

The Inclusion *of the* Bariatric Population

*Providing greater patient
access at a community
based hospital*

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Executive Summary

Obesity is an epidemic in the United States with over two thirds of the American population considered clinically overweight or obese. With the growth of the obese population, an exponential growth of the super-obese population has occurred resulting in 6.2% of Americans with a Body Mass Index of greater than 40 signifying they are more than 100 pounds overweight. Hospitals need to accommodate the super-obese patient population. For Auburn Memorial Hospital, a small 99-bed not-for-profit based in Auburn, New York, a modest investment in a small number of new spaces and equipment will allow for greater accessibility by this population. Design considerations include:

1. Develop a small, dedicated bariatric unit
2. Develop street-level access for bariatric patients
3. Develop a 4-10 bed bariatric unit
4. Build oversize rooms: 174-274 square feet
5. Build flexible space
6. Build specialized bathrooms
7. Build specialized entry/egress for bariatric patients
8. Provide bariatric patients with specialty bariatric beds
9. Provide bariatric patient rooms with specialized lifts and wheelchairs
10. Provide bariatric patient rooms with grab bars and non-skid flooring
11. Provide bariatric seating throughout the hospital



Source: Auburn Memorial Hospital, 2009.

As healthcare costs continue to rise rapidly and steadily, hospitals throughout the United States are being forced to make decisions in the face of adversity. Anticipating what care will be needed in the future, and what newly constructed facilities will most closely meet the needs of the public are crucial to fiscal and operational success.

For Auburn Memorial Hospital (AMH), a small 99-bed not-for-profit community hospital providing care in the Finger Lakes region of Upstate New York, prioritizing future investments is particularly pressing. Having recently conducted a large financial and clinical reorganization, AMH is seeking to provide further quality in care while exercising fiscal responsibility. With the intent to build an additional new wing with a to-be-determined program, AMH in conjunction with Holt Architects has sought solutions to some of the major design dilemmas associated with building in a hospital environment from Prof. Frank Becker's Design and Environmental Analysis 4530 course - Facilities Planning and Management in the Workplace.

With the prevalence of obesity in America increasing in parallel with the costs of healthcare, this report shall address the inclusion of the bariatric population in the new wing's operational program. More specifically, to what extent the needs for safe, efficient and effective access to the facility for this population should be integrated into a facility with the specific assets and strengths of AMH will be considered. After a three-week review of applicable literature, a series of evidence-based recommendations has been arrived at to better incorporate the bariatric user while maintaining a safe, accessible, accepting and successful environment.

Auburn Memorial Hospital (AMH)

Auburn Memorial Hospital is a community hospital serving a population of approximately 80,000 in the Finger Lakes region of Upstate New York (see Figure 1). The not-for-profit acute care facility has 99-beds and provides a full range of inpatient and outpatient services.

There are over 800 employees and 229 medical-dental practitioners working at AMH.

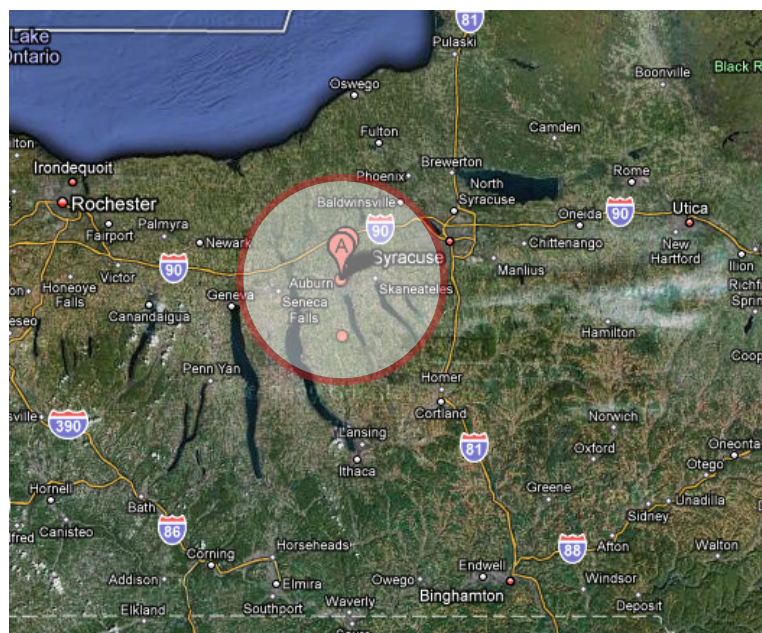


Figure 1 Map of AMH Geographical Coverage. *Image: GoogleMaps, 2009.*

STATISTICS

Notable statistics from 2008 include:

- 7,450+ operating room procedures
- 6,207 outpatient surgeries
- 20,223 patients treated in the Emergency Care Unit
- 18,411 patients treated in the Urgent Care Centers

In July of 2009 AMH became a fully accredited Level 2b Bariatric Surgery Center. Under this accreditation, AMH is recognized by the American College of Surgeons' Bariatric Surgery Center Network (ACS BSCN) Accreditation Program as a center for low-volume bariatric surgery.

The following restrictions exist on Level 2b:

- Conduct 25+ surgeries annually (Level I encompasses 125+ annual surgery facilities)
- Patients must be less than 60 years of age
- Patient BMI cannot exceed 55 for males and 60 for females
- Patients cannot have significant cardiac or pulmonary comorbid conditions

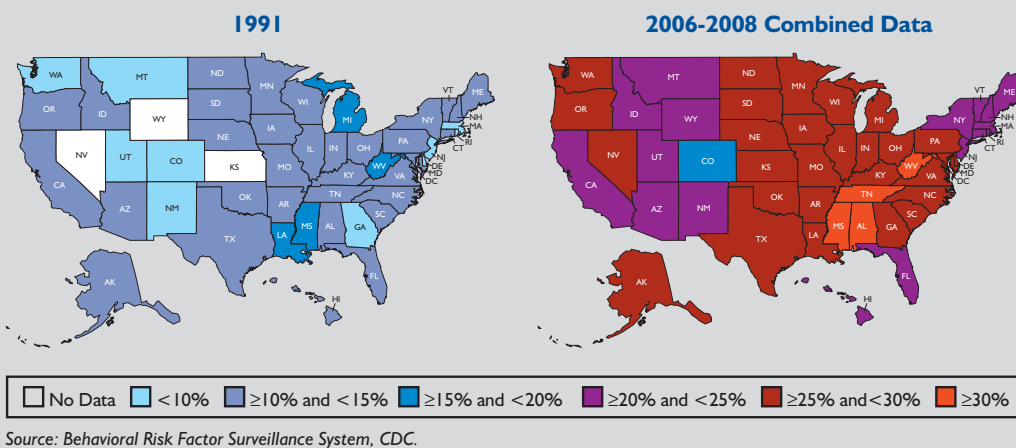
(Source: ACS BSCN, 2009)

Prevalence of Bariatric Americans

the ISSUE

Over the past thirty years, the United States has witnessed a proliferation of overweight and obesity among its population. Between 1980 and 2008, the prevalence of obesity more than doubled in adults older than 20, and more than tripled in children and adolescents aged 6-19 (Levi, 2009). While in 2004 65.5% of adults were overweight, and 31.5% were considered clinically obese, those numbers are expected to rise to 74.3% and 41.8% respectively in the next decade (Ruhm, 2007).

Figure 2 Obesity Trends Among US Adults



Unfortunately this obesity epidemic is not isolated. The most recent US data shows a significant rate of adult obesity in every state ranging between 18.9% (Colorado) to a high of 32.5% (Mississippi) (Levi, 2009). Those numbers jump to an astounding 55.3% and 67.4% respectively when including the overweight population. Figure 1 above show slightly higher obesity in the central and southern states, but it is clear that the entire US population is affected. In total, more than two-thirds of the US adult population is already overweight, and obesity rates continue to rise annually in every documented age group.

In 2008, New York state ranked 37th nationally in overweight and obese adults at 60.2% of the population; and 18th nationally in childhood (age 10-17) overweight and obesity with 32.9% effected (Levi, 2009). As this adult population of Baby Boomers ages, the added strain on the healthcare system in New York State from bariatric patients is expected to significantly increase.

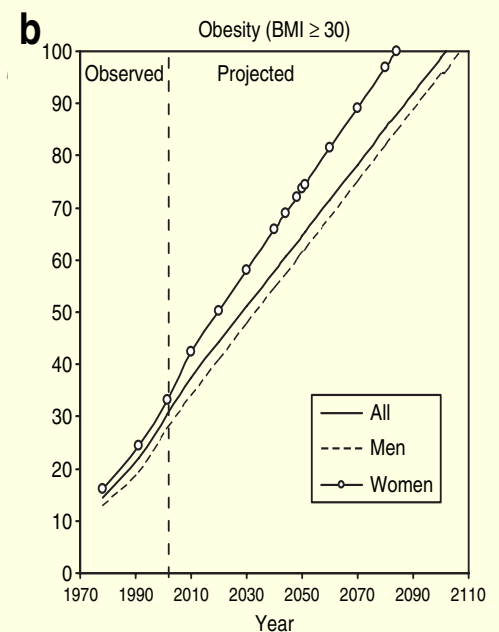
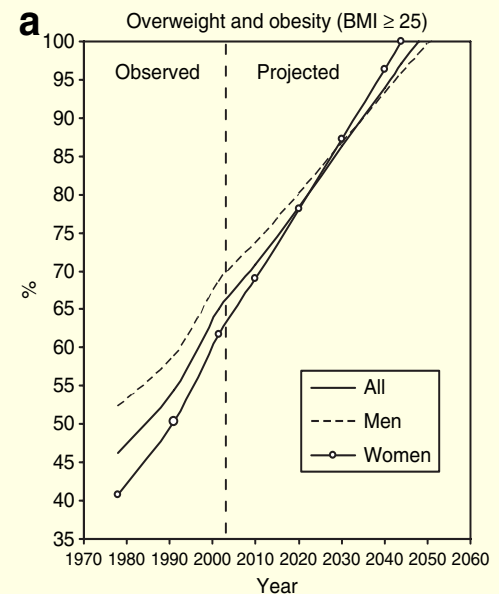


Figure 3a,b Prevalence of obesity and overweight among US adults: Observed during 1976-2004 and projected. The projected prevalence are based on linear regression models. Source: Wang, 2008.

Prevalence of Bariatric Americans: The Super-Obese

While the general trend toward an overweight and obese population is of concern, the average obese patient weighing less than 400 lbs can be accommodated by conventional medical equipment in most hospital settings.

Table 1 A Clinical Classification of Weight

Classification of Overweight and Obesity by BMI		
	Obesity Class	BMI (kg/m ²)
Underweight		< 18.5
Normal		18.5 - 24.9
Overweight		25.0 - 29.9
Obesity	I	30.0 - 34.9
	II	35.0-39.9
Extreme Obesity	III	≥ 40.0

Source: NHLBI Obesity Task Force, 1998.

The greater concern for healthcare facilities regards the unprecedented growth in the severely and super-obese population (see Figure 4). From 1986-2001 the population of severely obese patients – those with BMIs exceeding 40 (about 100 pounds overweight) – quadrupled from one in 200 in 1986 to one in 50 in 2001, while the prevalence of super-obese patients, those with a BMI above 50, increased by a factor of 5, from one in 2,000 in 1986 to one in 400 in 2001 (Berger, 2007).

As of 2006, 6.2% of American adults over age 20 were considered extremely obese (class III+) with a BMI ≥ 40. Providing healthcare to this population, who at times may exceed 1000 pounds, is exponentially more complex, dangerous and expensive than conventional healthcare.

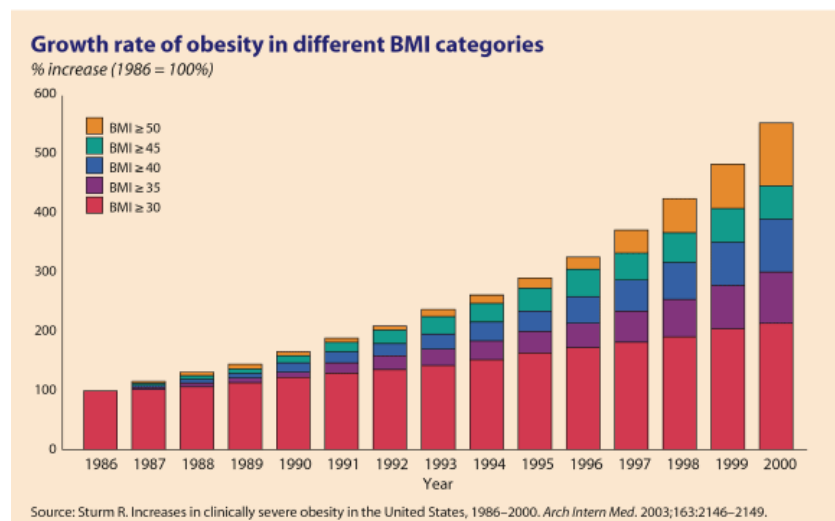


Figure 4 Growth rate of Extreme obesity in the US.

Source: Murphy-Barron, 2006.

Along with added weight, obesity carries with it greater risk factors for numerous comorbidities and medical complications. The increase in excess body fat associated with obesity results in an increase in required oxygen as well as increased strain and pressure on the heart, lungs and other organs. While body mass increases, organ size generally does not. As a result, obesity rates have a strong positive correlation with:

- Increased all-cause mortality rates
- Type II Diabetes
- Coronary Heart Disease (CHD)
- Increased incidence of cancers (endometrial, breast, prostate & colon)
- Respiratory complications (inclusive of sleep apnea and asthma)
- Osteoarthritis of large and small joints
- High Blood pressure
- Decreased vital capacity and ability to oxygenate tissue
- Hypertension
- Pulmonary embolism
- Skin infections

(Source: Mulvihill, 2006; Kopelman, 2004;
NHLBI Obesity Task Force 1998)

It has been further conjectured that obesity will halt or even reverse historic gains in American life expectancy (Ruhm, 2007). Additionally, the added cost and healthcare required to maintain similar life expectancies will only continue to rise with obesity levels.

While historically studies tie obesity to depression, low self-esteem, anxiety and poor

body image or satisfaction, recent studies suggest this link may

be slight, or nonexistent

(Wardle & Cooke, 2005). However,

that is not to say there are not psychological implications of obesity.

A secondary problem resulting from obesity is the bias confronted in the healthcare system itself. This well documented bias (Bejciy-Sprint, 2008) against obese patients from healthcare professionals contributes to what can be a vicious cycle illustrated

Figure 5c A cycle of neglected care. Source: Bejciy-Spring, 2008.

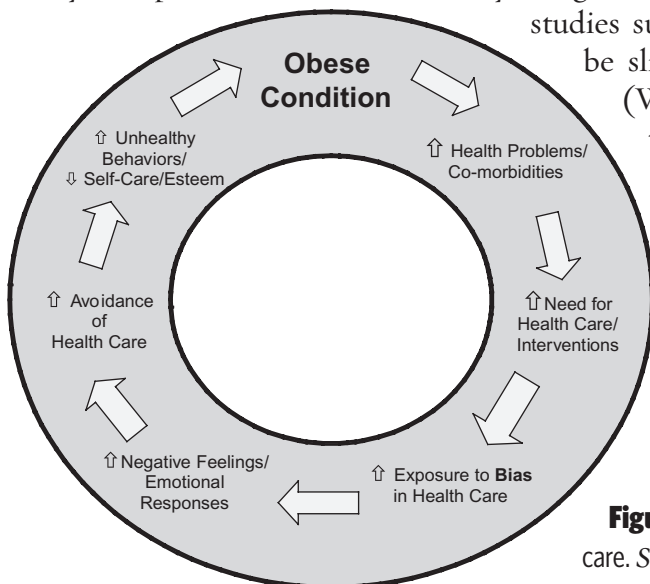
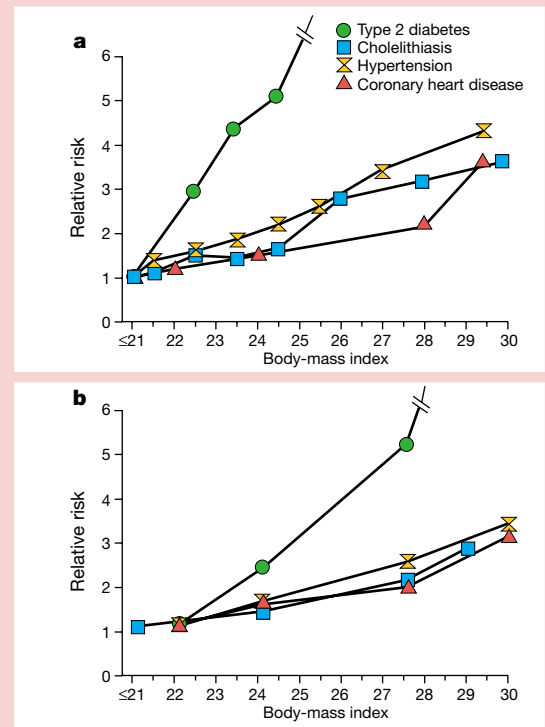


Figure 5 Relation between BMI up to 30 and the relative risk of type 2 diabetes, hypertension, CHD and cholelithiasis



a Relations for women, initially 30 to 55 years old, who were followed up for 18 years. **b** Relations for men, initially 40 to 65 years old, who were followed up for ten years

Source: New England Journal of Medicine, ref. 9 via Kopelman, 2000.

Patients

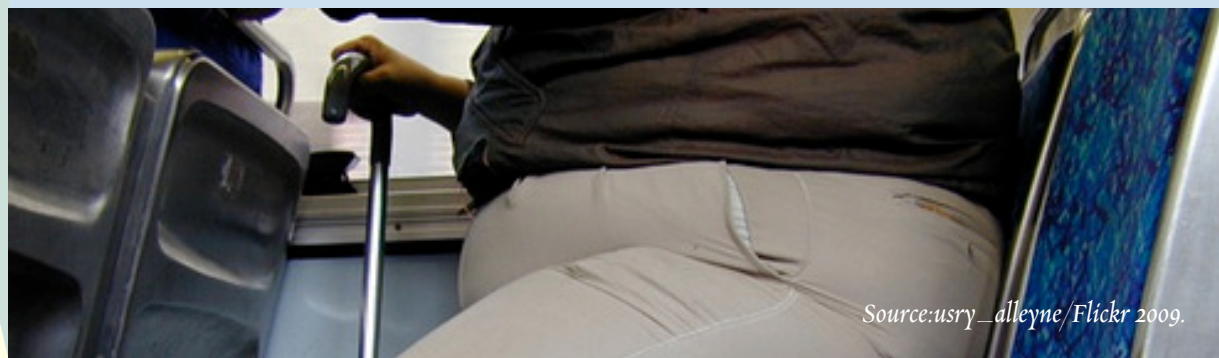
The Auburn Memorial Hospital serves a number of different groups of people in a number of different capacities. To effectively incorporate the bariatric population into the AMH setting, the needs and desires of each group of stakeholders must be taken into consideration. A summary of the applicability of the bariatric population to each group of stakeholders follows.

First, the needs of bariatric patients must be considered. Most importantly their physical needs must be met. For super-obese patients, various activities of daily living (ADLs) can be very difficult, if not impossible to do without the help of others. Independent tasks often considered trivial become true challenges for the super-obese who are hundreds of pounds overweight and have difficulty bearing and supporting their own weight. ADLs that may be difficult include: sitting up in bed, changing positions independently, lifting ones own legs to climb up or over steps, bathing, walking, using the bathroom independently, etc. Aiding these activities with the physical environment can work to give bariatric patients a sense of independence, well-being and demonstrate respect.

Sensitivity to stigmatization is also crucial to consider. A strong social stigma, defined as *weight bias*, surrounds obesity that has numerous negative effects on bariatric patients and their health. Unfortunately, this bias is particularly strong in healthcare where 69% of obese women report bias against them from doctors, and 52% report the bias was shown repeatedly (Rudd Center, 2008). As such, it is important to make the psychological well-being of patients a priority. Again, physical environment can aid in this process through providing adequate privacy for patients, appropriate furniture and equipment and adequately sized rooms and spaces. With psychological well-being, patients may recover faster, be more motivated and feel more satisfied with the care they receive.

Bejciy-Spring (2008) recommends a RESPECT model to ensure bariatric patients feel included and welcome. That model consists of:

- Rapport - An interpersonal relationship of connection, empathy and understanding that helps establish a foundation for trust, confidence and collaboration.
- Environment/Equipment - Addresses unique physical, comfort and safety needs
- Safety - Focused attention to critical safety needs
- Privacy - Protection of patient's physical, acoustical and visual privacy and dignity
- Encouragement - Foster a positive attitude to motivate bariatric patients
- Caring/Compassion - Sympathetic care that recognizes the body, mind and spirit
- Tact - Interactions that are sensitive to bias and discrimination, as well as mood, feelings and viewpoints of patients



Families of extremely obese patients are often integral to maintaining the livelihood of that individual. When ADLs become difficult it is family members who assist and provide support, both physically and emotionally. It is also family members who will often accompany bariatric patients to the hospital facilities and then stay with the family member prior and post procedure or physician visit. The patients family can also have a lot to do with patient happiness and satisfaction. Should a family be dissatisfied with the facilities or treatment they receive, they can pass those negative feelings on to the patient which in turn will reduce the likelihood of return visits and the patients perception of care they receive.

Families

For bariatric patients, there is often a correlation between their weight and family obesity levels. As such, the spaces where family members might need to stay during their visit to AMH must also be evaluated for bariatric appropriateness. Areas of particular concern are waiting areas and bathrooms for visitor use.

Physicians are ultimately responsible for the health outcomes of bariatric patients admitted to AMH. For physicians, having adequate facilities and equipment to conduct their job at optimal efficiency is essential.

Physicians

Research shows that weight bias is particularly pronounced in physicians (Rudd Center, 2008), which can potentially lead to dissatisfied patients and the perpetuation of unhealthy lifestyles and avoidance of care (see page 8). It is important to work toward reducing this bias for AMH to provide the best quality care to bariatric patients.

While social stigmatization and weight bias are difficult to counter through environmental design, a monetary and physical commitment to caring for bariatric patients that would be evidenced with the construction of a bariatric unit would work to establish a sentiment in the AMH community at large that the hospital is committed to providing top quality care to bariatric patients, regardless of inconvenience or increased cost. This should improve the way physicians view bariatric patients, and facilitate patient care.



Source: asbp.org, 2009

Nurses & Allied Health Professionals

The responsibility of transporting, moving, lifting and directly caring for bariatric patients is shouldered by EMSs, EMTs, paramedics, nurses, and allied health professionals. Despite the rapid increases in the national prevalence of obesity, increases in equipment availability to handle larger patients have not sufficiently increased in parallel to safeguard these professionals from injury. National statistics show 9.8 in 100 nurses sustained back injuries or illness in the 2006 calendar year, and sustain nearly 5 times the number of back injuries than the average worker (Bureau of Labor Statistics, 2009).

Prevention of these injuries should be a primary goal of the AMH facility for worker safety as well as for economic benefit. Research has shown that safe resident lifting programs reduce resident-handling workers' compensation injury rates by 61%, lost workday injury rates by 66%, restricted workdays by 38%, and the number of workers suffering from repeat injuries (Collins et al., 2006).



Source: Houston Press, 2009

As with physicians, a bias often exists in nurses and allied health professionals against bariatric patients. However, because this group deals more closely with patients and their families, it is even more paramount that interactions with patients be positive.

The programmatic needs of nurses and allied health professionals also change with the bariatric patients who generally requires closer medical attention due to the increased health risks associated with obesity, and their associated comorbidities. As such, nursing stations in the bariatric unit should allow for easier and more efficient access to patients.

Administration

For the administration, caring for the bariatric population should be viewed as an opportunity. There are considerable economic benefits of investing in bariatric care. Annual growth of bariatric surgery is occurring at a rate of 4.3% (Anonymous, 2009), faster than neurosurgery (4.0%), thoracic surgery (1.8%) and orthopedics (1.6%), and as such should be viewed as source of potential future income.

Since its inception, the bariatric surgery unit at AMH has also been the source of media attention for the hospital leading to favorable outcomes for many Auburn area ex-bariatric residents.

Additionally, with favorable results from bariatric surgeries, AMH can expect return visits from the higher risk, and more frequently hospitalized, bariatric population, creating loyalty, and ultimately improving hospital marketshare. To attract the bariatric population, and to concurrently reduce the insurance costs associated with bariatric-related injury in staff, investing in the infrastructure to support this population should again become a priority. Fortunately, investment in lifting equipment and other bariatric equipment and training programs has been shown to be a recoverable cost in two-three years (in most cases) (Collins, 2006).

Based on the needs and desires of the various stakeholders, as well as a review of the current American bariatric population a series of recommendations have been developed to allow for greater ease of access in all aspects relating to bariatric patient care.

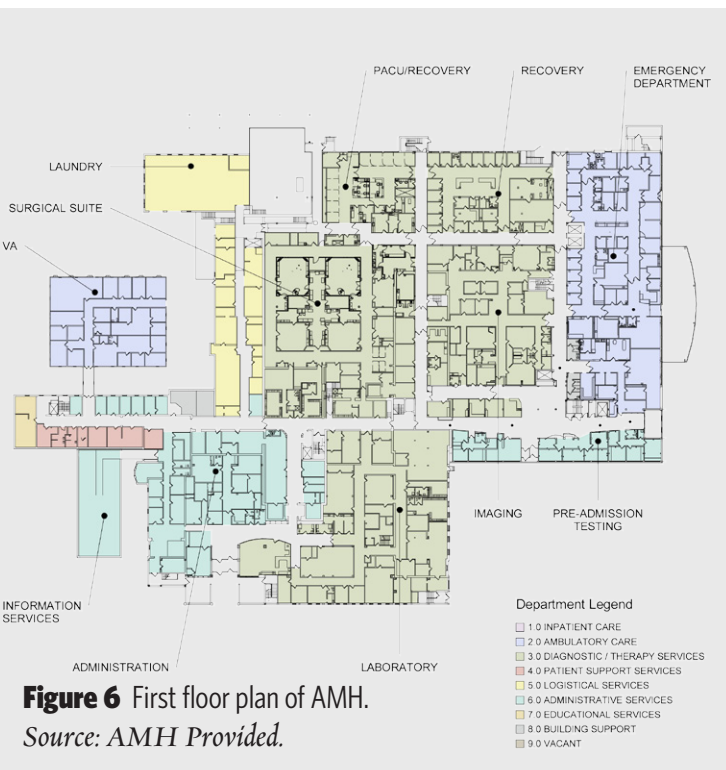
While two-thirds of the adult population is considered clinically overweight or obese (Levi, 2009), the majority of this population does not present hospitals with logistical difficulties accommodating their size and weight, as most equipment is rated for use nearing 400 lbs (as discussed previously). The costs associated with renovating the entire Auburn Memorial Hospital to accommodate the super-obese population are too high pragmatically to be realistic. Should a larger proportion of the population require bariatric accommodations, this can be revisited in the future. To minimize costs, and maximize effectiveness, improving access should be approached strategically. Specific recommendations follow.

1) Develop a small, dedicated bariatric unit.

This will enable highly skilled nurses with experience in bariatrics to efficiently care for super-obese patients and maintain a close watch on their conditions.

2) Develop street level access for bariatric patients

It is advised that a bariatric unit be developed to group all bariatric specific rooms together in an area of the hospital immediately adjacent to a street level entrance with parking or drop-off access within 100 ft of the door.



A concentrated approach fits the needs of a small community hospital like AMH, and additionally provides close proximity to specialized facilities that would potentially be needed for bariatric care such as imaging and large surgical units (see Figure 6).

3) Develop a 4-10 bed bariatric unit

Ideally, each of the 99 beds in AMH would be capable of accommodating every size and shape patient that might potentially require care, and with current trends projecting continual growth in the bariatric population, some day that may become a reality.

However, upon an analysis of both the economic cost and the size of the class III+ bariatric population it becomes clear that AMH should not attempt 100% accommodations in the near future. A model of a number of single rooms that are larger in size and equipped with the appropriate bariatric rated equipment is much more appropriate.

When deciding on what that number should be, two approaches may be taken. The first of which responds to the needs of bariatric surgery patients. Considering AMH’s Level 2b accredited bariatric surgery program requires between 25 and 125 surgeries annually, the following calculation shows an upper limit need of 5 beds and lower limit of 1 bed:

Figure 6 Calculation of Required Bariatric Beds based on Bariatric Sugeries

25-124

Bariatric surgeries annually

x

7.2

Avg Length-of-Stay at New York State Community Hospital

=

180-900

Hospital Bed Days/Year

(Source: Avalere Health LLC, 2009.)

180 - 900

÷

220 Working Days / Year

=

.8 - 4 .09

Beds Required

This calculation relies on the population of bariatric surgery patients to determine the overall bed need requirement. Since the number of annual bariatric surgeries can account for a maximum of 1.6% of total surgeries at AMH (125/7450), this may not be the best indicator.

Admission statistics of class III+ obese patients at AMH are unknown for the scope of this report and should be considered as primary indicators as to number of required rooms. Here, national statistics will be substituted: the super-obese population made up 6.2% of the entire American adult population in 2006 (NCHS, 2008), and is projected to be higher today. Assuming national statistics are indicative of AMH admissions, a lower limit of 7 (6.1 rounded up) beds should be used and a number closer to 10 should be approached informed by predictions of 9.6% of the population growing to class III obesity by 2020 (Ruhm 2007).

Figure 7 Calculation of Required Bariatric Beds based on National Statistics

6.2%

Current Class III+ Obese Americans

x

99

Beds at Auburn Memorial Hospital Facility

=

6.1

Required Beds

9.6%

Projected 2020 Class III+ Obese Americans

x

99

Beds at Auburn Memorial Hospital Facility

=

9.5

Required Beds

Rooms for bariatric patients require enlarged means of entry and egress, increased circulation space for nurses and caregivers, bariatric rated equipment, and effective means of providing privacy.

ROOM SIZE

4) Build oversize rooms: 174-274 square feet in size.

A footprint larger than that of conventional rooms is needed to accommodate the requirements of larger patients and the associated treatment equipment. Rooms should be singles to minimize crowding and preserve the dignity of bariatric patients. Wilson (2008) notes rooms for bariatric patients should be able to accommodate the bed, stretcher, lift and several caregivers simultaneously without obstructions. An approximation of the cumulative footprint of all the aforementioned based on a market survey of bariatric equipment gives the following:

Bariatric Bed:	$(4' + 3' \text{ circulation}) \times (8' + 3' \text{ circulation}) = 77 \text{ ft}^2$
Bariatric Stretcher:	$(40'' + 3' \text{ circulation}) \times (80'' + 3' \text{ circulation}) = 61.2 \text{ ft}^2$
Lift:	N/A (assume ceiling mounted in new construction)
4 Caregivers:	$4 \times (3' \times 3') = 36 \text{ ft}^2$
Total:	174.2 ft^2

This number is about 35 square feet smaller than a number arrived at by the Bariatric Room Advisory Board, a group of clinicians, designers and equipment planners assembled by the manufacturer Hill-Rom, who concluded the optimal size for super-obese patients is 14' x 15', or 210 square feet (Pelczarski, 2007). More recent recommendations from Hill-Rom have bumped room recommendation sizes to 272 square feet (Crook, 2009).

Ultimately, based on industry recommendations, rooms with a minimum of 210 square feet should be planned for bariatric patients, with optimal sizes nearing or exceeding 272 square feet. A square or squat plan is preferable to allow for easy maneuvering of patient beds and equipment.

OUTSIDE THE BOX

5) Build Flexible Space

Should AMH wish to push the boundaries of conventional hospital room construction, a

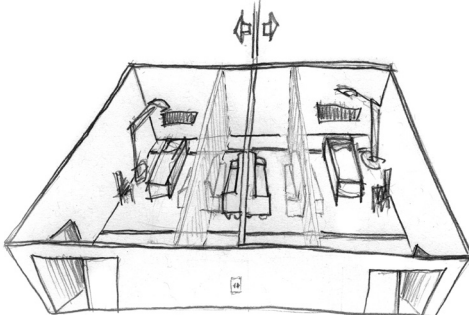


Figure 8 Automated Movable Wall Concept

model adapted from modular office construction may be considered. Fig 8 depicts an automated moving wall concept whereby the size of the room may be adjusted on demand to better accommodate the space needs of a bariatric patient without sacrificing square footage.

A more conventional modular wall system might also be looked at as an option to allow the hospital to transform with its population, creating rooms capable of being disassembled and reconfigured in a few hours rather than month-long construction.

BATHROOMS

6) Build Specialized Bathrooms

Each bariatric room should incorporate a private bathroom in addition to the base room size given previously.

Bathrooms should feature:

- Door widths in excess of 3' 6"
- Enough floor area to accommodate 2 caregivers for assistance
- Floor-mounted toilet capable of bearing 800+ lbs.
- Toilet mounted at least 24" from the wall on all sides to provide enough space for larger patients.
- Toilet should be placed toward the center of the wall to allow room on each side of the commode for assistants
- Toilet room walls should be reinforced to bear loads on grab bars and sinks of 800+ lbs.
- Slip-free flooring
- Grab bars on all sides of the walls.



Figure 9a,b Right- wide door with large opening and grab bars allows for greater patient access. Left - Bariatric reinforced toilet supports 1000+lbs.



(Source & Image: Crook, 2009.)

In addition to the prescriptive requirements above, all ADA requirements not modified or exceeded by the above should be adhered to.

ENTRY/EGRESS

7) Build specialized entry/egress

Due to the use of wider beds and equipment that exceed conventional door widths, entryways should be equal to or exceed 48 inches in width (Wilson, 2006). In fact, some beds can expand to 57" wide with side rails (Pelczarski, 2007), and should nurses need to enter in tandem with the bed, a second door 12-24" in width (see red highlight in Figure 10) should accompany the primary opening (Wilson, 2006).

Doors with automated operability (electronic opening mechanisms) are preferable to allow for easier entry and egress for nurses pushing beds and equipment that can potentially weigh in excess of three times their body weight.

All bariatric rooms should have wider entryways. Retrofitting of all hallway and room entries in the Imaging department and large surgical suites should also occur should current openings be smaller than 48".



Figure 10 Wide door with secondary opening. Source: Weasel56/Flickr.

Along with single rooms and accompanying bathrooms, a number of standalone and built-in pieces of specialty equipment should be purchased and incorporated into the bariatric unit at AMH.

BEDS //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////

8) Provide bariatric patients with specialty beds

Specialty bariatric beds should be used. These beds should be movable, support weight as close to 1000 lbs as possible. Specialized features including in-bed scales and motorized mechanisms to assist patients to turn and sit should be used (Crook, 2009).

Ideally, bariatric patients should be transported in their specialty bariatric beds to most procedures in the hospital to reduce the potential for injuries associated with transferring a super-obese patient. These specialty beds reduce the risk of bed sores. In the super-obese these risks are exacerbated due to increased perspiration, difficulty controlling body temperatures and an inability to shift positions independently (Mulvilhill, 2006). These alternatives may include, but are not limited to alternating air mattresses and fluidised bead beds.



Figure 10 Bariatric Alternating Air Mattress
Source: medicalairmattress.com, 2009.

LIFTS & WHEELCHAIRS //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////

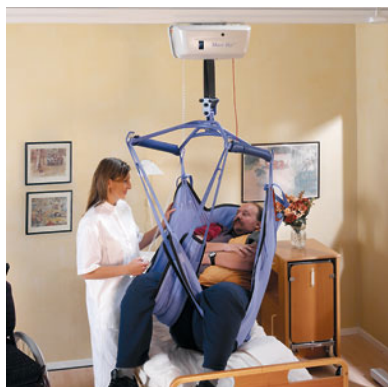


Figure 11 Overhead lift in use. Source: Crook 2009.

9) Provide bariatric patient rooms with specialized lifts and wheelchairs

Rooms should be outfitted with ceiling-integrated overhead lifts capable of bearing as close to a 1000 lb load as possible. Wheelchairs rated to the similar loads should be provided as well.

Lifts have been proven to reduce caregiver injuries in excess of 60% (Collins et al., 2006), and provide caregivers access to all sides of the patient when lifting them, in contrast to movable lifts which take up floor space and can interfere with caregiver movement. A reduction in the required number of attendants can also occur with the introduction of automated patient lifts.

GRAB BARS & NONSLIP FLOORING //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////

10) Provide bariatric patient rooms with grab bars and non-slip flooring.

In an effort to increase the independence of bariatric patients, and thus provide patients with an increased sense of dignity and self-respect, grab bars should be installed on all wall surfaces in bariatric rooms and in the hallways of the bariatric unit to aid patients in independent ambulation. Non-slip flooring should be installed to reduce falls and the complications that accompany them.

Required Equipment

SEATING

11) Provide bariatric seating throughout the hospital

The final equipment consideration regarding bariatric access is seating for both patients and bariatric family members or visitors. Due to financial constraints, replacement of all hospital furniture with bariatric rated furniture is not feasible, nor would it likely accomplish the goals of the AMH stakeholders. Again, a small percentage of the population utilizing AMH will require bariatric seating.



Figure 12 A variety of Bariatric Seating options exist today.

Source: ccfurn.com, 2009.

In line with promoting accessibility and comfort for bariatric patients, a single bariatric rated seat should be incorporated into each bariatric room planned in the unit. A few movable bariatric seats should be available on demand for rare cases when numerous family members or friends of a patient require specialty seating.

A percentage of all other seating in the hospital should be modified to support bariatric patients.

While numbers of seating throughout the hospital are unknown, this calculation should parallel the one made on page 13 and equate to approximately 5-10% of seating throughout the hospital with the majority of this seating localized on the first floor and in areas where users of the bariatric unit might frequent.

Simple prescriptive guidelines for bariatric furniture have been provided by Williams (2008) and include the following:

- Steel reinforcement for load limit to a static weight of 1000 lbs and a dynamic load in excess of that.
- A seat height of 19 inches
- An arm height of 24 inches with a grasp point on the front of the arm.
- A seat width in excess of 27–30 inches.
- A seat angle pitched forward 1 degree to assist in patient egress.
- A very firm seat

Conclusion

A survey of current United States epidemiological data reveals an epidemic of obesity that is projected to continue to rise significantly in the next decade. With two-thirds of the population already considered overweight or obese and 6.2% of the population clinically super-obese (100+ lbs overweight), the bariatric population comprises a significant number of Americans that require healthcare.

For Auburn Memorial Hospital, a recent accreditation in bariatric surgery has set the stage for continued progress toward better incorporation of the bariatric population into their program of care.

After consideration of the needs of the various hospital stakeholders and review of relevant literature, recommendations were devised to improve accessibility for the bariatric population at AMH. These guidelines show that modest investments in space and equipment can make it possible for AMH to care for this population while reducing work-related injuries in staff and providing income for the hospital. This combination of benefits is a true opportunity for AMH to begin a furthered commitment in quality care in the Auburn community.

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