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# **Novice Chinese Bariatric Nurses' Perceptions of Their Role as Bariatric Case Managers: a Qualitative Study**

## **Abstract**

**Introduction:** Bariatric Case Managers (BCM) are integral healthcare team members for patients undergoing bariatric surgery in China. As the demand for bariatric surgery increases in China, the number of BCMs has also risen. However, more is needed to know about the perceptions of novice bariatric nurses towards their role as case managers. This study aims to investigate the perceptions of novice Chinese bariatric nurses toward their roles during the early stages of their careers.

**Methods:** This qualitative study employed semi-structured individual interviews with 15 novice bariatric nurses who received training as BCMs. The interviews were audio-recorded, transcribed line-by-line, and analyzed thematically. The study was conducted in a bariatric surgery center of a public tertiary hospital in Southern China.

**Results:** Three themes emerged from the data related to the perceptions of being a BCM: "negotiating the ambiguity of the BCM role", 'establishing a core set of behaviors for the BCM role' and 'identifying areas of competence to develop a BCM role framework.' The novice bariatric nurses expressed both positive and negative feelings towards their role. They highlighted the need for further training to improve their qualifications and the importance of support from colleagues, and hospital management.

**Conclusions:** The findings illuminate the role of the BCM in China. Future research should investigate effective and acceptable job descriptions and cooperation modes between BCMs, colleagues and hospital management. We recommend using these findings to develop training programs for novice BCMs and improve their capacity to provide quality care to patients undergoing bariatric surgery.

**Keywords:** Interview; Metabolic surgery; Obesity; Support; Thematic analysis.

**Key Points:**

1. The novice bariatric nurses expressed difficulties and worries towards their roles as BCM.
2. Versatile skills and personal attributes were required to serve the BCM role.
3. BCMs were motivated and pleased that MBS candidates benefited from getting thinner, healthier, and more confident.
4. Several core competences were recognized by the novice BCMs to develop a role framework.

## **Introduction**

With over 50% of adults living with obesity, excess weight has become a public health problem in China [1]. Metabolic and bariatric surgery (MBS) is effective in treating obesity and its related metabolic syndromes, including diabetes, hyperlipidemia, hypertension, and fatty liver. [2-6]. Healthcare teams should provide lifelong follow-ups for patients undergoing MBS for better weight management, lifestyle adaptations and treatment outcomes [7, 8]. These teams may include bariatric surgeons, anesthetists, and other integrated members involving bariatric nurses, case managers, dieticians, physical trainers, and psychologists [9].

Certified bariatric nurses were introduced in the USA in 2007 [10]. They participated in all stages of the surgical process, including initial consultation, diagnosis, treatment, recovery, and follow-up care. In 2009, case management was introduced to bariatric teams in China to provide comprehensive and long-term care for patients. However, there is no such certification owing to a lack of specific formal education. Although the number of bariatric case managers (BCMs) has increased with increasing surgical procedures, the latest data show only 259 bariatric nurses providing case management services for 30 071 MBS clients [11], clearly demonstrating an imbalance in the ratio of case managers to patients. To address this situation, more Chinese nurses are being trained to be BCMs in clinics recognized by the International Federation for the Surgery of Obesity and Metabolic Disorders (IFSO). The responsibilities of BCM in China remained unclear until a specialist consensus highlighted the role should include recruiting bariatric clients, providing perioperative care, offering health education, providing follow-up services, managing data, conducting clinical research, and teaching [12]. However, there is still a formal lack of training for BCMs in China. Although some experienced specialists have achieved consensus on the responsibilities of BCMs, how novice bariatric nurses interpret their roles as “BCM” and their needs during the training and early career stages are currently unknown. This study aims to learn about the perceptions of novice Chinese bariatric nurses towards their roles as

case managers during the early stages of their careers.

## **Methods**

This study used a qualitative framework to explore novice bariatric nurses' perceptions of being a BCM. Qualitative methods are used when the research question aims to illuminate social phenomena which is not widely understood, focusing on the 'why' and 'how' of what is happening within the area of investigation [13]. Nurses who had completed their training in BCM at the X (blinded for review) were approached to participate and received information about the study. Verbal informed consent was obtained from all individual participants included in the study. Semi-structured, individual interviews were carried out in person or virtually in line with participant preference, assisted by a topic guide (**Figure 1**). Interviews were transcribed verbatim, and all data was anonymized to ensure confidentiality. Ethical approval for the study was approved by the XXXXX (blinded for review).

A thematic analysis was used to identify areas of salience that illuminated the role of the BCM in China [14]. Transcripts were read and reread to familiarize the entire data set. Line-by-line coding was conducted to identify data features, after which sub-themes were generated by grouping associated codes. These steps were moved back and forth until the themes were developed. To avoid bias, XX and XY (blinded for review) performed data analysis individually, and disagreements were discussed in person with XW (blinded for review) to reach a final consensus. The participants were invited to check the final themes and add their opinions.

## **Results**

Fifteen participants were recruited; all were females with an average age of 30.6 (see **Tables 1 and 2**). In terms of their working experiences, 2 of them had experiences of  $\geq 3$  years and  $< 5$  years, 6 participants  $\geq 5$  years and  $< 10$  years, and 7 participants  $\geq 10$  years. There were 7 junior and supervisor nurses, respectively, with only 1 nurse. Their

specific experience of being bariatric nurses was comparatively shorter, with 11 participants  $\leq$  6 months, 3 participants  $\geq$ 7 months and  $<$ 1 year, 1 participant  $\geq$ 2 years and  $<$ 3 years. All the participants were nurses before transferring to part-time bariatric nurses; 13 worked at the gastrointestinal surgical department, and the remaining 2 worked at the hepatological department. The average length of interviews was 42 minutes, ranging from 20 – 68 minutes. 12 interviews were face-to-face, and three were carried out virtually.

## **Themes**

The analysis revealed three themes that reflected the perspectives of the BCMs. Each theme is illustrated by in-vivo quotes.

### **Theme 1** Negotiating the ambiguity of the BCM role

The participants reported that in the absence of a clear role description of a BCM, there were self-reported difficulties across the pre-, peri- and post-operative phases, which were a source of stress for BCMs. In terms of encounters with patients, the role of the BCM is still relatively unknown, which could make it challenging to build trust with patients to provide care and support along the bariatric surgical continuum. BCMs seek to gain the trust of patients in the hope that communication will be two-sided, with the patient taking an interactive role in their care.

“Sometimes I feel I talk too much, I worry that my words are wrong because of the tense relationship between patients and doctors” (Participant 8)

It was reported that patients in China tended to trust surgeons over other healthcare professionals involved in multidisciplinary patient care. This information was reinforced by producing short and online videos to raise public awareness of obesity and MBS. Whether online or offline activities, BCMs aim to demonstrate the

professionalism of the bariatric surgeons and their bariatric units to gain the trust of the public and attract people living with obesity to participate in consultations and progress to BMS.

“Health communication involves thinking more about establishing the personal image of the surgeons and the hospital. It is about the construction of a discipline in BMS, that is how to promote these things” (Participant 5)

The relationships with other healthcare professionals were stated as difficult because other healthcare providers, especially nurses, neither understand what they do nor see behind what efforts they have made for health communication, patient recruitment, and keeping long-term follow-ups with patients with obesity. BCMs also tried to maintain close relationships with the other departments within their hospital and secondary hospitals by organizing free clinic activities to recruit potential patients.

“We not only communicate with patients, but we also have to communicate with our doctors and nurses which I think is very important.” (Participant 2)

The participants, who were all novices in the BCM role, reported feelings of stress owing to feeling obliged to take care of all the issues related to bariatric candidates on their own, including pre-hospital consultation, patient admission, health education and follow-ups, and general nursing responsibilities. Establishing a work-life balance was difficult, and they spent extra time at work to complete tasks in their perceived role. They had to spend their free time sending messages, communicating health, and addressing clients’ perioperative and post-hospital needs, which caused a sense of isolation and could be stressful. Some participants experienced stress from self-reported insufficient knowledge and expressed an urgent need to study further to equip themselves with sufficient knowledge of bariatric patient care to improve their confidence and ability to address the patients’ needs.

“Sometimes I can’t sleep, I follow the operation and shoot videos after a night shift and then after I must edit videos, I finish my day shift and then I need to go to the clinic with the surgeons” (Participant 8)

A lack of health communication skills was a major concern raised by the participants, who regarded writing, making short videos and live streaming as necessary skills to fulfill the role of health communications with patients. None of the participants had received any training in this area, with the tasks, especially video production, consuming a disproportionate amount of time.

“We need health communication skills, including video, editing and writing skills.” (Participant 4)

## **Theme 2** Establishing a core set of behaviors for the BCM role

To conceptualize the role of the BCM more fully, the thematic analysis found a core set of self-reported behaviors that participants felt the role should entail. Bariatric nurses brought up several skill sets to fulfill their multiple roles as case managers, including possessing sufficient knowledge of MBS and its related metabolic syndromes, health communication skills, communication, and coordination. They perceived that versatile personal attributes were required as case managers.

“To have enthusiasm...because there are too many things, if you don’t have enthusiasm or determination, there is no way to stick to it [BCM role].” (Participant 8)

BCMs thought they should care for their clients, trying to understand their thoughts and needs. They may need to be inclusive and considerate since patients with obesity may suffer from physical and/or psychological discomforts.

“You must be able to care about and understand the patient.” (Participant 2)

Most participants deemed their jobs meaningful, which motivated them to continue their roles as case managers. Different from what they previously experienced as general nurses in their wards, some thought that the happiness and uniqueness of being case managers were that they witnessed the bariatric clients becoming thinner, getting healthier, and gaining more confidence. Communication was found to be a challenging responsibility by all the BCMs, e.g., with patients, families, other healthcare professionals, and managers. Where good communication was established, leading to effective relationships, BCMs reported a sense of achievement in their work.

### **Theme 3** Identifying areas of competence to develop a BMC role framework

The thematic analysis illuminated areas within the bariatric surgical patient journey where the role of the BCM was needed. These are proposed to form the basis of a framework for the BCM role, which would assist in reducing the current ambiguity in the role, improve communication with patients and other healthcare professionals, and potentially reduce stress levels. The areas of competence within pre-, peri- and post-operative phases are explored below:

#### Pre-operatively

During this phase, BCMs reported participating in pre-hospital consultations, offering advice in areas such as weight loss, lifestyle and pre-operative preparation and assessment, and guidance on weight loss for those clients who do not meet the indications for operations. BCMs were also responsible for recruiting patients wishing to undergo BMS. Pre-hospital consultations were stated to assist in building trusted relationships with patients, which benefitted in-hospital communications and outpatient follow-ups.

“If we are involved in pre-hospital consultation, we can communicate with the patient. Such good communication will make the patient trust us during hospitalization and follow-ups; he will trust you.” (Participant 14)

#### Peri-operatively

BCMs played an active part in peri-operative nursing care. They thought they were responsible for completing the nursing evaluations before surgery and accompanying the patients to have pre-surgical assessments, facilitating discussions surrounding potential risk factors concerning BMS. BCMs highlighted the need to pay close attention to a patient’s emotional well-being, demonstrating an attitude of caring. In some instances, BCMs accompanied patients to surgery, keeping them company until they went into theatre, and some BCMs reported remaining with the patient during the whole procedure.

“Patients living with obesity are generally prone to psychological issues, which are deserving of more care and compassion.” (Participant 5)

#### Post-operatively

BCMs should provide life-long follow-ups to trace clients’ compliance with diet, exercise, and medicines to equip them with a healthy lifestyle and offer help when necessary.

#### Overall

The novices mentioned that health profiles were created for each client, and associated data, for example, demographic information, weight, laboratory results, imaging results, and complications, was put inside the profiles in an organized style within a database. In this regard, summarizing their jobs and conducting research when necessary would be easier.

“The management of the data and the database, to record and compare patients’ test results before and after surgery... follow-up reports and records of patient discomfort will be put in the database.” (Participant 10)

One also mentioned the role of conducting clinical teaching, in other words, teaching student nurses and/or newcomers in the bariatric field about how to be BCMs and care for bariatric clients.

Professional knowledge in the bariatric field was considered a basis and priority since they had to deal with different questions raised by bariatric clients during pre-hospital consultation, health communication, peri-operative health education, and follow-ups. Such knowledge involved general nursing and perioperative nursing for bariatric clients, nutrition, medicine, the etiology and treatment of obesity and associated metabolic syndromes, laboratory reports, different surgery types, and potential complications.

## **Discussion**

This study found that BCMs performed a largely implicit role, which patients and other healthcare professionals do not widely understand. BCMs perceived they should possess versatile personal traits and skillsets to handle their daily work and address patient needs. Although BCMs led busy working schedules, this was balanced with a sense of accomplishment when they witnessed bariatric clients losing weight, becoming healthier, and establishing a trusting relationship with the patients. However, BCMs could feel confused when others do not understand or recognize their roles, responsibilities, and efforts.

The majority of participants recognized the importance of good communication, whether verbal, written, or virtual. The highlight of health communication in this study may be because the Chinese government announced an action entitled ‘Healthy China

2030' where healthy weight was advocated. Therefore, the broadcast and spread of easily understood professional health information were encouraged [1, 15].

The responsibilities of providing peri-operative health education and follow-up services in this study were coherent with previous studies into general case management [16, 17]. Patient education strives to assist patients and their families in better understanding obesity, leading healthier lives, and enhancing their quality of life by considering bariatric clients' ideas and representations about their disease [18].

Although most novices listed several roles as case managers, some felt confused about the ambiguity of the role in the absence of formal role descriptors, which has been acknowledged in other studies [19, 20]. The capabilities of communication and coordination were identified as core skills of case managers in this study, which was coherent with the previous studies where introducing patients to the proper and needed healthcare services was stipulated as one of the responsibilities for case managers [10, 12, 17]. Multidisciplinary collaboration was encouraged to manage bariatric patients, caregivers, and healthcare providers and coordinate available patient resources. As the BCM role evolves in China, care must be taken for hospital management to listen to the post-holders to understand their needs and gain feedback [21] to shape the BCM role and ensure its implementation as part of the bariatric multidisciplinary team. Similar to Australia and America [10, 22, 23], educational programs for bariatric case management were also advocated nationally.

### **Strengths and limitations**

Limitations of this study included a small sample size from one Chinese public hospital and only recruited participants with limited experiences in bariatric case management. No male participants indicate a potential bias, but to our knowledge, there are no male BCMs in China. However, the strength of the study was it provided an in-depth insight into the experiences of novice Chinese BCMs. This knowledge may be transferable into

other bariatric surgical settings where the role of the case manager is established or in planning but acknowledging that different healthcare systems in other countries warrant consideration.

### **Conclusion**

The findings demonstrate a need for further research into practice and policy for BCMs, with the need for clear role profiles and to ensure robust communication across hospitals providing BMS procedures. BCMs play a major role in the pre-, peri- and post-operative care of patients living with obesity in China. The training systems for BCMs should also be adjusted and updated according to the needs of the novices so that they can be equipped with the needed skills and knowledge for quality care. Future research can be implemented to explore the viable cooperation pattern amongst bariatric teams and the detailed pathway of bariatric case management training.

**Conflict of interest:** The authors declare that they have no conflicts of interest.

**Ethical approval:** All procedures performed in studies involving human participants were in accordance of the XXXXX (blinded for review) and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

### **Consent Statement**

Informed consent was obtained from all individual participants included in the study.

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