A Qualitative Study on Clinical Healthcare Professionals' Beliefs and Practices Regarding Advance Care Planning for Glioma Patients

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Abstract: This study explores clinical healthcare professionals' knowledge, attitudes, and practices regarding advance care planning (ACP) for glioma patients. Using a phenomenological approach, 15 neurosurgery professionals were interviewed (May 2023–May 2024). Analysis revealed four themes: limited and passively acquired knowledge, with poor attention to glioma-specific issues; mixed attitudes (positive, negative, and neutral); infrequent and non-standardized practice; and key influences from staff competence and patient/family understanding. Overall, knowledge is superficial, attitudes vary, and practice is low. To improve ACP implementation, systematic training, glioma-specific guidelines, multidisciplinary collaboration, and tailored patient/family education are recommended.

***Keywords*:** neurosurgery, clinical healthcare professionals, glioma, advance care planning (ACP), beliefs and practices, qualitative study

1. Introduction

As a malignant tumor of the central nervous system, glioma is characterized by strong invasiveness and poor prognosis. During diagnosis and treatment, patients face challenges such as uncertain survival, increasing symptom burden, and complex treatment decisions. With the development of "precision medicine" and "patient-centered" nursing philosophies, ACP serves as an effective tool for communicating treatment goals, values, and care preferences in advance. Its application in the care of glioma patients is beneficial for improving patients' quality of life and effectively reducing decision-making pressure on families [1]. However, in current clinical practice for glioma patients, the implementation of ACP still faces certain issues, such as insufficient knowledge among healthcare professionals, lack of practical skills, and absence of institutional support. This article aims to conduct an in-depth investigation, through qualitative interviews, into clinical healthcare professionals' knowledge, attitudes, and beliefs/practices regarding ACP for glioma patients, explore key factors influencing ACP beliefs and practices, and provide a basis for hospitals to develop targeted training, with the goal of achieving standardized application of ACP in the care of glioma patients.

2. Subjects and Methods

2.1 Research Subjects

Using purposive sampling, eight clinical healthcare professionals from the neurosurgery department of our hospital between May 2023 and May 2024 were selected as study participants. Based on the principle of "information saturation" in qualitative research, the sample size was determined, ultimately including 15 participants, as shown in Table 1.

Inclusion criteria: ① Engaged in clinical diagnosis, treatment, or nursing work in neurosurgery for one year or more; ② Involved in the diagnosis, treatment, nursing, or clinical communication for glioma patients in the past six months; ③ Good verbal expression ability, able to accurately describe personal knowledge and experiences related to ACP beliefs and practices; ④ Voluntarily participated in the study and signed an informed consent form.

Exclusion criteria: ① Healthcare professionals with less than one year of experience in neurosurgery; ② Those unable to complete the full interview due to work arrangements, health conditions, etc.; ③ Those explicitly unwilling to participate.

Table 1. General Information of Research Subjects

No.	Gender	Profession	Title	Years of Experience
D1	Male	Doctor	Associate Chief Physician	13
D2	Male	Doctor	Associate Chief Physician	12
D3	Male	Doctor	Attending Physician	10
D4	Female	Doctor	Attending Physician	8
D5	Female	Doctor	Resident Physician	5

No.	Gender	Profession	Title	Years of Experience
D6	Male	Doctor	Resident Physician	2
N1	Female	Nurse	Nurse-in-charge	20
N2	Female	Nurse	Nurse-in-charge	6

2.2 Methods

2.2.1 Developing the Interview Guide

A semi-structured interview guide was developed based on a literature review and clinical considerations for glioma. Following pilot interviews with two eligible healthcare professionals, the questions were refined. The final guide explored: ① initial knowledge and current understanding of ACP; ② perceived necessity of ACP for glioma patients; ③ any prior ACP communication attempts and outcomes, or reasons for not engaging; ④ anticipated difficulties and influencing factors in ACP implementation; and ⑤ desired support to enhance ACP competency.

2.2.2 Data Collection and Analysis

One-on-one interviews were conducted in a private setting, each lasting 30-60 minutes. A trained researcher led the interviews while another recorded non-verbal cues. Transcripts were produced within 24 hours. Data were analyzed using Colaizzi's seven-step method [2]: familiarization with transcripts; extraction of significant statements; coding; grouping codes into sub-themes; refining sub-themes into core themes; describing themes with examples; and member-checking for validation.

2.2.3 Quality Control Methods

Researchers received qualitative research training and passed an assessment prior to the study. A purposive sample including both doctors and nurses with varied seniority was selected to reduce bias. During analysis, two researchers independently coded the data, with discrepancies resolved through discussion involving neurosurgery experts. A research log was maintained throughout for traceability.

3. Findings

3.1 Current Status of ACP Awareness

To ensure research quality, the two researchers involved in the study received specialized training in qualitative research before the interviews, equipping them with strong interview skills. They began work only after passing an assessment. Participants with different professional titles and years of experience were selected. By cross-referencing data from doctors and nurses, as well as senior and junior healthcare professionals, sample bias was effectively reduced. During data coding and theme extraction, two researchers independently completed the tasks first, then invited two neurosurgery experts to participate in discussions to resolve coding discrepancies and ensure objective and accurate theme extraction. The entire interview process was fully documented in a research log to ensure traceability and repeatability.

(1) Varied Levels of Awareness.

Medical staff's understanding of ACP varies significantly by seniority and experience. Senior personnel demonstrate deeper knowledge through academic exchanges and can outline its core value, yet lack detailed know-how. Junior staff mostly have only conceptual awareness or are unfamiliar with ACP.

(2) Single Source of Awareness.

None acquired ACP knowledge through systematic training. Awareness comes mainly from passive exposure such as literature, conferences, and peer discussions, resulting in fragmented understanding.

(3) Neglect of Patient Particularities.

Most staff overlook the specificities of glioma patients. Only a few senior personnel mentioned that “cognitive decline” could hinder ACP implementation but did not explore solutions further; junior staff rarely considered this issue.

3.2 Attitudes Toward ACP

(1) Positive Recognition.

Nearly half of respondents recognize ACP's value in safeguarding patient autonomy, reducing family decision-making pressure, clarifying treatment direction, and minimizing disputes.

(2) Negative Concerns.

Some worry that ACP may trigger negative emotions in patients and families, increase psychological burden, or lead to

dissatisfaction. Others cite heavy clinical workloads as a barrier to implementation.

(3) Neutral Wait-and-See Stance.

A small number hold a neutral view, acknowledging ACP's theoretical value but emphasizing the need for flexibility based on the patient's condition and family circumstances.

3.3 ACP Beliefs and Practices

(1) Low Frequency of Practice.

Only two interviewees had engaged in ACP-related communication, both passively in response to family inquiries. Most discussions occur only during critical moments and are not viewed as formal ACP.

(2) Lack of Standardized Processes.

No standardized communication procedures, scripts, or recording tools exist for glioma patients, leading to reliance on individual experience and incomplete communication.

3.4 Factors Influencing ACP Beliefs and Practices

(1) Individual Professional Competence.

Most medical staff lack communication skills for sensitive topics such as medical decision-making and end-of-life care, fearing potential conflicts.

(2) Patient and Family Awareness.

Patients and families generally lack awareness of ACP, often misunderstanding it as “shirking responsibility.” Emotional resistance and patients' cognitive decline further hinder effective communication.

4. Discussion

The awareness, attitudes, and practices of neurosurgical medical staff regarding Advance Care Planning (ACP) for glioma patients are collectively characterized by superficial awareness, diverse attitudes, and limited practice[3]. Awareness is primarily derived from fragmented, passive exposure and lacks systematic training; attitudes reflect a contradiction between recognizing its clinical value and concerns about practical risks, such as triggering negative emotions or increasing workload. In practice, communication tends to be passive, informal, and lacking in standardized tools[4].

To effectively enhance medical staff's ACP-related beliefs and practices, multidimensional measures are required[5,6,7]. This includes strengthening the professional capacities of staff through tiered training, establishing standardized ACP implementation processes aligned with disease stages, and forming multidisciplinary teams[5,6]. At the same time, targeted health education should be provided to the public and patients' families through multi-channel outreach, admission counseling, and experience-sharing activities to improve understanding, reduce resistance, and promote the orderly implementation of ACP[7].

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