordination strategies can be designed for people with different cultural background, including race and ethnicity, immigration experience, and language preference. Such integrated system has the potential to improve health care as well as overcome the barriers from social stigma. Hence, we expect to observe improved population health and health equity in the long run.

JHMHP: You are the principal investigator of several NIH research projects at the moment. Would you introduce us to one of these projects (e.g., objective, scope, research direction and current status)?

Prof. Chen: I am the director of the Hospital And Public health interdisciPlinarY research (HAPPY) Lab. Our research lab focuses on improving multi-sector health care coordination for people with multiple chronic conditions, using a multidisciplinary perspective and involving collaboration with clinical leaders, community partners, and organizational decision makers.

I am leading a project (PI, R21MH106813-01) to investigate the impact of public health-integrated health care on health care access among people with mental illness and co-existing conditions. Based on the encouraging finding of the NIMH project, we further developed project SMILE (1R01MD011523-01, Chen PI) to systematically examine care coordination practices between hospitals and communities, and evaluate their impact on hospital use for people with mental illness. Our recent research suggests that care coordination is the most useful among the elderly African American and Latino populations with multiple chronic conditions and cognitive limitations. Such evidence motivates us to pursue this exciting study to comprehensively examine the impact of care coordination for people with a diagnosis of Alzheimer's disease and related dementia (1R56AG062315-01, Chen PI).

Let me introduce project SMILE today. The objective of the project SMILE is to examine the current state of the extent and variation in integrated care coordination between hospitals, communities, and public health agencies (hospital-community-public health) among African American and Latino patients with mental illness and how these coordination practices impact racial and ethnic disparities in health. Our primary hypothesis is that integrating hospital-community-public health can reduce racial and ethnic disparities in health care access, quality, and costs among

people with mental illness. This hypothesis is based on our preliminary studies that demonstrate that public health integration can improve patient engagement, and reduce racial and ethnic disparities in preventable hospitalization for people with mental illness. The rationale for the proposed research is that once it is known what specific coordination practices and policies are most successful for different patient populations, integration of mental and physical health care delivery systems can be designed in a more cost-effective way to target the social determinants of health and overcome the barriers from stigma and limited health care access. The resulting integration is expected to align health care delivery with public health and thereby improve population health and eliminate disparities among the mentally ill population.

JHMHP: Your work involves collaboration with clinical leaders, community partners, and organizational decision makers. What role does each of these parties play?

Prof. Chen: Our study will use a mixed methods approach to: (I) link multiple nationally representative data to construct a unique multi-level data set (individual-, hospital-, community-, and state-levels) with a wide array of possible causal factors for racial and ethnic disparities, and (II) investigate barriers and challenges in implementing system-level coordination from perspectives of racial and ethnic minority patient representatives, hospital administrators and providers, and representatives from public health agencies.

We expect to identify barriers and challenges in adopting and applying hospital care coordination that may be unobserved in the existing data sets or omitted in the literature, and aid in both the interpretation of quantitative findings and in the development of actionable solutions. Our results combining perspectives from providers and patient representatives (e.g., the end user of care coordination practices) are expected to reflect patients' and their caregivers' preferences and enhance the knowledge needed to personalize care coordination. Key informants (expert stakeholders of patient advocates, physicians, hospital administrators, and public health agencies) have been engaged to identify barriers and challenges to adopt and apply care coordination, assist with the interpretation of the findings, indicate whether the results reflect their personal experiences, and translate and disseminate the results among patient groups, local hospitals, and public health agencies.

JHMHP: What are the biggest challenges in the research of health care delivery system and policy?

Prof. Chen: Integrated data sharing infrastructure is absolutely needed to study the impact of health care integration.

JHMHP: What are the short- and long-term goals of your research in general? By what means are you going to achieve them?

Prof. Chen: Our study will identify specific combinations of care coordination practices (e.g., integrating physical and behavioral health, sharing clinical information across health sectors) and public health programs (e.g., mental health prevention interventions, transportation, public housing) that work best for minority populations with mental illness. Such results are expected to have important positive impacts: (I) because no "one size fits all model" can be universally adapted, our identified practices are expected to provide evidence on how to personalize mental health care coordination for racial and ethnic minority patients with heterogeneous preferences in mental health treatment; (II) identified system-level care coordination practices are expected to be cost-effective, which can in turn make the integration sustainable for underserved populations; (III) results will enhance innovative models of health care delivery system reform by integrating treatment of the mentally ill with other health care efforts. Our results are expected to break down longstanding silos and bridge the gap between health care providers, community-based organizations, and the public health sector delivery system, and provide evidence to reduce health disparities through care coordination across health sectors.

Improving hospital care coordination is essential to meet the growing demands for mental health care access, while controlling costs and improving quality of service delivery. The proposed project offers an unprecedented opportunity to generate substantial amounts of new evidence and insights about the impact of the hospital care coordination practices on the effective treatment and community benefit activities for racial and ethnic minority populations with mental illness. Evidence will help us to achieve our long-term goal to determine best practice approaches to structuring and sustaining the hospital-community-public health integration to promote population health and reduce health disparities.

JHMHP: As the Editorial Board Member of JHMHP, do you have any words to say to our readers/peers in your field?

Prof. Chen: I am thankful for our readers and peers. Hospitals' and systems' roles in improving population health are of growing importance. Under new policy initiatives such as the Accountable Care Organizations and reimbursement reforms, hospitals shoulder more responsibilities to promote population health and improve collaboration with community partners. I am thankful to all the contribution of our readers/peers to make this field more significant and critical.

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Footnote

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