

UNITAR Future Global Youth Leaders Programme

Group Presentation 5

- **Group Title:**

Sunshine Plan for Alzheimer's Disease (AD) patients

- **Group Member:**

1. Leader: Albert Boxuan Zhang
2. Members: Thomas Hongling Pan



- **Project Background:**

Alzheimer's disease is becoming increasingly prevalent, with a new case diagnosed every 30 seconds in China alone. Globally, it affects one in four people over 80 and one in two over 90. The disease remains incurable, with treatments only capable of slowing its progression. While exercise rehabilitation has shown effectiveness in managing symptoms, it is often neglected due to safety concerns.

Many care institutions confine patients to locked floors for safety, but this approach accelerates the disease's progression and is inhumane. The current challenge is that while there is a large and growing population of Alzheimer's patients at high risk, there are not widely available and safe rehabilitation methods to help alleviate their condition.

- **Solution:**

Our solution involves a robot designed to enhance walking rehabilitation for elderly Alzheimer's patients with several key innovations:

1. **Safety Belt:** A quick-securing belt automatically stabilizes the elderly if they fall, reducing the risk of injury.
2. **Beidou Navigation:** The robot guides patients along a pre-set safe route, correcting deviations and minimizing the risk of them getting lost.
3. **Voice Communication:** The robot interacts with the elderly in real-time, responding to commands and providing updates, making it more intelligent and user-friendly.

4. **Health Monitoring:** A data collection device on the handle monitors heart rate, step count, and breathing during movement, preventing chronic conditions and ensuring safety.
5. **Real-Time Observation:** A camera on the robot connects to family members' phones, enabling real-time monitoring of the patient's condition.

These features address safety concerns, allowing Alzheimer's patients to engage in rehabilitative training securely. Our robots are designed for mass production, offering a scalable solution to improve patient care and safety.

● **Project Impact:**

Over the next five years, we plan to support over 50,000 Alzheimer's patients in engaging in active physical rehabilitation. We also aim to assist more than 1,000 elderly care institutions in shifting from restrictive management models, allowing AD patients to enjoy outdoor activities.

We will collaborate with the government, dedicating 2% of our profits to provide affordable assistance to patients in impoverished areas, ensuring coverage across all regions. Additionally, we will promote awareness about Alzheimer's prevention and management through lectures and online videos.

Our project is designed to directly and indirectly benefit the Alzheimer's community, improving patients' quality of life and helping them regain their freedom. Together, we can help Alzheimer's patients step into the sunshine.