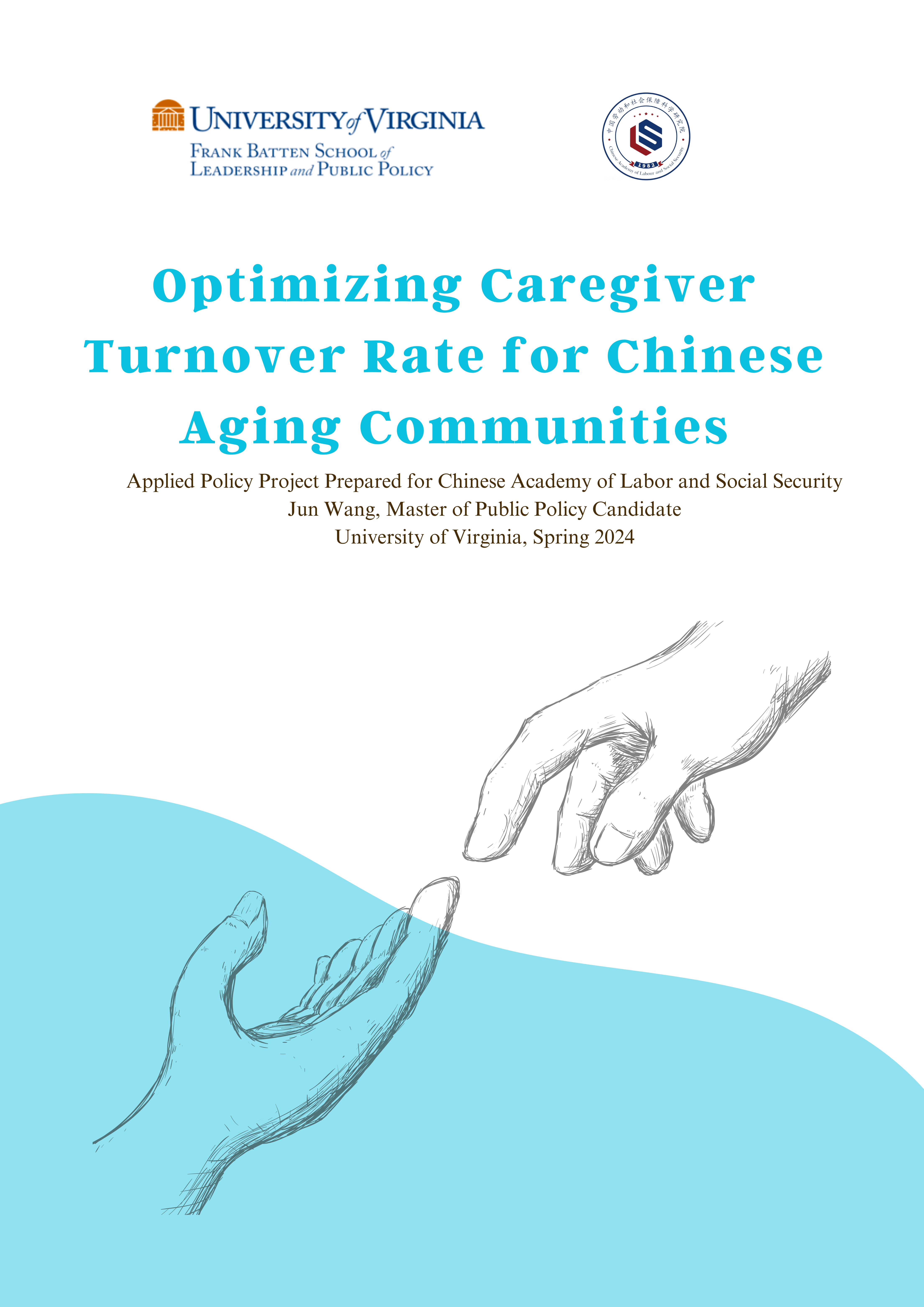
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**Acknowledgments**

I would like to express my sincere gratitude to my Professor, Lucy Bassett, whose enduring support and guidance have been invaluable throughout this APP project. Her mentorship, patience, and insightful feedback have significantly contributed to my whole APP's development. She made me a better and more professional student.

I thank my peers at the Batten School, whose advice, encouragement, and companionship have been a source of strength and inspiration. Special thanks to the Batten former therapist Anne Butz, Batten Associate Director, Kristine, and my dog, Bradley for their existence as spiritual softer during challenging times.

I am grateful to my family for their unchangeable belief in me and their constant encouragement. Their love and support have been my pillars of strength.

Finally, I thank myself for persevering through obstacles and challenges, and for hanging on to my goals and aspirations.

**Disclaimer**

The author conducted this study as part of the program of professional education at the Frank Batten School of Leadership and Public Policy, University of Virginia. This paper is submitted in partial fulfillment of the course requirements for the Master of Public Policy degree. The judgments and conclusions are solely those of the author, and are not necessarily endorsed by the Batten School, by the University of Virginia, or by any other agency.

**Honor Statement**

On my honor as a University of Virginia student, I have neither given nor received unauthorized aid on this assignment.

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# Executive Summary

China's elderly population continues to grow and is becoming a super-aging society. While healthcare services need improving, there is a corresponding increase in demand for long-term care, which stands at 39.64% (Shen et al., 2023) according to recent surveys. However, **a high caregiver turnover in aging communities in China poses a significant challenge**. It threatens the quality and stability of care while carrying broader socio-economic implications. This turnover not only impacts the well-being of the elderly but also contributes to unemployment among caregivers.

Studies suggest that unpredictable and unstable work schedules are highly correlated to caregivers' turnover rates (Bergman et al., 2022). Caregivers have to frequently adjust schedules to accommodate the increasing needs of the elderly, as they grow dependently with time, resulting in fatigue and job dissatisfaction (Ochs et al., 2009).

This report explores four alternatives to address this issue:

1) Implementing employee bonuses

2) Adopting smart scheduling software

3) Establishing a mental health support team

4) Providing online training opportunities

After a thorough analysis of cost, feasibility, and evidence of impact on caregivers, the report found **adopting smart scheduling software** is the best-performing solution.

Scheduling software leverages dynamic scheduling powered by machine learning to intelligently match caregivers with clients based on skills, preferences, and workload, with the "drag-and-drop scheduling" setting that people can arrange work shifts in one second conveniently (Aaniie, n.d.). This approach promotes a healthier work-life balance, reduces burnout, and increases job satisfaction, ultimately leading to improved caregiver retention (Vannieuwenborg et al., 2016). This alternative outperforms the others in terms of cost-effectiveness, and strong evidence suggesting a strong evidence of impact with great feasibility across China.

To implement this recommendation, a four-phase plan is proposed:

1) Client Spread the Strategy through a national seminar and media outreach

2) Managers Make the Choice by selecting the appropriate software

3) Caregiver Familiarization with the chosen platform

4) Managers Report the Results after a six-month evaluation period to the Client

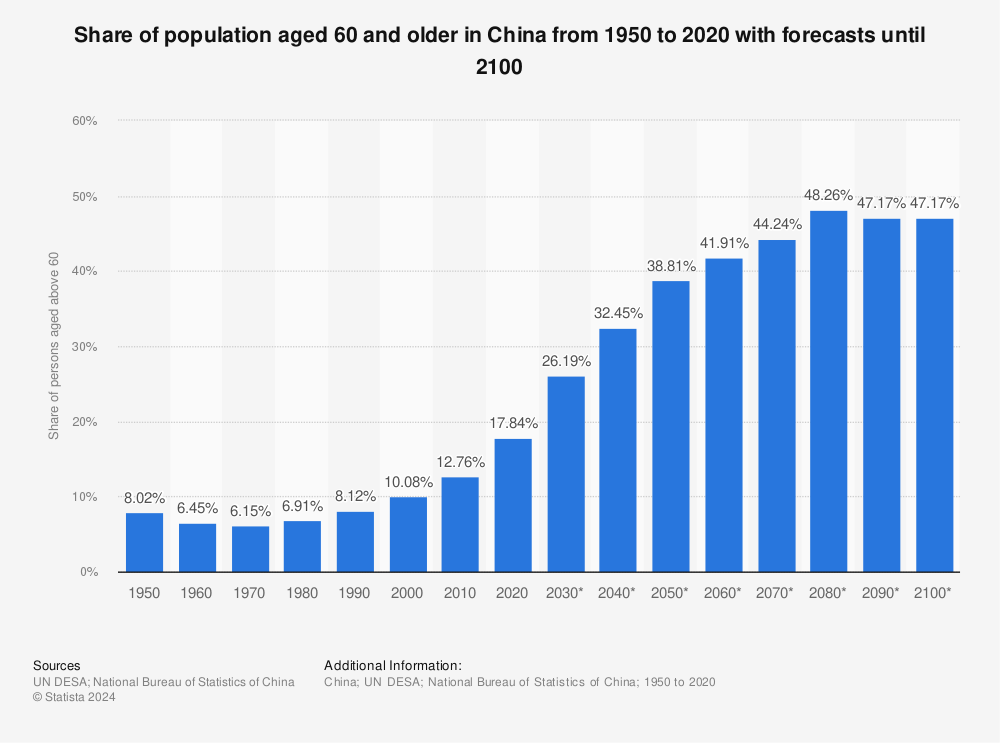
While potential challenges include data security concerns and app malfunctions, proactive measures such as prioritizing data privacy protocols and contingency plans can mitigate these risks. Regular monitoring of caregiver schedules and open communication channels will also be crucial to ensuring their well-being and job satisfaction.

In conclusion, the adoption of smart scheduling software presents a cost-effective and evidence-based solution to reduce caregiver turnover rates in aging communities across China. Through strategic implementation and ongoing support, this recommendation will drive positive change, improve the quality of care for the elderly population, and pave the way for a sustainable eldercare model aligned with China's demographic needs.

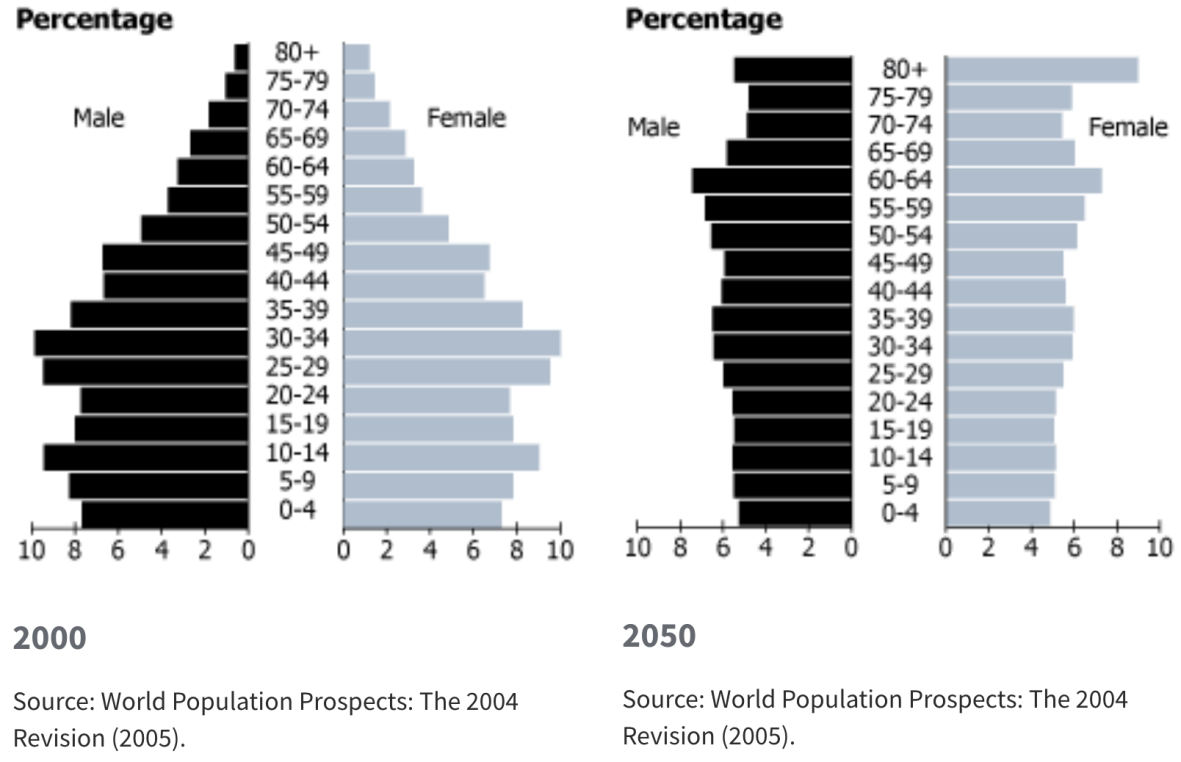
# Background

## Growing Elderly Population

The turnover rate among elderly caregivers is a core concern for aging communities worldwide, especially in China where the rapidly aging population exacerbates the problem. It's projected that by the end of 2022, China will have nearly 280 million people aged 60 or older, which is equal to nearly 20% of the total population (World Health Organization, n.d.). This indicates that the country is on track to become a super-aging society, with the percentage of people over 60 years old in China estimated to reach 32.45% by 2040, as you can see from picture 1 (World Health Organization, n.d.). To explain this trend, except for the increased life expectancy advancements in global medical technology, China's declining fertility rates have important effects. It was brought about by the one-child policy implemented from 1978 to 2016. Even when the policy ends, the preferences for smaller families have become entrenched. Nowadays, additional reasons for these preferences have been continually expanded, such as the rising cost and the heavier time pressure of raising children with the economic growth and the increase in education and employment opportunities for women (Michael, 2024). As you can see from picture 2, Chinese population pyramids shifted. Together, these factors have created a super-aging community in China.



**Picture 1**

******

**Picture 2**

## Elder Care in China

As the elderly population in China continues to expand, there is a corresponding rise in the need for elderly care services, particularly in long-term care. However, due to the existing scarcity of caregivers, the demand is further intensified by high turnover rates. To tackle this issue more effectively, the client has chosen to focus our research on China's for-profit aging communities, which is the current leading, transformative, and feasible power in the silver economy and its elderly service in developing countries (Ma & Shen, 2023). This research aims to gain a better understanding of the challenges that cause caregivers to leave their communities and develop effective solutions.

## The Evolution of Elder Care in China

The narrative of elder care has been shaped by both global and localized trends throughout history. Notably, China, with the world's largest population, has been a latecomer in terms of the attention paid to elderly care. Until the 1980s, institutional elder care was virtually nonexistent, with the few facilities in existence being social welfare institutions run by the government. This dearth of elder care infrastructure meant that China had to construct an elder care system essentially from scratch within a few decades (Krings, et al., 2022). In recent years, finally recognizing the pressing needs posed by an aging population, the Chinese government has implemented a multi-dimensional geriatric care system that prioritizes healthy aging, collaborating with various organizations through local government contracts (Fang, et al., 2020). During the 1990s, noticing the limited power of government, informal social service contracting became prevalent, with more government agencies working with non-profit organizations under their supervision (Jing, et al., 2021). But mostly aimed at the delivery of medical care services, since the government is hard to support much money for the non-profit aging community (Huijsman & Yuan, 2022). To meet the growing demand for elderly care services, the government has introduced over 30 national policies promoting the growth of elderly services to private businesses side and the integrated development of medical, health, and elderly care. Starting from the 11th FYP in 2006, policies recommend guiding the elderly to rational consumption while cultivating the consumer market for senior products and services. The government's advocacy has spurred a rapid market response, with real estate developers taking an interest in the aging care industry and leading to the emergence of numerous profit aging communities (Krings, et al., 2022). This expansion brought attention to inherent challenges within these communities, with the issue of high caregiver turnover gaining prominence due to the overwhelming demand.

## Challenge in Global Perspective

On a global scale, the care service industry has grappled with persistent challenges, historically marked by soaring turnover rates attributed to factors such as low pay, inadequate benefits, and limited training opportunities. The culmination of these issues became particularly pronounced in 2018, such as in the U.S., the industry's turnover rate reached an unprecedented 82%, as reported by Home Care Pulse, emphasizing the magnitude of the problem (Holly, 2020). The onset of the COVID-19 pandemic further intensified workforce challenges, leading to significant job losses within the healthcare sector, with a sluggish recovery observed, especially in long-term care (Frogner & Dill, 2022).

## Unique Challenges in China

Under those cases, studies on population aging and elder policies also have predominantly focused on Western countries, leaving China to navigate the complexities of elder care without a specific policy or protection mechanism for caregivers within for-profit aging communities, according to Wenlong Nie, the Deputy Director, Department of Planning and Finance, Ministry of Civil Affairs (the cabinet-level executive department responsible for social and administrative affairs, also the only aging affairs department) (Nie. Wenlong, personal communication, August. 20, 2023). Furthermore, the limitations of government intervention become apparent, as the government's public sector lacks direct power to regulate the management practices of profit-oriented companies in the elder care sector. The absence of a comprehensive policy framework for elderly caregivers in profit aging communities underscores the need for targeted interventions for this problem.

This historical background sets the stage for the contemporary challenges faced by elder caregivers in China, providing critical insights into the roots of the high turnover rates and the ongoing efforts to address these issues within the dynamic landscape of aging communities and evolving government policies.

## The CCRC Model: A Double-Edged Sword for Caregivers

In China, in aging communities, particularly led by entities like Taikang, the prevalent model for aging communities is the CCRC (Continuing Care Retirement Community), originally devised in the United States according to my visit to some aging communities and interview with Taikang’s main manager (Y. Fu, personal communication, July. 17, 2023). This model distinguishes itself by offering a full continuum of care options, encompassing everything from independent or assisted living to memory care and skilled nursing (Castaneda, 2023). While this comprehensive approach aims to meet the varied needs of elderly residents, it inadvertently places a substantial burden on caregivers. The diversity of care services within the CCRC model demands a broad skill set from caregivers, adding complexity and stress to their roles (Aslan & Aylaz, 2022).

Moreover, the CCRC model in China emphasizes the convenience of community visits and integrates healthcare facilities, including small hospitals with doctors and nurses. While this approach enhances the overall well-being of residents, it introduces additional layers of relationship and communication stress for caregivers (Mitnick, et al., 2010). The proximity of various professionals within the community, coupled with the continuous interaction with family members, intensifies the caregiver's responsibilities and underscores the need for effective communication and coordination. This relevant technical and process information sheds light on the intricacies of the caregiving environment within Chinese aging communities, providing a nuanced understanding of the challenges faced by caregivers in this unique context.

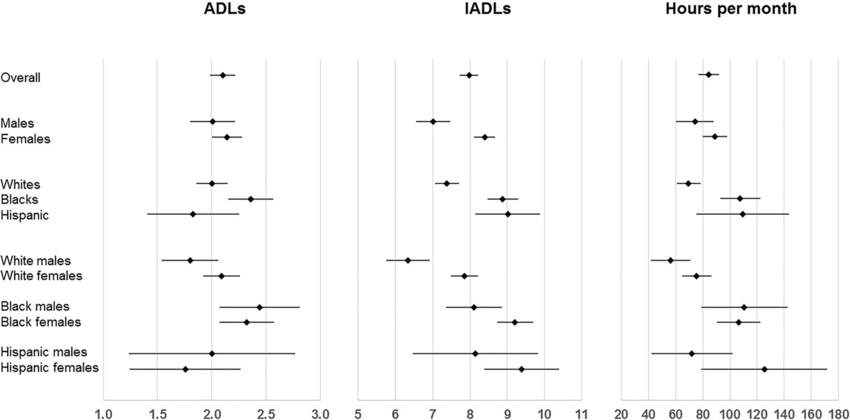
## Root Causes of High Turnover Rates

Among aging caregivers, the high turnover rates are a significant concern that is deeply rooted in a complex interplay of factors that collectively contribute to the challenging landscape faced by caregivers. A root cause analysis identified four pivotal factors driving higher turnover rates: work pay, work pressure, professional identity, and external motivation (Tan et al., 2023).

The inadequate ***work pay*** is one of the critical reasons to senior care industry faces a significant challenge with high turnover rates. According to a report by the Texas Health Institute, the annual turnover rate is estimated to be 150 percent due to low pay(Korosec, 2023). This issue is not unique to a particular region, as caregivers worldwide are generally paid low wages. The Institute of Medicine's Committee on the Future Health Care Workforce for Older Americans reports that 90 percent of these workers earn less than $30,000 annually, with some earning closer to $20,000 (Breeding, 2017). In many areas, this pay is insufficient to make ends meet, and ironically, many senior care workers cannot afford essential health insurance.

***Work pressure*** is a recurrent challenge due to the demanding nature of the job, exacerbated by increased workload and the need for diverse skills beyond basic care. The evolving landscape of caregiving adds another layer of complexity, where the expectations of caregivers extend far beyond traditional roles. The contemporary caregiving paradigm requires handling not only the basic life care of older adults but also cultivating relationships with doctors, coordinating with informal volunteer caregivers, managing family dynamics, and acquiring additional skills (Tan et al., 2023). The demand for comprehensive care places caregivers under immense stress, with potential health risks within any care movements heightened as elderly bodies become more fragile. For instance, a caregiver highlighted the intricacies involved in basic life care, emphasizing the need for careful attention to prevent pressure ulcers among physically weak older adults (Tan et al., 2023).

As for ***external motivation***, the high turnover rates in the caregiving industry are largely attributed to the predominance of women in the elderly care workforce. Studies across different countries show that between 57% and 81% of elderly caregivers are female, with many being older women who juggle family responsibilities on top of their jobs (Morris, 2001; Bush, 1997; Mathiowetz, 2005). Another statistic in Figure 3 displays that the diverse level of caregiver compositions varies by race and gender. Unfortunately, age, marriage discrimination, and gender stereotypes are prevalent, with managerial preferences often favoring younger, single female caregivers who are perceived to possess more energy and are better equipped to meet the demands of the job. Those women with young children, according to the U.S. Bureau of Labor Statistics, are easily experiencing persistently high turnover rates whether pushed or own plan (Page, 2018).



Note: Mean levels of caregiving intensity (ADLs, IADLs, and hours per month) overall, by race/ethnicity, gender, and jointly by race/ethnicity and gender

**Picture 3: Source from Journal of Cross-Cultural Gerontology**

Negative social attitudes and a lack of respect for caregivers' work exacerbate these issues, creating an unfair personnel constitution and inequitable social treatment within the profession. Addressing these systemic biases and promoting inclusivity is essential to ensuring fair treatment for all caregivers, regardless of their demographic characteristics. Additionally, caregiving work itself is inherently challenging, with unpredictable job responsibilities and sudden needs that often arise outside of normal working hours. These factors further contribute to the industry's high turnover rates and highlight the urgent need for targeted interventions and policy changes to improve working conditions and promote stability within the caregiving profession (Tan et al., 2023).

***Professional identity*** plays a pivotal role in turnover rates, influenced by a myriad of factors. With the outdated notion, society historically undervalues caring for the elderly (Clark, 2023), and the unfavorable reputations and social environments surrounding caregivers make it challenging for them to establish a sense of professional identity. The devaluation of care services in society further compounds the issue, with eldercare workers facing cultural marginalization as the most disadvantaged group in the urban labor market (Dong, et al., 2017). Limited career growth compounds the issue, leaving caregivers feeling undervalued in their work and fostering a lack of job satisfaction. Well, younger and more skilled caregivers aspire to career development opportunities, but inside an aging community, there's no promotion in the community (Tan et al., 2023). Besides, almost the same daily work induces tedious and a feeling of no growth in skills both work to drag people away from being a long-term caregiver. This dissatisfaction becomes a driving force behind the high turnover rates, as caregivers seek fulfillment and recognition in their professional endeavors (Cymbal, et al., 2022).

In summary, the roots of the high turnover rate among aging care providers are intertwined with issues of low work pay, cultural devaluation of domestic services, evolving caregiving expectations, precarious employment conditions, and challenges in establishing professional identity.

## Systemic Challenges and Government Intervention

The persisting challenge of the high turnover rate among elder caregivers in aging communities in China remains unsolved due to a confluence of factors. Another external reason caused by the political background mentioned above is the limited capacity of the government to directly intervene and address the multifaceted issues at play. While the government has made efforts to advocate for policy measures and create a supportive environment, the personal, intricate, and private control management within private sector management pose challenges beyond direct governmental control according to the Deputy Director, Department of Planning and Finance, Ministry of Civil Affairs (Nie. Wenlong, personal communication, Sep. 21, 2023). Additionally, the short history of the aging community model in China contributes to the ongoing struggle to find effective solutions. The relatively recent emergence of these communities necessitates time to mature, develop, and gain insights into the most efficient strategies to reduce the high turnover rate. Furthermore, the need for additional research is evident, as stakeholders, including the government and private sector, await a deeper understanding of the intricacies surrounding elder caregiver turnover. Public awareness and a revolutionary shift in societal attitudes towards caregiving are critical components that require time to evolve, contributing to the persistent nature of the unresolved problem (Ng, 2009). In essence, the complexity of the issue, coupled with the nascent stage of the aging community model and the vague private sector management dynamics which the government has limited right to control, collectively contribute to the ongoing nature of the problem.

## Consequences of High Turnover Rates

The consequences and costs of the high turnover rate of elder caregivers in aging communities extend far beyond the immediate financial burden. While the direct cost of turnover per caregiver is conservatively estimated at a minimum of $2,500 (including re-orientation of new caregivers, hiring temporary workers to make up the job vacancy, etc.) among some studies all over the U.S. from 1992 to 2004, it's got higher with the economic development nowadays. Moreover, more elusive indirect costs tend to be substantial and often overlooked (Seavey, 2004). Indirect costs could be low efficiency by the temporary workers and deterioration in organizational culture due to a low turnover rate. At the service delivery level, consumers bear the brunt of turnover through potentially lower-quality care from inexperienced workers. Care workers, grappling with increased stress and a heightened risk of injury, experience additional costs. Moreover, the repercussions reverberate to the third-party payer level, involving public funders and private insurers who play pivotal roles in designing, managing, and financing long-term care services (Seavey, 2004). The far-reaching consequences underscore the urgency of addressing the turnover issue, not only for the well-being of individuals and households but also for the overall societal fabric dependent on a stable and dedicated caregiving workforce.

# 

# Problem Statement

The problem revolves around the high turnover rate among caregivers in aging communities in China. As the elderly population continues to grow along with improving healthcare services, there is a corresponding increase in demand for long-term care. However, a significant challenge arises from the high turnover rate among caregivers, which stands at 39.64% according to recent surveys (Shen et al., 2023). **This turnover not only threatens the quality and stability of care but also poses broader socio-economic implications, like unemployment among caregivers and negative impacts on elderly well-being.**

# Client Overview

The high turnover rate of elder caregivers in aging communities poses a significant challenge to the overarching goals of my client --- Chinese Academy of Labour and Social Security. As the nation's sole national social security research think tank, the institute occupies a unique position as both an advocate for private entrepreneurs and a source of political and economic recommendations for social transformation. The key nature of the elder caregiver turnover issue lies not only in its immediate significance for care services for the growing elderly population but also in the broader socio-economic aspects tied to employment and humane working conditions.

From a governmental perspective, the problem not only is the challenges of maintaining a stable workforce for elderly care. It also delves into the core values of care and respect that caregivers deserve, implicating the broader societal ethos surrounding eldercare. The institute, with its influential role, has the responsibility to advocate for policies that protect the dignity and essential contribution of elder caregivers within the framework of social security.

Furthermore, the issue has ripple effects that extend into profit-driven aging communities. The high turnover not only creates direct costs during personnel changes and caregiver retraining but also undermines the establishment of robust relationships and effective leadership structures between managers and caregivers. All those troubles impact the quality and stability of care services provided and further reinforce the urgency for the institute to address this problem.

In all, the high turnover rate of elder caregivers is a multifaceted challenge that aligns with both the immediate concerns of elderly care and the broader societal and economic goals championed by the Chinese Academy of Labour and Social Security. Their unique role empowers them to bridge the gap between advocating for caregiver rights, addressing economic implications, and influencing government policies for comprehensive social change in the context of eldercare in China.

# Synthesis of Evidence

The evidence on potential solutions to the high turnover rate of elder caregivers in aging communities reveals a multifaceted landscape, with financial support, operational support, social support, and professional development emerging as key strategies. Each approach offers unique insights and considerations for the Chinese Academy of Labour and Social Security to contemplate as potential alternatives.

## 

## Financial Support

The Financial Support Approach, exemplified by augmenting salaries and providing bonuses, emerges as a compelling solution to address the high turnover rates within the caregiving industry. Research conducted by the University of Illinois provides substantial evidence supporting the positive impact of employee compensation on turnover. The study, which focused on frontline worker turnover in the long-term care industry, meticulously analyzed 61 agencies operating 200 community-based residential facilities for persons with developmental disabilities in Illinois (Powers, 2010). The findings underscored the effectiveness of bonus benefits in reducing turnover, with wages having a more significant impact. The study also referred to economic literature, revealing that a modest $1.00 per hour total income increase (including the bonus), could lead to a substantial 12-percentage point reduction in the annual turnover rate for new workers (Howes, 2005).

Although bonuses are commonly recognized as an effective motivational tool, providing merit-based bonuses can present challenges when evaluating employee performance. For instance, Kelsie Short, the manager of a non-profit aging community, has noted that assessing the performance of caregivers who work with elderly people is difficult due to the long-term nature of their work, especially for the elderly. Since their working goal is to make them comfortable and more convenient instead of an exact achievement like curing a disease. It is challenging to gauge their performance and merit in a short period (K. Short, personal communication, Nov. 3, 2023). What's more, economists and employers have expressed concerns about increased costs, inefficiencies, and the lack of clear productivity-based justifications for wage increases (Schlicht, 1978).

The apprehension is grounded in the potential impact on profits and the broader economy, employers have fears of elderly care wage inflation and increased costs across sectors. Despite these concerns, studies have consistently shown the positive effect of financial support in reducing turnover rates, underscoring its importance in retaining a stable caregiving workforce (Singh & Masters, 2017; Powers, 2010; Chan, et al., 2022). Balancing the managerial concerns of escalating costs with the well-being of caregivers becomes a critical consideration, emphasizing the need for a nuanced and strategic approach when implementing the Financial Support Approach.

In evaluating the methodology and rigor of the studies, different research stands out for its comprehensive analysis of a diverse sample of agencies in different countries, India, the U.S., China, and residential facilities, providing a robust foundation for its findings. The inclusion of economic literature further strengthens the study's credibility. However, acknowledging potential limitations, such as changeable economic situations, is essential. While causation can be inferred to some extent, given the consistency of findings across studies that financial support can reduce turnover rate, the complexity of how much money support relative to maximum working efficiency can profit more for managers requires a cautious and statistical interpretation. Generalizing the findings to the problem faced by the Chinese Academy of Labour and Social Security requires careful consideration of financial constraints feasible across regions in China, especially for rural areas, and community management factors. Still, no doubt that the universality of the turnover challenge in the caregiving industry enhances the applicability of the Financial Support Approach as a potential solution.

## Operational Support

The operational support approach, the implementation of organized working schedules, stands out as a promising strategy to address the high turnover of elder caregivers in aging communities, especially in China. China boasts some of the longest weekly work hours globally, with overtime becoming culturally ingrained in almost every industry (Nie et al., 2015). Overtime is becoming the norm for elderly caregivers, who require more time and attention as the elderly age, they rely on more time and more things over the job range. Additionally, with the Chinese cultural value of "always respecting the elderly," caregivers find it challenging to decline work requests. Besides, given that most caregivers work a single shift in China, it is difficult to find replacements when needed, and reaching out for help is often challenging. Consequently, caregivers have little time for themselves, and work-related stress can easily lead to depression (Liu et al., 2017).

Ede and Rantekeisu emphasize the mitigation of chaotic working arrangements can be the resolution of both physical and mental stress associated with insecurity and indirectly reduce the turnover rate (Ede & Rantekeisu, 2015). The literature underscores the effectiveness of this approach, with senior living operators adopting various strategies, including the implementation of a two-tiered schedule as demonstrated by the Summit Vista life plan community in Taylorsville, Utah (Regan, 2020).

The two-tiered schedule, where staff is divided into two groups, that work alternate schedules seven days on and seven days off, has proven effective not only in retaining community caregivers but also in reducing the spread of illness and enhancing workplace efficiency and communication between managers and caregivers, reduce loneliness of caregivers. However, it's crucial to note potential drawbacks, as some studies, such as Takahashi. (Takahashi et al., 2008), have found an increased risk of sleep problems for nursing home caregivers, particularly with longer night shifts.

To reinforce the operational support approach, studies have been conducted to evaluate the efficacy of managing organized work schedules, including two-tiered or other shift schedules, like three or every other day. The focus on COVID-19 at that time added urgency to the need for addressing healthcare worker concerns and reducing turnover rates. Michael Christensen, CEO of EasyShifts, highlights the demand for flexibility among healthcare workers, as evidenced by the significant number signing up for platforms offering temporary shifts in case some emergency happens to caregivers or traveling nurse-type shifts and reducing overtime cases with efficient work shift change (Stahlberg, 2023).

Analyzing the effectiveness of schedule management practices involves tracking costs, caregiver utilization, and service level performance. Studies, such as those by Restrepo et al. (2020), indicate that the use of flexible resource actions significantly reduces total costs, improves caregiver utilization, and enhances service levels by utilizing data-driven analysis (Patro et al., 2021). Furthermore, the integration of shift management technology, workforce management tools, and the development of AI-driven scheduling software offers additional avenues to simplify scheduling, promote a healthier work-life balance, reduce burnout, and minimize costs (Valentine et al., 2008).

While the operational support approach has shown promise, further research and attention are required to investigate the suggestion of reduced turnover rates. Conducting additional studies can provide deeper insights into the nuanced factors that affect the success of organized working schedules and associated technologies. Direct interviews with direct caregivers can be inefficient and time-consuming, making it crucial to fine-tune and optimize the operational support approach to meet the unique challenges and dynamics of elder caregiving in aging communities. Additionally, China's pursuit of the smart elderly road is still in its early stages, with inadequate use of smart elderly care products in old-age services, low numbers of professional staff, and the elderly's reluctance to accept new technology or share private information online with managers hindering widespread use of smart apps among aging communities (Meng et al., 2020). It is essential to address these challenges and ensure the efficacy and sustainability of the operational support approach and the use of smart elderly care products in elderly care services.

## Social Support

The social support approach emerges as a promising avenue for mitigating the high turnover rates of elder caregivers in aging communities. The literature reveals the efficacy of organizing mental health care teams for caregivers, particularly exemplified by the Primary Health Care Team (PHCT). A comprehensive article from BMC Family Practice outlines the PHCT's introduction of a social support approach, emphasizing workshops on neuro-linguistic techniques, communication skills, family care methodologies, and training sessions for primary care professionals and caregivers (Rosell-Murphy et al., 2014). This approach strategically addresses the social pressure challenges inherent in care work, acting as a proactive measure to enhance the well-being of caregivers.

The methodology employed in the PHCT's initiatives is rooted in evidence-based practices, aiming to improve caregivers' learning, engagement, and performance by fostering psychological safety (Hebles et al., 2022). However, the applicability of this approach to for-profit organizations, driven by the high cost of hiring a whole team considerations, raises important considerations, especially for organizations that have limited money to back up. New York Life's Group Benefit Solutions highlights the challenge of many caregivers being unaware of their employers' mental health resources, and a limited percentage receiving training to identify mental health needs and discuss these issues with their loved ones (Shea, 2023). Despite these challenges, a study published in JAMA Network Open indicates that online mental health benefits provided by employers can yield significant benefits, including a 25% decrease in missed work days and a 24% increase in productivity (Leonhardt, 2022).

While primary healthcare teams contribute to social support and professional services, there is a notable lack of available data regarding the effectiveness of this approach in reducing high turnover rates specifically in aging communities due to employers' hesitation in hiring mental teams resulting in limited employers' feedback on this team's effectiveness. This lack emphasizes the need for further research and exploration to establish a comprehensive understanding of the impact of social support initiatives on caregiver retention within the unique context of aging communities. Meanwhile, the nuanced considerations related to for-profit organizations, awareness of mental health resources, and the need for additional research underscore the Chinese Academy of Labour and Social Security explores potential solutions to the high turnover problem, it should consider adopting and tailoring social support strategies to align with the unique characteristics and challenges of the Chinese caregiving landscape.

## Professional Development Support

The Professional Development Support Approach emerges as a compelling strategy for mitigating the challenge of high turnover rates among elder caregivers in aging communities. The focus here is on the potential of online training programs to enhance the professional value and career path for caregivers. This approach suggests that investing in continuous professional development can significantly increase motivation and reduce turnover within the caregiving workforce.

Online training platforms' efficacy is underscored by revealing that an impressive 94% of elderly care employees express a preference for remaining with companies offering professional training (Morrisette, 2023). This statistic emphasizes the perceived value and impact of online training programs on caregiver retention.

Additionally, the introduction of Reli Learning, a healthcare training website or app, further exemplifies the commitment to addressing caregiver monotony and stimulating growth through innovative online training resources. The acknowledgment of the significance of continuous learning and the provision of new challenges align with the goal of not only retaining caregivers but also fostering their professional development.

A study conducted by Stramowski in 2017 surveyed 646 home care providers and 1,047 total home care locations in the U.S. The study was designed to uncover the efficacy of professional development support methods in delivering orientation training to elderly caregivers. The training encompasses daily caregiving skills and goes beyond additional skill acquisition such as first aid and medical training. The research indicates a notable difference in median turnover rates between agencies offering five or more hours of training (61.1%) and those providing less than five hours (77.3%) (Stramowski, 2017). This quantitative evidence supports the notion that the extent and quality of professional development training play a pivotal role in caregiver retention.

In evaluating the evidence on the Professional Development Support Approach, it is essential to consider the methodology and rigor of the studies. While the quantitative findings of the high effectiveness of reducing turnover caused by proving skill development classes from Stramowski's research provide valuable insights, a more detailed exploration of training types, caregiver characteristics, and potential cultural variations will enhance the understanding of the applicability of these approaches in China. The generalizability of findings from software research also warrants careful consideration, ensuring that the insights are applicable and relevant to the specific challenges faced by elder caregivers in China's aging communities.

# 

# Alternatives

## Alternative 1: Employee Bonus

One alternative to address the high turnover rate among elder caregivers in aging communities is through a financial support approach, where managers provide performance-based bonuses. This strategy is supported by research indicating the effectiveness of public policies like compensation subsidization or bonuses in mitigating turnover (Powers & Powers, 2010; Vizano et al., 2021; Lindhard, 2014). Specifically, this strategy will use retention bonuses, which are payments offered to caregivers who commit to staying with their company for at least a two-year duration (Leapsome Team, n.d.). The bonus amount will be calculated based on a percentage of the caregiver's annual salary.

Considering the effectiveness of reducing the turnover rate mentioned in "Incentive Agreements and Long-Lasting Partnerships as Instruments to Create Continuous Improvement," this alternative would offer a bonus equivalent to 2% of the caregiver's annual salary for each year of work completed (Lindhard, 2014). Taking into account the 2024 average annual salary for caregivers in China, which is 87,790 CNY (equivalent to $12198.47) (World Salaries, n.d.), using a 2% bonus, the additional amount per year of work would be calculated as $243.97. Another example as per the guidelines outlined in a caregiver's year-end bonus recommendation website for employers, the customary year-end bonus offered to caregivers is equivalent to one week's worth of remuneration (Koita, 2023). Because a year consists of 52 weeks, using the one-week value of the bonus, it can be estimated that the yearly bonus amount would be $234.59. With this in mind, the bonus range would be established between $234.59 and $243.97. This bonus is designed to acknowledge the dedication of caregivers who have met the full two-year commitment, so it will be distributed by managers on an annual basis starting from their third year. By employing this strategy, managers can create an incentivizing financial support system that rewards performance, promotes long-term commitment, and reduces turnover within aging communities.

## Alternative 2: Smart Schedule

Research has found that the turnover rate among caregivers is highly affected by unpredictable and unstable work schedules (Bergman et al., 2022). This is particularly true for caregivers of elderly individuals who, as they age along with declining health situations, grow increasingly dependent on their caregivers whether physical or mental. Due to the rising needs of their care recipients, caregivers often have to adjust and extend their work schedules, which leads to exhaustion and job dissatisfaction (Ochs et al., 2009). To combat the high turnover rates among elderly caregivers in aging communities, the alternative is the implementation of organized working schedules. The goal of this approach is to utilize scheduling technology to match caregivers with clients based on factors such as qualifications, compatibility, and other relevant information. For instance, caregivers with specific care skills can be paired with elderly clients who require those skills, like dressing skills when the elderly get injured and need to bind up, and caregivers with similar personalities and client histories can be assigned to familiar clients who desire companionship. This approach can also assist caregivers in managing their workloads by considering their working hours and arranging for appropriate replacements when necessary (Wang et al., 2022). By employing shift management technology, workforce management tools, and AI-driven scheduling software, managers seek to streamline scheduling operations, promote a healthier work-life balance, and minimize caregiver burnout (Valentine et al., 2008).

Implementing this approach would involve adopting scheduling software within aging community facilities in China. One example of this kind of software is Aanii. Its features, including drag-and-drop scheduling, quick-click messaging for rapid shift coverage, and dynamic scheduling powered by machine learning technology, would facilitate the efficient allocation of caregiver resources. By intelligently matching caregivers to clients based on their skills and preferences, Aaniie ensures that caregivers are assigned tasks aligned with their abilities and interests, ultimately increasing job satisfaction and retention (Vannieuwenborg et al., 2016). Additionally, Aaniie's bulk assignment feature allows for more predictable and stable schedules, which caregivers appreciate as it helps them balance their personal and professional lives better. According to related research, this consistency in scheduling significantly reduces stress and burnout, contributing to lower turnover rates (Ede & Rantakeisu, 2015). Moreover, by setting shift changes according to caregivers' preferred working times, Aaniie helps reduce caregiver fatigue, maximizing their working efficiency and allowing them enough time to rest and rejuvenate, further improving job satisfaction and retention (Aaniie, n.d.).

## Alternative 3: Mental Health Support Team

The utilization of a social support approach has emerged as a promising avenue for mitigating the high turnover rates of elder caregivers in aging communities. Studies suggest that the provision of mental health benefits (like having therapists, mental health checks, related classes, and other mental caring actions) by employers can significantly improve caregivers’ mental health situation, reducing stress, and resulting in a 25% decrease in missed work days and a 24% increase in productivity (Leonhardt, 2022). Especially by integrating mental health professionals into the community to work together with caregivers, it can provide tailored and more specific support to caregivers, while reducing their workload burden and clarifying their job responsibilities.

Thus, an approach involving the establishment of a Mental Health Support Team is proposed. Rooted in evidence-based practices, it aims to enhance caregivers' learning, engagement, and performance by fostering their psychological safety (Hebles et al., 2022). To maximize the team's efficiency under the hiring costs of the team, according to JABA (an aging center in Charlottesville) manager Kelsie Short and other aging communities working models, the team would be comprised of one occupational therapist, one psychologist, one psychiatrist, one counselor, and a few flexible community support caregivers, and would be embedded within the aging community. If the center has already filled some or all of the aforementioned roles, our efforts can be redirected toward optimizing the team's configuration to achieve a cohesive unit as described.

The Mental Health Support Team's services would include individual therapy sessions, mental health checks, and related classes aimed at improving caregivers' mental well-being. Additionally, the team would organize weekly activities, such as training sessions or workshops. The mental health support training sessions could be focused on neuro-linguistic techniques (Rosell-Murphy et al., 2014) which use visualization and other self-regulation techniques to help you gain control of your mind—and consequently, your actions, and can help people identify and change unhelpful thoughts and communication patterns, like feeling useless during work or stressful, specific content would be designed based on needs of caregivers. These trainings would provide caregivers with tools to manage anxiety, improve communication levels to better deal with many relationships during work, and develop a positive mindset to better cope with the demands of their work and personal lives (Rosell-Murphy et al., 2014).

Furthermore, the workshops would facilitate interactions between caregivers and their family members, inviting elderly individuals from the community to participate and better understand caregivers' work and values. These special services for caregivers are scheduled on a fixed schedule, such as Friday afternoons, to ensure consistency and convenience for participants. Overall, the establishment of the Mental Health Support Team within the aging community aims to foster a supportive environment, enhance caregiver well-being, and ultimately reduce turnover rates.

## Alternative 4: Online Training

The high turnover rates among elderly caregivers in aging communities can be reduced by adopting the Professional Development Support Approach. A 2017 study by Stramowski underscores the effectiveness of professional development support methods in reducing median turnover rates (Stramowski, 2017). Out of convenience for caregivers, this strategy focuses on enhancing professional value and professional opportunity through online training programs. Studies show that participation in relevant training programs significantly affects the satisfaction levels of care staff (Cui et al., 2023). Training programs ensure high engagement, motivation, and job satisfaction by providing caregivers with opportunities to continuously learn new skills and knowledge, preventing stagnation and disengagement. Online training programs as a self-paced study further empower caregivers and build independence to manage their workload. These programs offer equal opportunities for career advancement with the same content and access, removing roadblocks that caregivers may face in traditional career paths and eliminating unfair advantages between employees (Aaniie, n.d.). EdApp has partnered with the United Nations Institute for Training and Research (UNITAR) to provide an exceptional example of a novel approach to education and get Educate All, a comprehensive, free, and fully editable library of high-quality content (EdApp, 2023). This platform provides free caregiver courses with certificates, empowering caregivers to improve their skills and relationships with patients at their convenience. Caregivers can access all courses on the platform for free, like Mental Health & Resiliency in Aged Care Facilities, while managers can customize courses to fit specific needs by paying a monthly fee.

A healthcare training website or app can be an invaluable resource for professionals seeking to enhance their skills in their current work. Moreover, it can also provide caregivers with access to a diverse range of care skills, enabling them to pursue new and different care work opportunities within their center and minimize the tedium of single routine tasks. Caregivers can access these resources anytime and anywhere, providing flexibility in their learning process. Recognizing the significance of continuous learning and providing new challenges aligns to retain caregivers and foster their professional development.

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# Criteria

## Criterion 1: Cost

Cost considers (i) the overall financial investment required for the implementation and maintenance of each alternative and (ii) the direct monetary expenses borne by the aging community. Total costs are estimated to encompass all relevant components. All costs will be calculated using US dollars over two years. China has set its CPI inflation target at 3 percent for all of 2024 (Mullen, 2024). So the total cost should be calculated with a 3% yearly inflation rate to get its future value.

Overall cost shall be measured as the total direct financial outlay associated with each alternative, including upfront implementation costs and ongoing operational expenses. Relevant components of this total cost estimate include but are not limited to:

- Labor costs: Number of individuals involved, their labor hours, and wage rates for implementing and maintaining the alternative.

- Resource costs: Costs associated with obtaining baseline regional economic data, licensing, and maintenance of any required software or technology.

- Training costs: Expenses related to training caregivers or stakeholders involved in the implementation of the alternative.

- Material costs: Costs of any materials or equipment necessary for the implementation.

- Other relevant costs: Any additional direct costs specific to the alternative.

The cost analysis will account for regional variations in pricing and potential fluctuations in costs. To make it comparable, the analysis will use the standard of 100 caregivers per community.

## Criterion 2: Feasibility

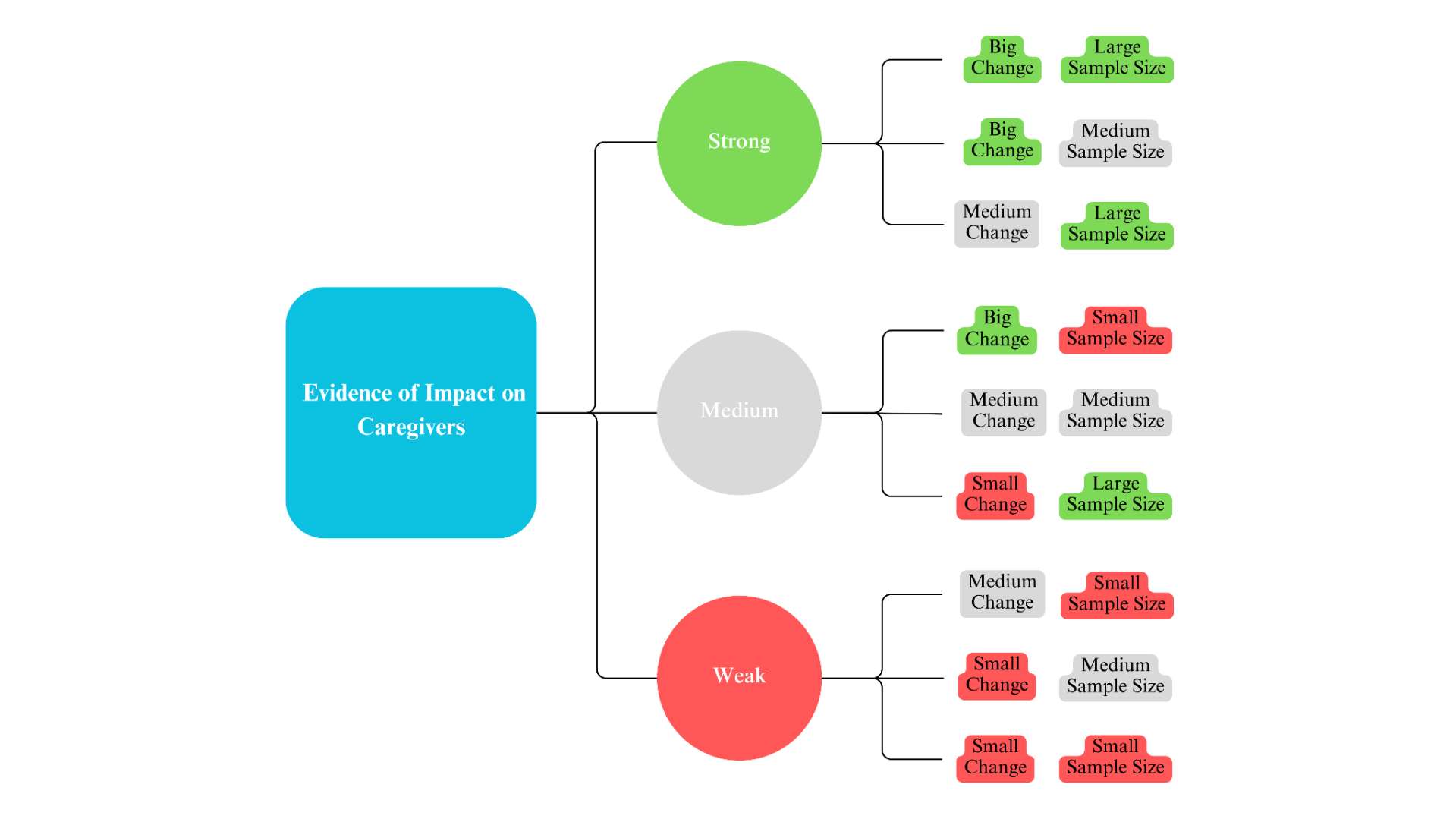
Feasibility will measure the capacity of centers to adopt and implement the proposed alternatives within aging communities in various provinces or regions in China. High feasibility is determined when proposed alternatives are readily accessible and usable within the targeted regions for the aging community. This is measured by the willingness of managers to adopt proposed bonus amounts, the widespread accessibility and usability of scheduling software and apps across different regions, and the availability of professional therapists in urban and rural areas. Medium feasibility is assigned when proposed solutions are somewhat accessible and usable but may face moderate challenges in accessibility or usability. This is measured by the moderate accessibility and usability of scheduling software and apps, like it only supports one version of a phone, instead of both iPhone and Android, and the limited availability of professional therapists in both urban and rural areas. Low feasibility is indicated when proposed solutions face substantial barriers in accessibility or usability within the targeted regions. This is measured by the limited accessibility or usability of scheduling software and apps, and the scarcity of professional therapists, particularly in rural areas where accessibility may be severely limited.

Overall, feasibility assessments consider the alignment of proposed solutions' accessibility and usability within the specific context of aging communities in China. High feasibility denotes practicality and ease of implementation, medium feasibility indicates moderate challenges and low feasibility suggests significant barriers or challenges that may hinder adoption and implementation.

## Criterion 3: Evidence of Impact on Caregivers

The assessment of the impact on caregivers aims to gauge the strength of evidence regarding positive changes related to the turnover rate following the adoption of various alternatives. This criterion considers the robustness and rigor of evidence, encompassing the magnitude of impact and the strength of supporting data.

Analyzing the turnover rate of caregivers is critical to understanding the magnitude of the impact of each alternative. The assessment involves examining existing studies and research to determine the level of impact on turnover rates, estimation approaches for each alternative will involve specific calculations to the change in turnover rate. The magnitude would be classified into three categories: small change as the turnover rate is below 10%, medium change as the turnover rate is between 10% and 30%, and big change as it exceeds 30%. The strength of supporting data will be assessed by the sample size of the research where data comes from. The strength will be categorized as large (over 500), medium (500~300), or small (below 300). The final analysis of the evidence of impact on caregivers would be categorized as the figure following.



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# Evaluating Analysis

Each of the alternatives is evaluated along three criteria. All alternative cost calculations are in the Appendix.

*Alternative 1: Employee Bonus*

*Cost:* The total cost of a bonus in one year in US dollars uses the standard of 100 caregivers per community in two years.

Considering that the bonuses of 2% of the caregiver's annual salary and one week's pay have been used, the cost would be calculated as a bonus range within these two considerations. The bonus range by the end of the two-year cost would be between **$49,775.31 and $51,765.55** (see Appendix).

*Feasibility:* The feasibility of managers’ willingness to adopt the bonus amount considering all the cities in China is defined by high, medium, and low.

According to the latest data from Salary Expert as of March 1, 2024, caregivers in China currently receive an average annual bonus of ¥1115, equivalent to $154.93. Even in Beijing, the city with the highest average caregiver's bonus, it is only ¥1,289 per year, or $179.11 (ERI’s Salary Expert Database, n.d.). If we multiply this by 100, the average bonus would be $15,493 with the highest $17,911. These figures are significantly lower than the proposed bonus range for this alternative of $23,459 to $24,397. Managers are not likely to be willing to offer higher bonuses than the average, particularly for those in smaller cities.

Consequently, the feasibility of this alternative is **low**.

*Evidence of Impact on Caregivers:* The evidence of impact on caregivers in magnitude and strength after implementing bonuses for two years.

According to Power's study in Illinois (2010), increasing total compensation by 25% could reduce employee turnover by 33.33%. This translates to a 1.33% reduction in turnover for every 1% increase in compensation. For Chinese caregivers, the 2% bonus increase would lead to a 2.66% reduction in turnover rate. The 2.66% is below 10%, so it should be a small change.

In Power's study (2010), the questionnaire data was collected from 61 agencies and 200 associated caregiver sites in Illinois with each site over 100 caregivers, which is considered as a large sample size.

Based on the above, small change + large sample size, the evidence of impact on caregivers for this alternative is **medium**.

*Alternative 2: Smart Schedule*

*Cost:* The cost of subscribing to a smart schedule app in two years in US dollars uses the standard of 100 caregivers per community with inflation.

On the website, it can find a selection of scheduling applications tailored to the needs of Chinese caregivers (SourceForge, n.d.). These include long-term care, enterprise, staff scheduling, and geriatric care options. Within all the available apps for elderly caregivers scheduling apps, the subscription costs range from the cheapest at $5,000 for a one-time purchase for all 100 caregivers to the highest at $49.99 per month per user. The total cost is **$5,000.00 to $63,641.27** (see Appendix).

*Feasibility:* The general feasibility of accessing apps and convenient to use in daily life in almost all the cities in China is defined by high, medium, and low.

Although internet connectivity and smartphones are widespread across the country, some regions primarily use Android phones instead of iPhones. Consequently, the app's compatibility with both phone types will determine its accessibility. Given the ubiquity of mobile phones, if the app supports phone usage, its convenience level will be high. As of June 2023, 99.8% of internet users in China use smartphones to go online, while laptops only 32.4% (Thomala, 2023). In contrast, if it only supports laptops or iPads, it may be challenging to ensure universal accessibility in rural areas. Based on the website's filtering criteria, ten apps remain, with five supporting both iPhone and Android and the other five only accessible via laptops or iPads (SourceForge, n.d.).

As a result, only half of the remaining apps are considered convenient for users, resulting in a **medium** feasibility level.

*Evidence of Impact on Caregivers:* The evidence of impact on caregivers in magnitude and strength after implementing the schedule app for two years.

Studies have found that even a small increase in schedule unpredictability can cause a noticeable uptick in employee turnover. For instance, research shows that a 10% increase in schedule volatility can lead to a 0.02 percentage point increase in turnover rate for full-time employees over just 28 days (Bergman et al., 2022). Assuming the increasing rate won't change, over a year, this effect compounds, leading to a 0.24 percentage point increase in turnover rate. Setting the software is designed for a schedule to give caregivers greater control over their schedule leading to a 100% increase in schedule volatility, then it incurs to resulting in a 2.4% decrease in turnover rate. Another study found that introducing a staff scheduling system in disability care reduced the turnover rate by an impressive 43% (Strouse et al., 2004). The average turnover rate change is 22.7%, which is categorized as a medium change.

Bergman study and Strouse study's sample sizes are separately 4,877 nurses and 525 caregivers, which are all considered large sample sizes.

Considering both, a medium change + a large sample, utilizing software scheduling systems is **strong**.

*Alternative 3: Mental Health Support Team*

*Cost:* The cost of hiring a complete mental health team plus having weekly support activities for caregivers in two years in US dollars uses the standard of 100 caregivers per community.

Based on research, it's recommended that a team consisting of an occupational therapist, counselor, psychologist, and psychiatrist is sufficient for 100 caregivers. However, the specific costs of hiring for each center may vary, with some requiring extra hiring for all four positions and others only to extra hire one or two. For example, the top aging community in China (Taikang, which is considered the most comprehensive aging service in China) already has one occupational therapist and one counselor. That would be set as the lowest hiring cost standard in China, while the highest hiring cost is hiring four of them, according to the Chinese average yearly wages for each position (indeed, n.d.).

In addition to hiring costs, it's important to consider the expenses associated with hosting weekly activities for all 100 caregivers, like snacks and beverages costs, etc (Pang, 2023).

When all costs and the inflation rate are factored in, the total expenses for the manager in a community would range from **$417,032.36 to $564,014.75** (see Appendix).

*Feasibility:* The feasibility of hiring complete professional members in all the cities in China is defined by high, medium, and low.

The Asia Society has reported that while mental health care access in China has expanded in recent years, there is still much room for improvement. Only 20 individuals per million in China have access to mental health services, compared to 1,000 in the United States, which is a relatively low figure (Asia Society Policy Institute, 2022). Furthermore, the provision of mental health care is not evenly distributed throughout the country. A study examining China's mental health workforce distribution discovered that the ratio of medical professionals working in specialized psychiatric institutions per 100,000 population is highest in Beijing at 21.12% and only 7.92% in Henan (Sun et al., 2024). In some provinces due to inadequate infrastructure, researchers are even hard to investigate in person.

Consequently, the uneven distribution of mental health resources plus overall limited mental health care leads to **low** feasibility.

*Evidence of Impact on Caregivers:* The evidence of impact on caregivers in magnitude strength after having the mental health support team for two years.

Researchers conducted a study to assess how structured psychoeducation intervention impacted the burden of caregiving. They analyzed the turnover rate before and after the intervention and discovered a significant 23.9% decrease (34.6% to 10.7%) over 12 weeks (Iyidobi et al., 2022). Hypothesized that the intervention's positive effects would remain stable for one year without any fluctuations. The change in turnover rate would be a 23.9% reduction considered a medium change. Iyidobi research participants are 140 caregivers considered as the small sample size.

With medium change plus a small sample size, the evidence of impact on caregivers is **weak**.

*Alternative 4: Online Training*

*Cost:* The cost of subscribing to the online training app or classes for caregivers in two years in US dollars uses the standard of 100 caregivers per community.

EdApp is an exceptional software solution for online classes that offers a user-friendly interface for effortless navigation. With per-user pricing available on the website, EdApp is an excellent choice for managers overseeing 100 caregivers. The Managed model is explicitly designed for this scenario, providing access to personalized courses developed by a team of experts. The platform enables a smooth and prompt implementation of online learning tailored to caregivers' needs. Also for managers, the community can detect caregivers’ access situation and learning progress to follow up one by one.

With pricing ranging from $2.95 to $5.95 per user per month (EdApp, n.d.) and inflation, the cost for 100 caregivers would be between **$7,511.17 to $15,149.65** (see Appendix).

*Feasibility:* The feasibility of accessing this app and ease of use in almost all the cities in China is defined by high, medium, and low.

Today, internet connectivity is quite ubiquitous throughout the nation. In 2023, there were 1.05 billion internet users in China, and the internet penetration was 73.7% (Kemp, 2023). Nonetheless, not all individuals rely on iPhones, it could be Android phones. Hence, the app's compatibility with both types of devices is essential in determining its accessibility. As per EdApp's website, it conveniently supports iPhones, Android phones, iPads, and desktops with various browsers (EdApp, n.d.). This makes it exceedingly convenient for users to access the app without encountering many technical challenges.

As a result, the feasibility level for that is **high**.

*Evidence of Impact on Caregivers:* The evidence of impact on caregivers in magnitude strength after implementing the online training app for two years.

A study among 250 respondents conducted by International Business Research has demonstrated that workplace training for skills development is related to a 29% turnover rate reduction (Jehanzeb et al., 2015). Another study focuses on the association between different training types and staff turnover, one of the results indicated that 18% of the variance in 100 clinician turnover was accounted for by distance education (Brabson et al., 2019). The change in turnover rate would be between 18% and 29%, which can be regarded as a medium change. The sample sizes are 250 and 100, both are below 300 and a small size.

Overall, this alternative's evidence of impact on caregivers would be **weak**.

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# Outcomes Matrix

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Employee Bonus** | **Smart Schedule** | **Mental Health Support Team** | **Online Training** |
| **Cost** | $49,780 to $51,770 | $5,000 to $63,640 | $417,030 to $564,020 | $7,510 to $15,150 |
| **Feasibility** | Low | Medium | Low | High |
| **Evidence of Impact on Caregivers** | Medium | Strong | Weak | Weak |

Numbers in the matrix have been rounded to the nearest 10. Green represents the best score and red represents the worst score in each different criterion.

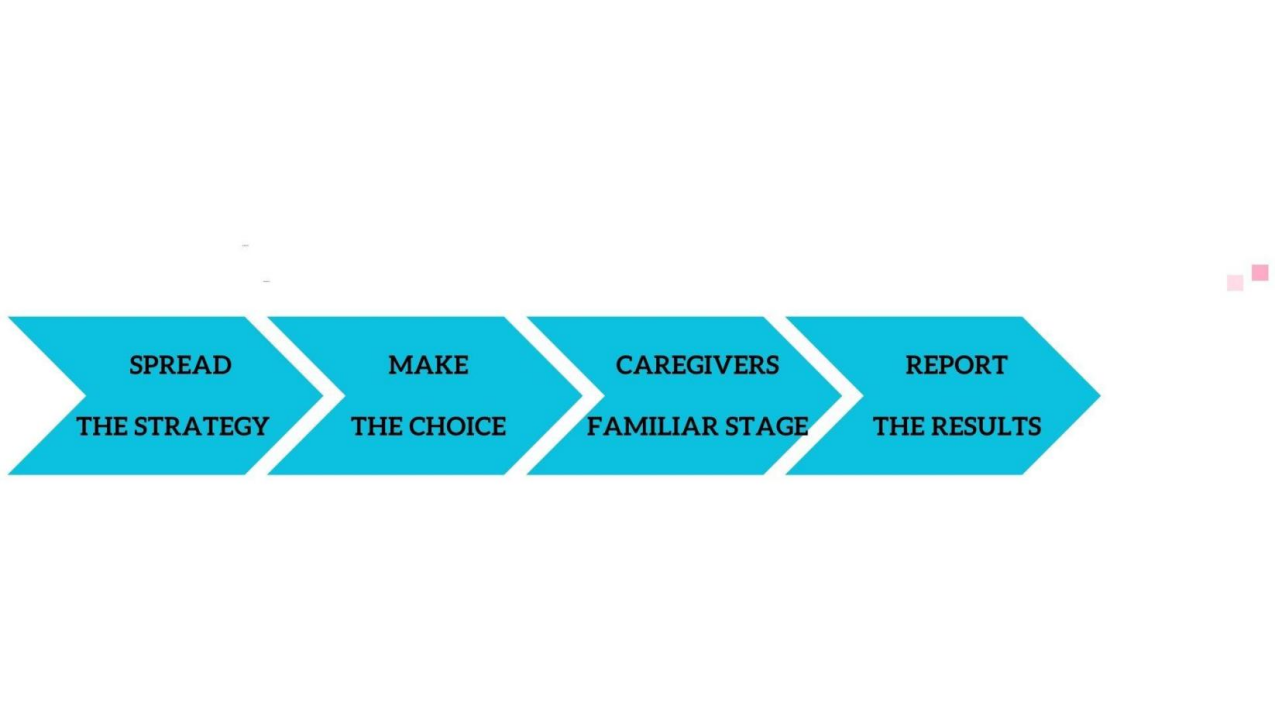
# Recommendation

Because Alternative 2 demonstrates the strongest performance across cost and evidence of impact on caregivers criteria with the second best in feasibility, the aging community should adopt scheduling software such as Aaniie, expanding the use of this software to all caregivers in the community and leveraging internet-accessible dynamic scheduling technology to optimize their allocation. While this approach may be less feasible than Alternative 4 (online training), it takes into account the accessibility of all smart schedule apps for elderly care in China. This ensures that the aging community has access to a wide range of choices and solutions, resulting in better coverage and less feasibility by counting a few low-feasibility cases. However, by adopting only these high-feasibility apps, caregivers can easily access them regardless of their location or device used. In that case, this approach could offer the highest feasibility for the aging community and benefit both caregivers and managers. Additionally, Alternative 2 outperforms the other options as the lowest cost and strong evidence of impact on caregivers.

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# Implementation Plan and Challenge Considerations

The implementation plan for adopting scheduling software would rely on the active participation of caregivers, managers in aging communities, the client (Chinese Academy of Labour and Social Security), and customer service representatives from smart scheduling apps.



In the first phase of implementation---Spread the Strategy. This phase spans approximately 1-2 months. Based on past implementation experience, the client will organize a national seminar to introduce the recommendation to the aging community industry, inviting some leading aging community managers, like Taikang, and famous media, like Xinhua News Agency. This seminar will serve as a platform to share insights, gather feedback, and encourage collaboration between aging communities and the client for a two-year implementation observation. Additionally, articles written by the clients and public journalists related to the recommendation will be published on industry forums to further disseminate information and try their best to garner support in all aging communities around China.

The second phase---Make the Choice, lasting one month, involves managers in aging communities selecting the most accessible and favorable scheduling app for their community. This process includes booking demos with interested apps and app salesman or experts would evaluate the suitability based on community size and specific needs. Once a decision is made, managers will undergo training on app usage, integrate it into daily operations, and submit all elderly client's information in the community.

In the third phase--- Caregivers' Familiarize Stage, lasting approximately two weeks. Taking the ShiftCare scheduling app as an example, caregivers will download and begin using the selected scheduling app. They will input personal information, preferred working hours, and care skills to facilitate efficient scheduling. Caregivers will also be encouraged to provide feedback on the app's usability and functionality to ensure continuous improvement (ShiftCare, n.d.).

The fourth phase---Report the Results, occurs after 6 months of app usage and involves evaluating the effectiveness of the recommendation. Managers will report the two-year turnover rate change to the client, who will analyze the data and assess the impact of the scheduling app on caregiver retention across different aging communities in China. The findings will be analyzed and compiled into a final report for the government and published for industry stakeholders.

Throughout the implementation process, several potential challenges must be addressed. Data security concerns regarding the sharing and usage of personal information on the app may deter caregivers from fully engaging with the platform. According to the results of a survey on digital usage in China conducted in 2023, it was found that 20% of the respondents expressed apprehension regarding the potential misuse of their digital data by internet companies (Thomala, 2024). Another challenge to consider is the possibility of the app malfunctioning and breaking down, which could disrupt the work schedule of the aging community. To mitigate these two risks, negotiations with the app provider should prioritize data privacy and security measures, including proof of data protection protocols and contingency plans for app malfunctions.

The crucial aspect to consider during implementation is caregivers' rest time and willingness to work since this alternative is highly related to solving the problem of unpredictable and unstable work schedules. To ensure their well-being and job satisfaction, managers must regularly review caregiver schedules and adjust workload distribution to prevent burnout. Additionally, caregivers should be encouraged to share feedback and concerns directly with managers through the app to facilitate open communication and prompt resolution of issues.

# Conclusion

The high turnover rate among elder caregivers in China's aging communities is a significant issue that impacts the quality of care provided to seniors. After careful evaluation, alternative 2: the Smart Schedule approach is recommended, which utilizes scheduling software such as Aaniie. This approach is cost-effective, has great feasibility across regions, and has strong evidence of improving caregiver retention and satisfaction by optimizing scheduling processes.

However, it is important to note potential challenges during the implementation of scheduling software in aging communities, which require thorough planning, stakeholder engagement, and proactive measures to address potential challenges. By following the outlined implementation plan and strategies, the client can effectively navigate the complexities of implementation and drive positive change in caregiver retention rates across aging communities in China, the caregiving environment can be significantly enhanced, benefiting both caregivers and seniors.

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# Appendix: Alternatives Costs Calculation

|  |  |  |
| --- | --- | --- |
| **Alternative 1: Employee Bonus** | | |
| **Costs** | **Assumptions** | |
| Annual salary | The Chinese caregiver’s 2024 average annual salary is $12,198.47 | |
| Bonus Consideration Range | Bonus = one week's pay (assuming a year consists of 52 weeks) | Bonus = 2% of the caregiver's annual salary |
| Bonus |  |  |
| 100 Caregivers in 2 years |  |  |
| Compounding | 3% yearly inflation rate, 2 years  截屏2024-04-05 下午12.15.05 | |
| **Total (2 years):** | **$49,775.31 to $51,765.55** | |

|  |  |  |
| --- | --- | --- |
| **Alternative 2: Smart Schedule** | | |
| **Costs** | **Assumptions** | |
| Available scheduling apps subscription costs range | $5,000 for a one-time purchase for per community | $49.99 per month per user |
| 100 Caregivers in 2 years |  |  |
| Compounding | The $5,000 is a one-time purchase, no need considering inflation | 3% yearly inflation rate, 2 years  截屏2024-04-05 下午12.15.05 |
| **Total (2 years):** | **$5,000.00 to $63,641.27** | |

|  |  |  |
| --- | --- | --- |
| **Alternative 3: Mental Health Support Team** | | |
| **Costs** | **Assumptions** | |
| Hiring costs range (According to Chinese average yearly wages for each position) (indeed, n.d.). | Psychologist $124,44 + psychiatrist $263,445 = $387,893 | Therapist $75,445 + counselor $52,700 + psychologist $124,448 + psychiatrist $263,445 = $516,038 |
| 100 Caregivers in 2 years (each mental health support role one person enough for 100 caregivers) |  |  |
| Weekly activities costs | As these activities are held in the center, there are no additional venue fees. The estimated cost for snacks and beverages is between $5200 to $15600 per year, assuming each person consumes one snack and one beverage per week, 52 weeks per year, costing between $0.5 to $1 (Pang, 2023). The mental health team members themselves can serve as speakers, eliminating the cost of guest speakers. | |
| Compounding | 3% yearly inflation rate, 2 years  截屏2024-04-05 下午12.15.05 | |
| **Total (2 years):** | **$417,032.36 to $564,014.75** | |

|  |  |
| --- | --- |
| **Alternative 4: Online Training** | |
| **Costs** | **Assumptions** |
| Online training subscription costs range (per user per month) | $2.95 to $5.95 |
| 100 Caregivers in 2 years | 截屏2024-04-05 下午12.16.36 |
| Compounding | 3% yearly inflation rate, 2 years  截屏2024-04-05 下午12.15.05 |
| **Total (2 years):** | **$$7,511.17 to $15,149.65** |