Service Review of Mission Memorial Hospital

Final Report

Prepared for the Service Review Steering Committee

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*Executive Summary*
Fraser Health is one of five regional health authorities in British Columbia. It serves a population of over 1.6 million in the province’s lower mainland. Fraser Health services and facilities include an acute care network of 12 hospitals, five of which are located in Fraser East: Ridge Meadows Hospital, Abbotsford Regional Hospital, Chilliwack Hospital, Fraser Canyon Hospital and Mission Memorial Hospital. The latter of these, Mission Memorial Hospital (MMH) is the focus of a service review conducted in 2012; the findings and recommendations of the review are the subject of this report.

**Mission Memorial Hospital at a glance**

MMH serves approximately 42,000 residents of the District of Mission and surrounding areas. It is within the Mission Local Health Area (LHA), a community characterized by strong population growth. MMH is a small community hospital located 15 km from the larger Abbotsford Regional Hospital and Cancer Centre which serves a larger community and the East Fraser geographic area that also has a rapidly growing population.

MMH is comprised of an Emergency Department, an Inpatient Medical Ward, and an Ambulatory Day Care program, as well as laboratory and diagnostic imaging services. In addition, MMH has a detached 10 bed Palliative Care Ward and four small outpatient clinics run by visiting specialists. In recent years, there were between 18,000 and 21,000 annual visits to emergency. The caseload of the 22 bed Inpatient Medical Ward is predominantly geriatric and there are roughly three admissions daily; the occupancy level is often pushed to 26 patients due to a significant number of Alternate Level of Care (ALC) patients on the ward.

**Why a service review?**

Against the historical backdrop of the reduction in beds and shift in services at MMH, a number of quality of care issues in the hospital over the past year prompted the Executive of Fraser Health to conduct an independent service review of the institution. Conducted by Cushman Consulting and PPMC Inc., the review took place between February and July, 2012.

**Key findings**

The findings of the service review identified a number of issues and challenges for MMH. First and foremost, there is a lack of awareness of the role of MMH. The hospital’s current role has been determined more by default over time with the closure of several services at MMH and the shadow cast by the construction of the new Abbotsford Regional Hospital and Cancer Centre (ARH) in Abbotsford.

While there is no need for a small local “full” service general hospital within 15 km of ARH, rapid population growth in Fraser East and current capacity pressures at ARH make it clear that the MMH site needs to be retained. For example, closing the Emergency Department at MMH would, on its own, increase visits to 70,000 annually at the ARH Emergency Department.

This absence of a defined role for MMH is exacerbated by a poor organizational fit within Fraser Health. MMH is too small to find its place and to get recognition within the complex Fraser
administrative network. While multiple administrative interfaces exist, there is very little delegated authority and responsibility at the MMH site level. The end result is that Mission lacks local hospital leadership and the ability to address internal challenges. “Who is in charge?” was a question the Consultants frequently asked themselves during the Service Review. Equally, there is no defined working relationship with ARH, and surprisingly little attention appears to have been paid to potential for patient care integration in the planning of the soon-to-be-built community health centre.

The absence of an on-site site director is compounded by fragmented roles for the medical staff and nursing staff. A handful of physicians represent the medical staff in a number of areas in the hospital and in Fraser Health yet roles are ill-defined and there is no clear leadership. The nursing staff is similarly fragmented and lacks an effective senior team. There is a lack of cooperation and even friction among the nursing staff across the three clinical services—likely due to the inadequate role definition and unclear responsibilities. The hospital lacks the critical mass to deliver a quality nursing program.

The three clinical services at MMH—Emergency Department, Inpatient Ward and the Ambulatory Day Care Program—all face challenges. Ironically, Fraser Health has strong program based services with potential to improve the quality of care in Mission. Yet the programs, specifically medicine and emergency, do not provide as much attention to MMH as they do to larger sites, leaving MMH somewhat isolated.

The Emergency Department is dependent on ARH for definitive diagnosis and treatment, yet few formal arrangements are in place to expedite consultations and transfers. The subsequent isolation and lack of back-up creates a challenging ER environment at MMH. The physicians are general practitioners with no formal training in emergency medicine. The skill level is uneven, and there are occasional lapses in coverage. The medical roster is dominated by two or three regular physicians who carry a heavy burden of shifts, and is rounded out by a few individuals who sometimes reluctantly serve so as not to jeopardize the hospital’s 24/7 service.

Emergency Department nursing staff face a number of challenges: mixed confidence in the physicians, inadequate nursing supervision, and less-than-rigorous nursing education. Yet there is a palpable self-confidence and a culture of independence amongst ER nurses. The Consultants heard that Mission is a demanding setting with minimal supports, in which only the most seasoned and resourceful can handle the work pressures. There is a frontier town mentality that seems 25 years out of date and ignores the reality of the state-of-the-art ARH just down the road. This “two solitudes” situation contributes to significant friction between the two hospitals over patient transfers.

Problems on the Inpatient Ward include inadequately worked-up patients from the Emergency Department, lack of nursing confidence to identify and care for deteriorating patients thereby putting additional pressure on the ED, and the temporary loss of staff needed for patient transfers to and from ARH for investigations and treatment. Staff on the ward, to quote one of the nurses, feel they are “undereducated, unsupported, and under serviced.” The fundamental cause is the unreliable and sporadic level of medical coverage from duty doctors and personal physicians, as
well as the lack of available internal medicine support. The end result is a demoralized and stressed nursing staff, friction with the emergency room, and inferior patient care.

The third clinical service, Ambulatory Day Care, has also evolved over time and does not play a support role for the ER or the Inpatient Ward. The Ambulatory Day Care Program’s endoscopy unit is extremely busy for such a small facility and puts added strain on the nursing staff—all the while raising questions about adequate post-procedure management and safety. IV therapy caseloads exceed the limited clinic hours and are often transferred to the ER at 1400 when the Day Care closes. Interviews with the nursing staff by the Consultants left the distinct impression that the program does not get much oversight or supervision from the hospital’s senior nursing administration.

It is worth noting that while there are some architectural challenges, Mission Memorial Hospital has substantial excess physical capacity, essentially from what was vacated in the past, to expand service and improve patient flow.

**Consultants’ recommendations**

The Consultants offer a total of 22 recommendations for action. They address the complex challenges outlined above, and call for action in key areas. The following highlights reflect vital improvements that the Consultants see as essential:

- Establish a clear and strategically defined role for MMH—one that reflects a significant integration of the clinical and management programs of MMH and ARH—resulting in MMH becoming what is effectively a strong and essential second campus of ARH.

- Determine whether MMH’s Inpatient Ward should provide acute care or continuing care. This crucial decision must be addressed through a joint MMH-ARH planning approach before arbitrarily improving acute care capacity. Currently the ward is functioning largely as a chronic care ward, and the question is whether the necessary improvements in quality to become a legitimate internal medicine ward are achievable and sustainable. Alternatively it should be considered—in an age of significant care requirements for the frail elderly—whether it would be more cost effective for MMH to develop into a continuing and chronic care centre. The outcome of this decision will provide the fundamental direction and role for MMH and will lay the groundwork for integration with ARH. For either option, the current report offers a number of recommendations to develop effective and efficient programs that are coordinated with the services of ARH.

- Put in place effective leadership at MMH—specifically, a site director to oversee day-to-day operations at MMH with a well-defined relationship with ARH leadership. Similarly, put in place effective medical leadership—a part-time, funded medical leader position to oversee and coordinate physician activities and responsibilities, in conjunction with the site leader.
Simplify nursing structures at MMH by building a highly functioning team under the site director to manage the clinical services, consolidating nursing education at ARH for a more robust program, and establishing nursing rotations between the two hospitals.

A variety of recommendations are offered for the Emergency Department and Ambulatory Day Care Program. These include:

- Integrate MMH’s Emergency Program with that of ARH; over time, it would be a single program delivered on two sites.
- Establish an alternate payment system for Emergency Department physicians at MMH.
- Collaborate with ambulance services to establish protocols for direct transfer to ARH for critically ill patients.
- Provide more administrative, nursing, and medical oversight to Ambulatory Day Care.
- Develop a strategy to best meet the Ambulatory Day Care needs of the local population—including putting in place an IV therapy program that combines the roles of the Ambulatory Day Care Program, the Emergency Department, and the Home IV service.

Other recommendations address challenges for support services, specifically Pharmacy, and what is required to make quality of care and patient safety a priority. Finally, communication and engagement with internal and external stakeholders is required throughout the change process.

While some of the recommendations stand alone and can be considered and implemented independently, the strength of the Consultants’ recommendations lies in Fraser Health making some key decisions and implementing the overall package of recommendations. Health care delivery is a complex interface of interdependent services; for the best outcome, Fraser Health needs to take an overall systems approach that maximizes the integration of available resources. While Fraser Health needs to determine a specific role for MMH, the plan must stress the value of ARH to MMH and, equally, MMH to ARH, in a smooth and flowing two-campus model that improves quality, access and capacity in a sustainable system.
I Introduction

Fraser Health has commissioned Service Reviews as a strategic approach to support service transformation. Service reviews are a change management instrument in which a standardized approach is used to review a clinical site, program or activity and to present Fraser Health with a range of opportunities. Implementation of accepted recommendations will lead to enhanced dimensions of quality (accessibility, acceptability, safety, efficiency, effectiveness), align with strategic and financial directions and inform clinical integration initiatives at Fraser Health.

Service Reviews are undertaken to:

- Perform a current-state assessment of a clinical site, program service or activity. This will be based upon: an understanding of contextual factors (such as Fraser Health vision and strategic imperatives, directional and clinical service plans, hospital typology, etc.), and understanding of the population profile, the clinical profile of the site, program service or activity, a description of the care delivery model and the model-of-care and a summary of current challenges to optimum service delivery.
- Describe a desired state.
- Provide a gap analysis between the current and desired state.
- Develop a set of recommendations that, if enacted, will permit Fraser Health to address the opportunities that exist between the current and desired state and facilitate management processes that contribute to desired changes in organizational culture.

A. Key Participants in the Service Review

In January 2012, the Fraser Health Executive decided to initiate a Service Review of the Mission Memorial Hospital (MMH), and contracted with the Cushman Consultants and PPMC Inc. (hereafter referred to as the Consultants) in February 2012.

Key Fraser Health Participants

- The Executive Sponsor for the MMH Review is: Dr. Andrew Webb, VP Medicine.
- The Project Sponsor is: Dr. Shallen Letwin, Executive Director Clinical Operations, Medicine.
- The Information Analysis Team was comprised of individuals from several Fraser Health Departments: Health and Business Analytics, Finance, Quality Improvement and Patient Safety and the Strategic Transformation Team.

B. Methodology
The Consultants visited Fraser Health in mid May 2012 and, through meetings with Executive Sponsors, Project Sponsors, and members of the Project Core Team, discussed project goals and were provided with background information and some preliminary data. Tours were conducted at both MMH and Abbotsford Regional Hospital (ARH). Meetings and/or interviews with physicians, physician groups, management staff, nursing staff and patients took place during the same time. During and following this visit, additional data was requested regarding MMH and these data were provided to the Consultants and reviewed. Based on the information developed through these visits and through review of the data and information provided, the Consultants developed the current report.

The results of the Service Review of MMH are aligned with the Fraser Health vision, purpose and strategic imperatives—all aimed at achieving a higher level of system integration (see sidebar).

**Specific Deliverables**

In keeping with the defined goals of a Fraser Health Review, the Consultants and MMH Service Review Planning and Advisory Committee were asked to perform a current state assessment, describe a desired state, describe the gap between the current and desired states and provide recommendations that not only will assist the organization in addressing this gap, but also support Fraser Health’s broad change management initiative and its need to develop and embrace a different organizational culture.

The specific approach taken to accomplish the above was to:

- Review and summarize contextual factors important to the Service Review, including the Fraser Health Vision, purpose and Strategic Imperatives, the population profile of the MMH; community, the role of MMH and its relationship to ARH and other hospitals; information from the Fraser Health and District of Mission Community Health Plan for Mission, BC 2009, and relevant high level performance indicators;
- Develop a clear understanding of the current role and organization structure of MMH;
- Review current services provided at MMH, describing their strengths, weaknesses, and their service relationships with ARH;

**Fraser Health Vision, Purpose and Strategic Imperatives**

The MMH Service Review was guided by and within the context of the Fraser Health vision, purpose, values and strategic imperatives, within a vision of **Better Health, Best in Health Care**, along with its purpose to **improve the health of the population and the quality of life of the people we serve**, Fraser health is positioned to achieve a well-integrated sustainable health care system from a clinical, people and financial perspective, and promote excellence in quality and patient safety.

Service Reviews will support achievement of the Fraser Health strategic imperatives:

- **Great Workplaces** – Create workplaces where people want to come and contribute.
- **Quality and Safety** – Deliver exceptional service as an organization that pursues quality.
- **Capacity** – Create capacity across our networks.
- **Integration** – Create an integrated and sustainable health care system.
- **Research and Academic Development** - Develop as an innovative academic health care organization.
- **Progressive Partnerships** – Advance strategic alliances and progressive partnerships.
- Define options and present recommendations regarding administrative matters, the services that should exist within MMH as a community hospital within the Fraser Health Network and a preferred state for each of these services; and
- Develop recommendations regarding a medical staff model for MMH.
II Community Profile and Acute Care Directional Plan

A. Background—Mission Memorial Hospital

The District of Mission receives health services through the Fraser Health Authority and is within the Fraser East region which also includes Abbotsford, Chilliwack and Hope/Agassiz. The District of Mission, Local Health Area is currently home to a Mission Memorial Hospital (MMH), with an emergency room, 22 acute medical beds, an adjoining 10 bed hospice and a limited ambulatory care unit. Within the hospital there are four additional outpatient clinics which include respiratory, stress testing, seniors, and diabetic teaching. The Abbotsford Regional Hospital and Cancer Center (ARH), is 15 km from MMH and serves the entire Fraser East region. Other hospitals in this region include Chilliwack Hospital and Hope Hospital.

Mission Memorial Hospital (MMH) was built in 1965, operating as a full service community hospital, including OR and ICU, with 57 acute care beds. In 2000, MMH maternity services were consolidated at the then Matsqui-Sumas-Abbotsford Hospital and eight beds were closed. In 2002, the six-bed ICU was closed and the surgical unit was changed to a surgical day care unit. In 2007-2008, the OR was closed and the orthopaedic day care was transferred to Abbotsford.

B. Mission Memorial Hospital Population Profile

Population Growth

In 2010, Mission Local Health Area (Mission LHA) had a population of approximately 43,000; less than 5% of the total Fraser Health population. Highlights of the population include:

- Compared to Fraser Health overall, Mission LHA’s population is slightly younger, with roughly twice as many children and youth aged less than 16 years (21%) than seniors over 65 years (11%).
- The population in this area is expected to grow by about 21% over the next 10 years.
- Between now and 2035, the highest percentage of population growth in the Mission Local Health Area will be in the 65 years or older age group.
- Mission has about 7% of the Aboriginal population of Fraser Health
- Relative to other areas in Fraser Health, Mission is not as ethnically diverse, although ethnic diversity is on the rise.

Patient Origin

In 2010-2011:

- 997 of 4,038 (25%) of Mission residents treated in hospitals were treated in MMH
- 1,927 of 4,038 (48%) Mission residents treated in hospitals were treated in ARH
- 473 of 4,038 (12%) Mission residents treated in hospital were treated at either Ridge Meadows Hospital (RMH) or Royal Columbian Hospital (RCH)
• 120 of 160 (75%) of transfers out of MMH went to ARH
• 79 of 129 (61%) of transfers back to MMH came from ARH

**Health Status Profile**

As described in the Fraser Health Population Health Profile of 2010:

- Relative to other areas in Fraser Health, Mission has one of the higher fertility rates, and the third highest teen birth rate. It also has a lower income and education levels, as well as higher rates of depression, asthma and COPD.
- Half of Fraser East residents are overweight or obese and about 17% of residents smoke. These are major risk factors for chronic diseases such as cardiovascular disease and diabetes.
- Mental health disorders are some of the leading causes of hospitalization among residents under age 65, with cardiovascular diseases among the leading causes for residents over age 65.
- Cardiovascular disease is the leading cause of death in Mission; cancer is the second leading cause.
- About 15% of residents were born outside of Canada and one in ten residents is a visible minority.
- Based on the Overall Regional Socio-Economic Index, the Mission LHA ranks 19 out of 77 in the province and 3rd out of 12 in Fraser Health.

**Community Services Profile**

Based on 2008-2009 data, Mission has a lower rate of general practitioners per 100,000 residents (94) than British Columbia (112), but higher than Fraser Health overall (82). There are no specialists in the community; however, Abbotsford Regional Hospital is close by and as of May 2012, four visiting specialists saw patients at MMH.

Home health services provided to adults include case management, nursing, rehabilitation and home support; utilization of these services in the Mission area appears low compared to other Fraser Health LHAs, based on crude data. Information from the Community Health Plan for Mission indicates that there is not a wait list for any home health services.

In December 2006, Fraser Health released a confidential Final Draft Report: *Directional Plan for Acute Services to 2020 - Transforming Healthcare in Fraser Health*. The Consultants reviewed this Acute Care Capacity Initiative (ACCI) Report. It emphasizes that Fraser Health is the most populated health region in British Columbia, and that by 2020, the population served by Fraser Health will total 1.89 million, or 40% of the British Columbia population. Accordingly, with no changes in current utilization patterns, Fraser Health would need an additional 2,209 beds over its current bed base of 2102. If Fraser Health were able to successfully employ a number of mitigation strategies, the number of required additional beds would be reduced to 1,348. Because of the exceptional population growth in Fraser Health, a disproportionate number of these new beds are required.

The MMH access and referral patterns are primarily within the Fraser East and South regions (i.e., Abbotsford, Maple Ridge, Surrey and Langley).
The *Directional Plan* identified the following principles to guide service planning:

- There is an urgent requirement to address inadequate bed capacity.
- A shift in philosophy is required to move away from 12 semi-autonomous hospital sites to an integrated network of acute care.
- There will be a requirement to increase community sector capacity.
- It will be essential to focus on the needs of the geriatric population.
- The planning and delivery of services must embed quality and leading practice principles.
- Fraser Health will be required to implement models of care that are both innovative and that optimize use of acute care resources.
- Technology must be leveraged.
- Human resource requirements must be proactively addressed.

Some of the assumptions and recommendations in the ACCI Report were as follows:

- It is anticipated that the MMH Emergency Department will remain a Level B facility, a medium volume Emergency Department with fewer than 30,000 visits per year, and that about 5.5% of these visits will result in hospital admissions.
- The single Inpatient Ward at MMH is a 22 bed medical unit. Surgical, obstetric, pediatric, and critical care are not provided for inpatients. Patients are assessed and triaged by general practitioners in the Emergency Department and are referred mostly to ARH for additional services including diagnostic imaging and inpatient care.
- Fraser Health currently has 12 beds/100,000 population devoted to mental health. In other health authorities, the bed ratio ranges from 15 to 27 beds/100,000 population. MMH is currently not a designated facility under the Mental Health Act and does not formally provide inpatient psychiatric care. The Emergency Department does provide assessment and triage despite the fact that there are no designated spaces for interviews, nor secure spaces to hold patients prior to transfer.
- For Residential Care and Assisted Living Capacity, the following table shows the capacity in each of the Local Health Areas and what the target is. For Mission the target is higher than existing capacity for Residential Care beds but a target that has been exceeded with Assisted Living Beds. The residential care capacity should be addressed with the increase in residential care beds planned over the next couple of years.
<table>
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<tr>
<th>Local Health Area</th>
<th>FH RC Beds Effective 2011-12</th>
<th>2011 RC Bed target* (75 per 1,000 pop 75+)</th>
<th>FH AL Beds Effective 2011-12</th>
<th>2011 AL Bed target* (13.75 per 1,000 pop 75+)</th>
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<td>775</td>
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<td><strong>7,607</strong></td>
<td><strong>1,353</strong></td>
<td><strong>1,395</strong></td>
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</table>

*Note: follows MOH planning guideline

Source: FHA RC and AL planning team
III  Current State Assessment

A.  Current Role and Mandate of MMH and its Relationship with ARH

Mission Memorial Hospital (MMH) does not currently function as a full-service community hospital. Its current role has been “defined” by the historically based relationship to the former Matsqui-Sumas-Abbotsford Hospital (MSA) and to the Abbotsford Regional Hospital (ARH), which replaced it in 2008. The original MMH opened as a hospital in 1925 and was replaced by a new hospital in 1965. At the height of its operational capacity MMH had a full operating room, surgical and medication inpatients, an ICU, obstetrics and pediatrics. As outlined earlier, significant reductions in service occurred in 2001 and were followed by further reductions in 2009.

The 300-bed Abbotsford Regional Hospital and Cancer Centre (ARH) opened in 2008 and with it was additional potential capacity of 112 beds. Since then, the role and mandate of MMH has not been defined; moreover, its role within the larger integrated network of acute services in Fraser Health has also remained unclear.

B.  Organizational Structure

MMH operates within a hybrid structure common in Fraser Health that has both a program management structure as well as a site-based structure. Specifically, there is a Fraser Health Vice President of Medicine (Dr. Andrew Webb), and Executive Director of Clinical Operations of Medicine (Dr. Shallen Letwin) and a Director of the Medicine Program (Linda Herman). One of the Directors of Medicine oversees the Inpatient Ward at MMH and, until recently, also had oversight of the Emergency Room. The MMH ER now reports to one of the Directors of Clinical Programs, Emergency and Trauma (Darlene Emes). The Manager of Clinical Services for MMH reports through both Program Directors. The Site Director of Operations for MMH reports to the Executive Director of Clinical Programs and Operations, Primary Health care, Aboriginal Health and Chilliwack General and MMH (Diane Miller). The Site Director has no direct reports. All three Directors that link to MMH report up through different Executive Directors and through two different Vice Presidents.

The triad of reporting confuses accountability and responsibility for and efficiency of the operations at MMH.

Fraser Health Medical leadership for MMH consists of Dr. Willem DeKlerk (Local Head, Department of Family Practice), Dr. Maged Mikhail (Local Department Head, ER), and Dr. Andrew Edelson, (Local Medical Coordinator). Dr. Peter Barnsdale is Head, Division of Family Practice, which has no direct connection to Fraser Health, but its projects are approved by Fraser Health, the British Columbia Medical Association (BCMA) and the province’s Ministry of Health. It is an independent organization made up of community physicians who may or may not have hospital privileges. Dr. Carol Pomoroy is the President of the Medical Staff at MMH;
Medical Staff Presidents have a Fraser Health organization which attends the Health Authority Medical Advisory Committee.

Fraser Health programs should link both through the medical staff organization and the administrative organization at MMH. The local departments do not appear to exist, in spite of having local Department Heads. They are not required to meet; nor are they required to keep minutes. The physicians are members of the Regional (Fraser Health) department/program that is responsible for meetings, privileges, and quality improvement. Other structures include the Facility Advisory Committee and the Fraser Health Medical Advisory Committee.

The Consultants were struck by the large number of titles and committees and, equally, by the lack of a local focus to the work.

C. Infrastructure

As stated earlier, MMH consists of an Emergency Department, a 22 bed Inpatient Medical Ward (which often runs over capacity with 26 patients), an outpatient clinic and an unaffiliated, 10 bed hospice. The Emergency Department has 13 stretchers and the Ambulatory Day Care has five stretchers, five IV chairs, and one scope room.

The hospital has excess space because of the significant downsizing over the years, and there is potential to add beds on the Ward and to improve flow in ER with renovations of the existing physical plant.
IV  Review of Services Provided at Mission Memorial Hospital

This section presents highlights of results of the Service Review for the three MMH clinical services, as well as support services as follows:

A. Emergency  
B. Medicine  
C. Ambulatory Care  
D. Other Support Services

For each service reviewed, the Consultants provide:

- Background
- Key Performance Indicators (Clinical Efficiencies, Operational Efficiencies)
- Issues/Gap Analysis

A. Emergency

- Background

The Emergency Department had 20,098 visits in 2011-2012. This level of activity places MMH ER as a Level B facility Emergency Department and, while the community is growing and visits are increasing, it will be at this level for years to come before 30,000 visits per year are surpassed. By way of comparison, ARH has over 50,000 visits annually and is classified as a Level D, a very high volume Emergency Department.

- Key Performance Indicators: Clinical Efficiency

Volumes (Visits)

Visits to the MMH Emergency Department numbered 19,194 in 2009-2010, 18,289 in 2010-2011, and 20,098 in 2011-2012. In 2010-2011 pediatric visits accounted for 3,777 (20%) visits and in 2011-2012 fell to 3,275 visits (16%). The absolute number of pediatric visits declined by 13% and may be a trend showing gravitation of families to the pediatric service at ARH. Seniors over age 75 years numbered 1,748 (10%) in 2010-2011 and 2,290 (12%) in 2011-2012 for Emergency visits. ER volumes remained steady from 2005-2009 and then started to increase in the last 2 years. The greatest percentage of visits is among those in the 20-40 year age group; they account for 30% of the total in 2010-2011. As the population ages, an increase in the 75 years and older age group is likely to be seen, even though it comprises a small percentage of total visits at this time.

In addition, there were 1,828 IV therapy visits in 2011-2012 in the Emergency Department. This amounted to 10% of all ER visits. Slightly more patients, 1,957, were seen for IV therapy in the Ambulatory Day Care Centre, and a number of patients are transferred to the ER for completion.
of care when the clinic closes. The existing data are not precise enough to draw any conclusions about the existing and potential interface between the two services.

**Admission Rate**

There were 929 admissions through Emergency in 2010-2011, an average of 2.5 per day, and 1001 admissions in 2011-2012 for an average of 2.7 per day. The respective rates of admission for Emergency patients were 5.4% in 2010/11 and 5.5% in 2011/12. In spite of the number of pediatric Emergency visits, there is no pediatric service and all admissions are at Abbotsford Regional Hospital.

**Levels of Intensity**

The following table indicates the level of intensity of patients presenting to the MMH ER department over the past 7 years.

<table>
<thead>
<tr>
<th>CTAS</th>
<th>FY05-06</th>
<th>FY06-07</th>
<th>FY07-08</th>
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<td>2</td>
<td>277</td>
<td>2060</td>
<td>812</td>
<td>827</td>
<td>2253</td>
<td>2138</td>
<td>2378</td>
</tr>
<tr>
<td>3</td>
<td>2135</td>
<td>8370</td>
<td>4495</td>
<td>6450</td>
<td>8407</td>
<td>8593</td>
<td>8249</td>
</tr>
<tr>
<td>4</td>
<td>6102</td>
<td>5356</td>
<td>7514</td>
<td>9268</td>
<td>7173</td>
<td>6418</td>
<td>6525</td>
</tr>
<tr>
<td>5</td>
<td>2882</td>
<td>778</td>
<td>2717</td>
<td>1873</td>
<td>908</td>
<td>696</td>
<td>1231</td>
</tr>
<tr>
<td>Total</td>
<td>18726</td>
<td>18699</td>
<td>19623</td>
<td>19027</td>
<td>19194</td>
<td>18289</td>
<td>20098</td>
</tr>
</tbody>
</table>

The seven year data set for ED visits by CTAS level is variable and for a significant number of visits not available. It is difficult to draw conclusions from this data. MMH has had few CTAS level 1 patients over the seven year period. Level 2, 3 and 4 CTAS patients for the past three years has been fairly constant. Level 5 CTAS visits have been highly variable, and it would be difficult to explain whether it is a coding artifact or a reflection of inadequate primary care coverage. Comparisons to sister hospital ERs in Fraser (Delta and Ridge Meadow) are fairly consistent in terms of admission rates and CTAS percentages, the exception being the difference between the percentage of CTAS level 2 and 3 which may well be a coding variation.

The MMH ED average visits by hour of day are outlined in the graph (this page) and the
The majority of patients are seen between 1000 and 2100 with a peak occurring at 1800. RN shifts are for 12 hours starting at 0730 and ending at 1930, with some additional help from a swing shift to target busy afternoons and evenings. It is interesting to note that in 2010-2011, in the full eight hour period between 2300 and 700, on average, there were seven to eight visits to the ER.

**Average Daily Visits to MMH ER, by Time of Day, 2010-2011**

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Average Number of ER Visits/Day*</th>
<th>Average % of 24-Hour Daily Total*</th>
</tr>
</thead>
<tbody>
<tr>
<td>12:00 am – 4:59 am</td>
<td>3.6</td>
<td>7.24</td>
</tr>
<tr>
<td>4:00 am – 7:59 am</td>
<td>3.3</td>
<td>6.65</td>
</tr>
<tr>
<td>8:00 am – 11:59 pm</td>
<td>9.9</td>
<td>19.67</td>
</tr>
<tr>
<td>12:00 pm – 3:59 pm</td>
<td>10.9</td>
<td>21.76</td>
</tr>
<tr>
<td>4:01 pm – 7:59 pm</td>
<td>12.8</td>
<td>25.58</td>
</tr>
<tr>
<td>8:00 pm – 11:59 am</td>
<td>9.6</td>
<td>19.11</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>50.2</strong></td>
<td><strong>100.00</strong></td>
</tr>
</tbody>
</table>

*Numbers and percentages may not equal totals due to rounding.

**Wait Times**

<table>
<thead>
<tr>
<th>Indicators</th>
<th>2011/12 Results</th>
<th>Benchmark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wait time from Triage to Physician assessment based on national guidelines for:</td>
<td></td>
<td>MoHS Target: Meeting the guideline 90% of the time</td>
</tr>
<tr>
<td>CTAS 2 – 15 min</td>
<td>CTAS 2 (3%)</td>
<td></td>
</tr>
<tr>
<td>CTAS 3 – 30 min</td>
<td>CTAS 3 (3%)</td>
<td></td>
</tr>
<tr>
<td>CTAS 4 – 60 min</td>
<td>CTAS 4 (4%)</td>
<td></td>
</tr>
<tr>
<td>CTAS 5 – 120 min</td>
<td>CTAS 5 (5%)</td>
<td></td>
</tr>
<tr>
<td>% of Patients Admitted from Emergency Department to an Inpatient bed within 10 hours of decision to admit</td>
<td>47%</td>
<td>MoHS Target: 80%</td>
</tr>
</tbody>
</table>

The MMH ER does not meet the Ministry of Health Benchmarks for Wait Times as noted above on any of the CTAS levels.

- **Key Performance Indicators: Operational Efficiency**

**Physical Capacity**

The MMH Emergency Department has 13 stretcher bays that include one trauma room, three cardiac monitored bays, one treat and release area, one isolation room, one EHS bay and six general areas. There are no private rooms and the admitting/triage area is extremely small and very confined.
Staffing

The baseline staffing in the ER is one patient care coordinator, one unit clerk, and three RN’s for days, one RN and one unit clerk for evenings (1100 – 2300 hrs) and one unit clerk and one RN for nights (including a charge nurse). This staffing is compromised if a nurse has to accompany a patient to ARH for testing or transfer which appears to occur with frequency—for example, for 67 CT scans in 2011-2012. There is a problem with sick time and staff shortages are not uncommon.

A psychiatry liaison nurse is available from Monday to Friday 0800 – 1500 but works out of the community mental health office (off-site) if not needed in the Emergency Room. Physiotherapy, Social Work, and Home Health are available for consults during their regular hours on the Inpatient Medical Ward. The limited respiratory therapy support is only available while the therapists are seeing patients in the pulmonary function lab.

Direct Hours of Care per Visit (2011-2012)

<table>
<thead>
<tr>
<th>Department</th>
<th>304.71.3102000</th>
<th>308.71.3100000</th>
<th>310.71.3100000</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Emergency General RMH</td>
<td>Emergency DH</td>
<td>Emergency MMH</td>
</tr>
<tr>
<td>YTD Budget</td>
<td></td>
<td>YTD Budget</td>
<td>YTD Budget</td>
</tr>
<tr>
<td>Total Pt Activity (visits)</td>
<td>28,324</td>
<td>26,897</td>
<td>21,690</td>
</tr>
<tr>
<td>Total (UPP) Hrs of Care</td>
<td>70,516</td>
<td>67,001</td>
<td>28,376</td>
</tr>
<tr>
<td>RN (UPP) Wrkd Hrs/Pt Activity</td>
<td>1.87</td>
<td>2.09</td>
<td>1.31</td>
</tr>
<tr>
<td>LPN (UPP) Wrkd Hrs/Pt Activity</td>
<td>0.52</td>
<td>0.40</td>
<td>0.00</td>
</tr>
<tr>
<td>RCA (UPP) Wrked Hrs/Pt Activity</td>
<td>0.10</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Total (UPP) Hrs of Care/Pt Activity</td>
<td>2.49</td>
<td>2.49</td>
<td>1.31</td>
</tr>
<tr>
<td>Total Patient Visits</td>
<td>28,324</td>
<td>26,897</td>
<td>21,690</td>
</tr>
<tr>
<td>Total Cost per Visit</td>
<td>194</td>
<td>184</td>
<td>128</td>
</tr>
</tbody>
</table>

Notes: RCA – Registered Care Aide, LPN – Licensed Practical Nurse, RN – Registered Nurse
DH – Delta Hospital, RMH – Ridge Meadows Hospital

The MMH Emergency Department does not have either Care Aides or LPN’s on their regular staff schedule. The direct care hours per ER visit are lower than the comparator hospitals of
Ridge Meadows Hospital and Delta Hospital. Unfortunately, this does not compare intensity of care so it is difficult to draw conclusions about staffing levels and efficiencies.

**Physician Coverage**

Physician coverage at the MMH Emergency Department is through a General Practitioner Group providing 24/7 coverage. Two physicians provide 40% of the coverage, and additional coverage is provided by a mix of full and part time general practitioners. There is a Medical On Call Physician Contract (MOCAP) for the Emergency Department. It stipulates the physician must be available by telephone within 10 minutes and available to be on-site urgently but no later than within 45 minutes. This is for 27/7/52 coverage. The daily stipend, with no adjustment for weekends and holidays, works out to $616. There is no funding to cover any inpatient admissions. There have been occasional gaps in physician coverage, and problems with patient turnovers in the Emergency Department and the Inpatient Ward.

- **Issues/Gap Analysis**
  - There have been challenges with 24/7 physician coverage, and there is an uneven pool of skills and formal training.
  - The Emergency Department has little support from the Ambulatory Day Care Unit due to limited hours of service, and IV therapy cases are regularly transferred from the clinic to the ER for completion of treatment.
  - Support services are limited for Laboratory, Medical Imaging and Pharmacy (see section below re: Support Services.)
  - Respiratory therapy support is minimal.
  - Once patients are admitted to the ward, they are transferred to the care of a GP with admitting privileges. Frequently there are problems as patients are often held in the ER either for lack of ward GP coverage, or due to individual physician practice patterns related to perverse financial incentives. There have been problems with inadequate physician coverage.
  - Until recently they did not have any specialist support other than a loose arrangement that did not appear to be working.
  - The nursing staff are under pressure to deal with patients of varying degrees of complexity without the required staffing or supports. Nurses are frequently required to accompany patients on transfer or for tests thereby exacerbating the staffing situation. The lack of constant physician presence adds to the pressure, and nursing shortages on specific shifts, significant sick time, overtime, and high turnover are problematic.
  - The physical plant in the Emergency Department is not optimized for good patient care. The triage area is extremely small and a better layout for the entire department could enhance workflow.
  - Adverse patient outcomes and safety concerns have led to a number of reviews in the past 18 months, calling into question the quality of physician and nursing care in the ER.
- Ambulance service will bypass MMH if a cardiac patient needs interventional cardiology—instead, the patient will be taken directly to Royal Columbian Hospital. However, there seems to be little in the way of other bypass protocols in place for more critically ill patients to go directly to ARH.

**B. Inpatient Medical Ward**

- **Background**

  The 22 bed Inpatient Medical Ward serves a distinctly geriatric caseload, and has a high percentage of ALC patients which often stretches capacity to 26 beds. It is a general practice run ward and has no significant support from internal medicine consultants. The ward is the remaining inpatient service from the original 57 bed full service hospital built in 1965.

- **Key Performance Indicators: Clinical Efficiency**

  **Volumes (Cases and Patient Days)**

  The number of cases admitted to the Inpatient Medical Ward has averaged 1,087 over the past four years, from a high of 1,129 in 2009-2010 to a low of 1,024 in 2011-2012. Roughly 90% of patients are admitted through the ER and 8% were transfers from other hospitals, principally ARH. This translates into a little under an average of 3 admissions per day.

  The total number of inpatient days for the last four year period was 33,662 for an annual average of 8,416. Of interest, the number of inpatient days has dropped year by year from 8,924 to 7,801—by 1,123 days (13%), over the past four years.

  **Alternate Level of Care (ALC)**

  Over the same period the number of acute stay inpatient days dropped progressively from 7,004 to 5,771 (down 1,233 days or 18%); ALC days increased from a low of 1,471 to a high of 2,030. In 2011-2012, ALC days numbered 2,030, while acute days were 5,771 (26% of inpatient days). This shows a dramatic shift in the patient mix, workload and, more importantly, patient needs. While ALC is a nationwide challenge for hospitals, it is clear that many Mission patients “bypass” MMH for internal medicine services at ARH. In 2010-2011 MMH had only 60% of all the medical admissions to hospital of Mission residents. ARH accounted for most of the difference; the split was even more pronounced for non-interventional cardiology.

<table>
<thead>
<tr>
<th>Clinical Group</th>
<th>Acute Days</th>
<th>% out of total acute days</th>
<th>Ave Acute Days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiac Health</td>
<td>406</td>
<td>6%</td>
<td>4.3</td>
</tr>
<tr>
<td>Medicine</td>
<td>3568</td>
<td>57%</td>
<td>5.4</td>
</tr>
<tr>
<td>Neurosciences</td>
<td>328</td>
<td>5%</td>
<td>5.0</td>
</tr>
<tr>
<td>Surgery</td>
<td>1645</td>
<td>26%</td>
<td>5.2</td>
</tr>
<tr>
<td>Perinatal</td>
<td>1</td>
<td>0%</td>
<td>0.6</td>
</tr>
<tr>
<td>Psychiatry</td>
<td>216</td>
<td>3%</td>
<td>5.5</td>
</tr>
<tr>
<td>Others</td>
<td>131</td>
<td>2%</td>
<td>4.5</td>
</tr>
</tbody>
</table>

Notes: acute days shown only, excludes all EAR and ALC days

*Clinical Groups are determined by CMGs as per ACCI methodology*
The following table shows the mix of service categories on the ward. Not surprisingly, the caseload is mostly medicine (57%) with a small amount of cardiology and neurosciences, which probably represents heart failure and stroke. Surgery accounts for 26% of cases—somewhat higher than anticipated, given the resources of the hospital—but probably represents transfers back from other hospitals and non-operative cases.

**Resource Intensity Weights (RIW) by Major Clinical Categories (MCC)**

The average RIW of cases over the past five years is set out in the table below. The overall trend is a decrease in the average RIW, which indicates less intensity and acuity of patients. (Note that there is an anomaly in the data on line 18 listing Burns with an average RIW of 48.2 for 2007-2008.) The single consistent exception is for Mental Diseases and Disorders (MCC 17) which could well be a proxy for Dementia because of the shift to older, more chronic and, ultimately, more ALC patients. This observation is supported by the fact that there is no in-house capacity at MMH to provide psychiatric services.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Diseases &amp; Disorders of the Nervous System</td>
<td>1.8</td>
<td>1.6</td>
<td>2.0</td>
<td>1.3</td>
<td>1.5</td>
</tr>
<tr>
<td>2</td>
<td>Diseases &amp; Disorders of the Eye</td>
<td>0.5</td>
<td>2.3</td>
<td>2.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Diseases &amp; Disorders of Ear Nose Mouth &amp; Throat</td>
<td>1.1</td>
<td>0.7</td>
<td>0.5</td>
<td>0.4</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Diseases &amp; Disorders of the Respiratory System</td>
<td>1.1</td>
<td>1.1</td>
<td>1.1</td>
<td>0.9</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Diseases &amp; Disorders of the Circulatory System</td>
<td>1.3</td>
<td>1.1</td>
<td>1.1</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Diseases &amp; Disorders of the Digestive System</td>
<td>0.8</td>
<td>0.7</td>
<td>0.7</td>
<td>0.7</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Diseases &amp; Disorders of the Hepatobiliary System &amp; Pancreas</td>
<td>1.1</td>
<td>0.8</td>
<td>0.7</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Diseases &amp; Disorders of the Musculoskeletal System &amp; Connective Tissue</td>
<td>1.1</td>
<td>1.6</td>
<td>1.4</td>
<td>1.2</td>
<td>1.2</td>
</tr>
<tr>
<td>9</td>
<td>Diseases &amp; Disorders of the Skin Subcutaneous Tissue &amp; Breast</td>
<td>1.2</td>
<td>1.8</td>
<td>0.9</td>
<td>1.5</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Diseases &amp; Disorders of the Endocrine System Nutrition and Metabolism</td>
<td>1.8</td>
<td>1.4</td>
<td>0.9</td>
<td>0.9</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Diseases &amp; Disorders of the Kidney Urinary Tract &amp; Male Reproductive System</td>
<td>1.4</td>
<td>1.0</td>
<td>0.8</td>
<td>0.8</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Diseases &amp; Disorders of the Female Reproductive System</td>
<td>1.8</td>
<td>0.5</td>
<td>0.6</td>
<td>0.6</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Pregnancy &amp; Childbirth</td>
<td>0.3</td>
<td>0.5</td>
<td>0.3</td>
<td>0.3</td>
<td>0.4</td>
</tr>
<tr>
<td>14</td>
<td>Newborns &amp; Neonates with Conditions Originating in Perinatal Period</td>
<td>0.6</td>
<td></td>
<td>0.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Diseases &amp; Disorders of the Blood &amp; Lymphatic System</td>
<td>1.1</td>
<td>1.0</td>
<td>0.9</td>
<td>0.8</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Multisystemic or Unspecified Site Infections</td>
<td>1.4</td>
<td>2.1</td>
<td>1.0</td>
<td>0.9</td>
<td>1.2</td>
</tr>
<tr>
<td>17</td>
<td>Mental Diseases &amp; Disorders</td>
<td>1.0</td>
<td>1.4</td>
<td>1.9</td>
<td>1.8</td>
<td>2.5</td>
</tr>
<tr>
<td>18</td>
<td>Burns</td>
<td>48.2</td>
<td>1.4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>Significant Trauma Injury Poisoning &amp; Toxic Effects of Drugs</td>
<td>0.9</td>
<td>0.9</td>
<td>1.1</td>
<td>1.1</td>
<td>1.0</td>
</tr>
<tr>
<td>20</td>
<td>Other Reasons for Hospitalization</td>
<td>2.1</td>
<td>1.6</td>
<td>1.7</td>
<td>1.7</td>
<td>2.0</td>
</tr>
<tr>
<td>99</td>
<td>Miscellaneous CMG &amp; Ungroupable Data</td>
<td>0.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All MCCs</td>
<td>MMH Acute Utilization - Average RIWs by MCC</td>
<td>1.3</td>
<td>1.3</td>
<td>1.2</td>
<td>1.1</td>
<td>1.1</td>
</tr>
</tbody>
</table>
The following table lists the top 15 CMG’s by number of cases for 2010-2011.

**Fraser Health Authority - Mission Memorial Hospital**

**Top 15 CMGs by number of cases**

**Data Source: CIHI DAD**

**Fiscal Year: 2010/11**

<table>
<thead>
<tr>
<th>Case Mix Group</th>
<th>All Cases</th>
<th>Typical Cases*</th>
<th>ELOS**</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cases</td>
<td>Days</td>
<td>ALOS</td>
</tr>
<tr>
<td>139:Chronic Obstructive Pulmonary Disease</td>
<td>87</td>
<td>704</td>
<td>8.1</td>
</tr>
<tr>
<td>806:Convalescence</td>
<td>63</td>
<td>1,215</td>
<td>19.3</td>
</tr>
<tr>
<td>138:Viral/Unspecified Pneumonia</td>
<td>47</td>
<td>258</td>
<td>5.5</td>
</tr>
<tr>
<td>811:General Symptom/Sign</td>
<td>45</td>
<td>364</td>
<td>8.1</td>
</tr>
<tr>
<td>249:Enteritis</td>
<td>45</td>
<td>281</td>
<td>6.2</td>
</tr>
<tr>
<td>255:Gastrointestinal Obstruction</td>
<td>44</td>
<td>200</td>
<td>4.5</td>
</tr>
<tr>
<td>257:Symptom/Sign of Digestive System</td>
<td>44</td>
<td>164</td>
<td>3.7</td>
</tr>
<tr>
<td>196:Heart Failure without Cardiac Catheter</td>
<td>42</td>
<td>330</td>
<td>7.9</td>
</tr>
<tr>
<td>487:Lower Urinary Tract Infection</td>
<td>32</td>
<td>157</td>
<td>4.9</td>
</tr>
<tr>
<td>254:Gastrointestinal Hemorrhage</td>
<td>31</td>
<td>141</td>
<td>4.5</td>
</tr>
<tr>
<td>287:Disorder of Pancreas except Malignancy</td>
<td>27</td>
<td>99</td>
<td>3.7</td>
</tr>
<tr>
<td>026:Ischemic Event of Central Nervous System</td>
<td>22</td>
<td>388</td>
<td>17.6</td>
</tr>
<tr>
<td>810:Palliative Care</td>
<td>21</td>
<td>99</td>
<td>4.7</td>
</tr>
<tr>
<td>437:Diabetes</td>
<td>19</td>
<td>85</td>
<td>4.5</td>
</tr>
<tr>
<td>040:Seizure Disorder</td>
<td>17</td>
<td>47</td>
<td>2.8</td>
</tr>
<tr>
<td>All Other CMGs</td>
<td>506</td>
<td>3,610</td>
<td>7.1</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td>1,092</td>
<td>8,142</td>
<td>7.5</td>
</tr>
</tbody>
</table>

*typical* cases as coded by CIHI reflect single-site treatments of patients who were not deemed to have a disproportionately large length of stay. Journeys that required any sort of transfer from/to another acute site, deaths, and 'sign-outs' are excluded.

**ELOS is relevant to typical cases as only these are considered for its calculation**

Only 68% of patients (740 of 1,092 cases) fall into the typical category which, again, reflects long length of stays and the number of transfers to hospitals offering higher levels of service for sicker patients. This is more evident in the total number of days in hospital, where the typical category accounts for 50% of the total days (4,048 of 8,142). Overall the Average Length of Stay in 2011-2012 was 7.6 days which dropped year by year since 2008-2009 when it was 8.1 days.

**Transfers**

As indicated earlier, the limited diagnostic and treatment capacity of MMH results in a large number of transfers to other hospitals, and also a significant number of patients sent back to MMH for completion of care once the acute intervention phase is complete.
Over the three year period from 2008-2009 to 2010-2011, 644 patients were transferred to other hospitals, with 477 of these going to ARH. The annual averages in this period were 214 for transfers and 159 for transfers to ARH. While the number dropped significantly in 2010-2011 to 160 and 120 respectively, there are no data for 2011-2012; for this reason it would not be prudent to suggest a trend.

In the same time period, there were 339 transfers back to MMH, or an average of 113 per year. ARH sent 179 patients (53%) back for an average of 60 per year.

Unfortunately, for transfers out the data do not differentiate between patients sent directly from the ER and those sent from the ward post admission to MMH through the ER. This information would provide another indication of the Inpatient Ward’s capacity to handle sicker patients. Nonetheless, the data do indicate that a MMH is very dependent on larger hospitals in the area, specifically ARH, for more sophisticated and specialized medical care.

Performance Indicators: Operational Efficiency

Funded Beds and Additional Capacity

There are 22 funded medicine beds at MMH with an additional six overflow beds which are not funded, but frequently used. There is unused space in the facility, where the previous ICU and OR were located. This is currently used for storage.

Staffing

For the inpatient unit, staffing consists of care aides, licensed practical nurses (LPNs), and registered nurses (RNs). A primary care nursing model is used to deliver patient care. Baseline staffing (at the time of the review) includes:

- **Day Shift:** (0730 – 1845) 1 unit clerk, (0630 – 1430) 1 care aide, (0715-1457) 1 patient care coordinator (PCC), (0730 – 1930) 3 LPNs and 2 RNs
- **Evening Shift:** (1430 – 2230) 1 Care Aide
- **Night Shift:** (1930 – 0730) 2 LPNs and 2 RNs

Direct Care Hours per Visit

Compared to its peer hospitals for 2012, the total RN direct hours are lower compared to the average of its comparator hospitals of Ridge Meadows Hospital and Delta Hospital. Total direct LPN hours are considerably higher with Direct Care Aide Hours in the middle. Overall total direct care hours are above average. These are noted in the table below. Whether the mix of RN/LPN/Care Aide hours is correct depends on the intensity of care and as this is not measured it is difficult to draw conclusions about staffing levels and efficiencies.
## Hours of Care Report

<table>
<thead>
<tr>
<th>Department</th>
<th>Ridge Meadows</th>
<th>Delta Hospital</th>
<th>Mission Memorial</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Medical</td>
<td>Medical</td>
<td>Medical</td>
</tr>
<tr>
<td>YTD Actual</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Pt Activity (days) *</td>
<td>2,468</td>
<td>3,447</td>
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<tr>
<td>Staffed Beds</td>
<td>7</td>
<td>9</td>
<td>24</td>
</tr>
<tr>
<td>Total (UPP) Hrs of Care</td>
<td>14,402</td>
<td>18,368</td>
<td>52,040</td>
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</table>

<table>
<thead>
<tr>
<th></th>
<th>Ridge Meadows</th>
<th>Delta Hospital</th>
<th>Mission Memorial</th>
</tr>
</thead>
<tbody>
<tr>
<td>RN (UPP) Wrkd Hrs/Pt Activity</td>
<td>2.7</td>
<td>2.35</td>
<td>1.94</td>
</tr>
<tr>
<td>LPN (UPP) Wrkd Hrs/Pt Activity</td>
<td>1.92</td>
<td>2.37</td>
<td>2.98</td>
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<tr>
<td>RCA (UPP) Wrked Hrs/Pt Activity</td>
<td>1.21</td>
<td>0.61</td>
<td>1.01</td>
</tr>
<tr>
<td>Total (UPP) Hrs of Care/Pt Activity</td>
<td><strong>5.84</strong></td>
<td><strong>5.33</strong></td>
<td><strong>5.93</strong></td>
</tr>
</tbody>
</table>

Notes: RCA – Registered Care Aide, LPN – Licensed Practical Nurse, RN – Registered Nurse
DH – Delta Hospital, RMH – Ridge Meadows Hospital

The allied health support for this unit is as follows:

- Home Health Liaison – 0.5 FTE, Monday, Tuesdays and Thursdays from 0800-1430.
- Social Work and Recreational Therapy are available Mondays to Fridays during day shifts.
- Occupational therapy is available 3 days a week and Speech and Language Therapy is very limited with 3 hours a week to perform swallowing assessments.
- Physiotherapy is also available during weekdays but also services other sites every 3 months.

### Physician Coverage

The Inpatient Ward is covered by general practitioners with admitting privileges at MMH. Until very recently there was no specialist coverage. Since the site visit in May, a specialist in internal medicine is available for half days during the week. There is a MOCAP contract for ward coverage which stipulates that the physician must be available by telephone within 15 minutes and available to be on-site within 16 hours of receiving the call. This contract covers availability between 0800 Monday until 0800 Friday. The daily stipend is roughly $192. There is no alternate funding to cover inpatient admissions.
Issues/Gap Analysis

Through interviews, a review of data and background information, a number of issues pertaining to the Inpatient Medicine Ward were identified, as follows.

General practitioner (GP) coverage is the major challenge on the ward. One nurse who was interviewed called it “the ward with no doctor.” There is little in the way of financial incentives and until recently no internal medicine support. As a result, continuity of care is a patient safety issue. Coverage by the duty doctor is spotty; this is compounded by the fact that there is little support from the patients’ personal physicians, who may/may not have admitting privileges. The roster of available GPs who have admitting privileges has been reduced from 25 to 16 over the past few years. A physician on-call roster is in place but ends on at 1700 on weekdays and at 1100 or 1200 on weekends when the on call defaults to the ER physicians. It has been noted that there is often no handover between physicians and there has been delays in addressing abnormal diagnostics and changes in condition. (A recommendation for internal medicine coverage was made, and was recently introduced half days on weekdays.) Other reasons for lack of handover included lack of access to support services, complexity of patient population and increased number of patients without a GP.

Other challenges and issues include:

- A Most Responsible Physician (MRP) policy was updated in April 2011 to address some of the gaps in communication and continuity noted above. This alone will not address the more fundamental issues, and there is no guarantee this policy will be effective.

- While there are legitimate concerns about quality and patient safety, a formal structure with processes is necessary for improvements. Although linked to the Medicine Program there are no formal mechanisms to educate and implement clinical practice guidelines. There appear to be efforts to educate but the frequency with which certain practices are required to be used may be low and skill level may not be maintained.

- Patients admitted to the Inpatient Ward through the Emergency Department often have only partial workups and this, coupled with high acuity levels, put added stress on ward staff. Nursing staff have indicated that they do not get complete orders on transfer. There have been complaints about the cumbersome and bureaucratic tools that were introduced, SBAR assessment tools, to communicate about patients whose conditions might be deteriorating.

- There is no IV team, no respiratory therapy and limited pharmacy support which, along with the lack of an effective internal medicine consultation service, make the Ward a stressful working environment for nursing staff, many of whom are relatively inexperienced and end up leaving.

- Nurses must travel to the ER department to obtain medications when medication orders are not reviewed in a timely fashion by pharmacy and available in the automated dispensing cabinet. This is time consuming for the nurses and takes them away from inpatient care.

- As with the ER department, nurses are often required to accompany patients on transfer or for tests/exams further compromising their staffing. Examples include CT scans,
chemotherapy, and radiation therapy at ARH. This situation adds to the undue pressure on an already challenged nursing staff.

In summary, there are serious concerns by staff, mostly nursing, about the work environment and the quality of patient care on the Inpatient Medical Ward. Morale is low and there is friction with the ER. Improving nursing skills and confidence are very much dependent on medical coverage, and the key challenge will be to ensure the quality and continuity of care by the duty doctor or attending physicians. All the while, the Ward's caseload is becoming less acute and more chronic. The inevitable question is whether remedial action can turn the Ward around and then, more importantly, sustain it. Alternatively, a chronic and continuing care centre would be a good option to best meet the needs of the frail elderly and to relieve bed pressures at ARH.

C. Ambulatory Day Care

Background

MMH has an Ambulatory Day Care Unit that provides limited booked outpatient services in one location of the hospital. There is no defined mandate or role for the Ambulatory Day Care Unit. The procedures that are undertaken have been put in place historically with no physician oversight or formal administrative structure. In general, the services provided include IV therapy, blood transfusions, minor day surgery procedures, and a twice a week endoscopy.

Key Performance Indicators: Clinical Efficiency

Volumes (Cases)

Ambulatory care service data are collected manually and, unfortunately, is of poor quality. In 2010-2011 there were 7,379 visits, and in 2011-2012 there were 4,765 visits. While this would appear to show a significant decline in visits; however, the IV therapies completed in the ER were not recorded in the data for 2012. As a corrective measure (to allow for data comparison), all IV treatments administered in the ER were removed—the adjusted number of visits totalled 5,185 in 2010-2011 and 4,525 in 2011-2012.

Most of the visits are attributed to IV therapy, with 2,183 visits in 2010 and 1,957 in 2011 accounting for approximately 43% of visits. Endoscopies (1,133 in 2010-2011 and 1,083 in 2011-2012) were the second most frequent type of visit and accounted for about 24% of visits. Blood transfusions and minor surgical procedures accounted for most of the remaining 33% of visits.

IV therapy (mostly consisting of antimicrobial therapy) is administered Monday to Friday from 0730 until 1400. After this time the service is provided in the Emergency Room.
Key Performance Indicators: Operational Efficiency

Physical Capacity
There are five stretchers, five IV chairs and one endoscopy room.

Staffing
For IV therapies, one nurse is on duty five days a week during clinic hours, and a second nurse participates on Wednesdays when more complex and lengthy infusions are scheduled. For endoscopy, one nurse works in the suite and a second one does prep and post-procedure care. The unit clerk books the cases (with the exception of outpatient endoscopies) where she prepares the charts and registers the patients. The limited nursing supervision comes from the Inpatient Medical Ward.

Physician Coverage
One visiting physician does approximately 25 endoscopies per week on Tuesday and Thursdays from 730 to 1430. Urgent inpatients at MMH have two spots reserved as needed, and the remaining spots are for outpatients scheduled by the physician. Minor procedures are performed by general practitioners during clinic hours on Monday/Wednesday/Friday and between 0730 and 0800 on endoscopy days. IV therapy is ordered by physicians but they do not attend. If there are issues with follow up or clarification, the nurse must contact the physician by phone. There is no pharmacy support for the unit.

Four additional specialty services are provided—not in the Ambulatory Day Care clinic, but in spaces along an Inpatient Ward corridor. There are clinics for diabetes, geriatrics and respirology, as well as space available for stress tests conducted by a visiting cardiologist. Some inpatients benefit from the service, however, the focus is predominantly on visiting outpatients booked by the consultants’ offices. The lack of integration with the hospital and service to hospital inpatients is apparent. Until this year the unit clerk at the Ambulatory Day Care Unit booked the patients of local general practitioners for visiting specialists, and at present still registers patients, coordinates follow-up tests, and maintains the MMH chart.

Issues/Gap Analysis
The following issues have been identified with the ambulatory care unit:

- There is no defined role/mandate at MMH for ambulatory care services.
- The consultant services currently provided are historically based and are not part of any formal service plan to complement or support the ER or Inpatient Ward. Consultants arrived over time, endoscopies were transferred from another site, and no requirement was ever made to support inpatient or emergency services.
- There is no medical or formal administrative leadership in ambulatory care. There is also a lack of nursing supervision and a disconnect from other hospital services.
• The booking system is manual, not electronic, and there are no formal booking criteria. The unit clerk has additional duties aiding the visiting consultants beyond the endoscopist.
• General practitioners can do minor surgeries without any formal requirement to provide services (ER duty, ward duty) to the hospital.
• Nursing requirements for endoscopy are heavy for such a small unit and put pressure on the staff. This service needs to be reviewed for appropriateness and quality/safety of care.
• There is limited ability to access data to ambulatory care data and what is available is collected manually and of poor quality.
• IV therapy is often administered in both the Ambulatory Day Care area as well as in the ER, creating a lack of continuity of care. There doesn’t appear to be adequate physician follow up or a mechanism to deal with appropriate monitoring of IV therapy. There is no pharmacist involvement in the IV antimicrobial therapy assessment or monitoring.
• In addition to the Ambulatory Day Care clinic, there are four other clinics in the hospital: diabetes, geriatrics, respirology and stress testing. Each is separate and has no support relationship to the ED or the inpatient medical ward.

D. Support Services – Laboratory Medicine and Pathology, Medical Imaging and Pharmacy

• Background
Over the years, some support services have changed or reduced their service due to change in demands, centralization of service and challenges in recruitment of staff. Often after hours service is provided by ARH.

• Key Performance Indicators: Laboratory Medicine and Pathology

Service
There are direct laboratory services done on site (Biochemistry, Hematopathology and Transfusion Medicine). There is a collection facility for Microbiology and Anatomical Pathology which are sent out to ARH laboratory. ECG Services are available for the Emergency Department, and for inpatients and outpatients. An outreach program is available for residential and private home collections. Glucose point-of-care equipment is utilized and the maintenance and quality control for these is the responsibility of the Laboratory.

Volumes
Inpatients served total approximately 60 per day; outpatients total 90 per day. There are 200 outreach visits per month and the specimen volume is approximately 20,000 tests per month.

Wait Time for Service
Outpatient wait time is usually less than 10 minutes but can be up to 30 minutes during particularly busy times. Testing for these is considered routine and is completed within 48 hours. Inpatient turnaround times as per Fraser Health guidelines are:

- **Routine**: Within eight hours
- **Urgent**: Within one to four hours
- **Stat**: Within 30 minutes to two hours.
- **Routine tests**: Usually completed within two hours.

**Hours of Operation**

- **Inpatients**: 24 hours per day, seven days per week
- **Outpatients**: Monday to Friday, 0800–1600; Saturday, 0900–1330; Sunday, closed.
- **Outreach Program**: Tuesday, Thursday and every second Wednesday.

- **Key Performance Indicators: Medical Imaging**

**Service**

All general radiography tests are done on site. Most of the cases are routine exams of the chest, abdomen, spines and upper and lower extremities. Ultrasound tests are limited due to the fact that a radiologist is not onsite at all times. Tests that are done include abdomen, renal, pelvic, thyroid, prostate biopsies, thyroid biopsies, obstetrics, DVT, carotid, baker’s cyst, scrotal and extremities.

At MMH there are two ultrasound rooms, one digital radiography room, one CR general radiography room and one general/fluoro radiography room.

**Volumes**

Daily average exams done are as follows:

<table>
<thead>
<tr>
<th>Modality</th>
<th>Outpatients and ED</th>
<th>Inpatients</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Radiography</td>
<td>75</td>
<td>3</td>
<td>78</td>
</tr>
<tr>
<td>Ultrasound</td>
<td>22</td>
<td>3</td>
<td>25</td>
</tr>
</tbody>
</table>

Most of the general radiography is completed on outpatients and they arrive without appointments. Patients are registered as they arrive and the tests are done as soon as time permits. This is usually immediate if no one is waiting; otherwise wait time is less than 20 minutes.

Ultrasound appointments are booked unless there is an emergency case. There is a five-week waitlist as of April 2012. In March 2012 biopsy bookings were scheduled one morning a week with a plan to expand the schedule, with additional radiologist time on site and more ultrasound rooms becoming available.
Hours of Operation

- **Inpatients and ED:** 24 hours per day, 7 days per week. There is a technologist on site from 0700–2400 and one on call from 2400–0700.
- **Outpatient:**
  - General Radiography: Monday to Friday 0700–2000; weekends 0730–2000
  - Ultrasound: Monday to Friday 0700–1500; no service on weekends.

Key Performance Indicators: Pharmacy Services

**Volume of Service**

New orders entered per year: 28,000 for acute care.

MMH has an onsite pharmacy with a distribution system that includes automated dispensing cabinets for the Inpatient Ward and general wardstock for the Emergency Department. New orders and daily refills are provided to the units for medications not in the automated dispensing cabinets. There is a daily top up of the cabinets on the inpatient unit.

**Hours of Operation**

The hours of operation of the pharmacy are 0800 to 1630, seven days a week. It is staffed with two pharmacy technicians on weekdays and one on weekends. A pharmacist is on site two half days a week. Pharmacist staffing is currently lower than normal due to a high pharmacist vacancy rate in the Region. For outpatient IV therapy there is no Home IV or DVT Pharmacist support.

Issues/Gaps Analysis

Issues and gaps that the Consultants identified in the Support Service Areas include:

- There is a perception from the medical staff and nursing staff that the turn-around time for laboratory tests has increased. There are no data to indicate that this is the case. There has been the reduction of a full blood bank service but there is a supply of the Universal donor type 0 blood in stock at the hospital.
- The laboratory and medical imaging have identified that there is or could be additional physical space available in their departments if capacity was needed in the Emergency Department for enhanced workflow redesign.
- There is a high demand for tests/exams to be done on ER patients and inpatients that require transport to and from ARH with a nurse to accompany the patient creating staffing pressure on both the Inpatient and Emergency Department areas. For example, in 2011-2012, 470 CT scans required transfers to ARH.
- There is no credible clinical pharmacy support. What does exist is done from ARH with cursory order review. No IV therapy or DVT clinical pharmacist support. The Inpatient
Ward indicated a need for better medication therapy education from the pharmacists. Medication reconciliation is not done by pharmacy staff.

V Recommendations

The results of the independent service review point to key challenges in eight areas; for each the Consultants have identified a set of recommendations to comprehensively address the challenges and improve patient care provided by Mission Memorial Hospital. In total, the Consultants offer 22 recommendations, set out below.

A. Role of MMH within Fraser Health
B. Administrative Leadership
C. Nursing
D. Medical Leadership
E. Clinical Program Areas: Emergency Department, Inpatient Ward, Ambulatory Day Care
F. Pharmacy
G. Quality of Care and Patient Safety
H. Communication and Stakeholder Engagement

While some of the recommendations stand alone and can be considered and implemented independently, the strength of the Consultants’ recommendations lies in Fraser Health making some key decisions and implementing the overall package of recommendations. Health care delivery is a complex interface of interdependent services; for the best outcome, Fraser Health needs to take an overall systems approach that maximizes the integration of available resources.

A. Role of MMH within Fraser Health

Mission Memorial Hospital needs a strategically defined role, in partnership with Abbotsford Regional Hospital, to provide quality care and best serve the health needs of the community. The following two recommendations address system needs to meet the delicately balanced triple aim—the best patient experience and high quality care at sustainable costs.

1. Implement significant integration of both management and clinical programs of MMH and ARH, to the point where MMH evolves into what is effectively a strong and essential second campus of ARH, rather than an independent, stand-alone facility.

In the process of such integration, specific, complementary roles would be identified for the three clinical services: Emergency Department, Inpatient Ward, and Ambulatory Day Care. The roles would be selected to ensure quality care, meet realistic access needs of the local Mission community, and to mesh with ARH to determine the best use of existing capacity to serve the broader Fraser East community.
Given that change involves risk, particularly in a partnership between two unequal parties, it will be vital to successful integration that measures are put in place to guide the process to the intended outcome.

2. **Determine whether the MMH Inpatient Ward should provide acute care or continuing care.** This decision for Fraser Health will provide fundamental direction for MMH (see recommendation 1) and will set the stage for integration with ARH. It is further recommended that Fraser Health address this issue through joint planning and integrated programming before arbitrarily building up the acute care capacity at MMH.

Two options are evident:

**Option 1:** MMH provides (retains) an acute care medical ward and the necessary steps are taken to improve the quality of care.

At the time of the Consultants’ site visit, the Inpatient Ward was labeled a medical unit, yet there was no internal medicine support and it was functioning largely as a chronic care ward with a high number of ALC patients. Under Option 1, Remedial efforts to improve medical coverage, nursing skills and the quality of care are imperative. An honest yet painful question is whether such change is sustainable for such a small ward, and whether this is the most cost-effective use of medical and nursing resources for Fraser East.

**Option 2:** MMH develops an expanded chronic and continuing care ward, using additional available on-site physical space, taking advantage of close proximity to the palliative care unit upstairs and building on multiple synergies with the future residential and community care services under development.

Fraser Health could designate MMH to expand chronic care services while concentrating acute care at ARH. While this would put more pressure on the MMH ER to transfer patients, and would be less popular with patients due to travel, it would establish clear roles for both sites, allow for greater concentration of expertise, and make excellent use of existing empty space at MMH to reduce acute care pressures at ARH.

This option presents an important alternative—one that is increasingly compelling in an era of multiple chronic conditions with increasing numbers of geriatric patients living beyond the age of 85. It recognizes the shift in patient needs from acute care to chronic care, and the required health care delivery changes from episodic to continuing service.

In summary, Fraser Health needs to seriously weigh the challenge of creating and maintaining a safe and effective acute care internal medicine ward at MMH against the opportunity to build a continuing care hub using the MMH inpatient ward along with the other facilities under development on the same site in Mission.

**B. Administrative Leadership**
3. Put in place clear and effective site leadership at MMH—a single individual, with authority to directly control and manage day-to-day operations, in a well-defined and well-supported partnership with ARH.

MMH is too small to have an effective administrative fit within the current Fraser Health organizational structure. The administration needs to be simplified and tailored to accommodate the needs of MMH, all in partnership with ARH. This applies specifically to both the role and the oversight of the site leader and the integration of program based services. Currently there are far too many roles and few well delineated responsibilities.

C. Nursing

4. Simplify and reorganize current nursing structures at MMH to build a highly functional team to work with the site director to manage and coordinate the hospital’s clinical services.

5. Amalgamate nursing education into the larger ARH programs.

Such integration would strengthen in-house skills, create stronger ties to Fraser Health best practices and guidelines, and improve the overall quality of nursing care. Currently the MMH nursing education program lacks critical mass, results in uneven quality and needs additional oversight.

6. Establish rotation of nursing staff between MMH and ARH to support the development of integrated programs with common standards, and to break down existing barriers between sites.

The Consultants are aware that implementation of this recommendation will be challenging and resisted; ultimately the better cooperation between sites that will be achieved will facilitate transfers and improve patient care.

D. Medical Leadership

7. Put in place at MMH a part-time medical leader to oversee and coordinate physician activities and responsibilities, in conjunction with the site director. This must be a funded position, with clear organizational links to the site director and to clinical programs at Fraser Health.

Currently, four physicians have multiple roles at MMH. The hospital is too small for this arrangement; moreover, the roles are confusing, responsibilities poorly defined, and the benefits minimal. This recommendation is aimed at ensuring that the local cohort of physicians is meeting the hospital needs of the patients. Specific responsibilities for the post would include medical coverage, continuity of patient care on the ward, quality issues, best practices, ongoing medical education, recruitment, and general issue management.
Fraser Health has strong program-based services, specifically medicine and emergency, yet they do not provide as much attention to MMH as they do to larger sites, a situation that needs to be changed. The Consultants recommend that the key to improving patient care at Mission is program integration with ARH.

Recommendations follow for each of the three clinical services currently integral to MMH. Note that the Consultants’ recommendations for Medicine Unit reflect the need to first determine what type of service should be offered—separate sets of recommendations are made to support each of these options (see also Recommendation #2, above).

**Emergency Department**

8. **Integrate the Emergency Departments of MMH and ARH to create, over time, a single program with two sites.** The ED would feature integrated management, single medical leadership, rotating physician and nursing rosters, integrated nursing education, and improved transfer and consultation protocols.

Given the rapid population growth in the region, both the MMH and ARH sites will be necessary to meet community needs for urgent and emergency care. However, MMH is currently facing a number of challenges including inadequate medical and nursing coverage, difficulties with maintenance of skills, and challenges to provision of quality care. The critical mass at MMH is too small to address these issues. Program integration with ARH offers the most promising solution.

Under this scenario of integration, physicians and nurses from MMH would benefit from some shifts at ARH, as well as from additional training and continuing education opportunities. Equally, physicians and nurses from ARH could help improve service levels at MMH. A larger critical mass would also reduce the everyday pressures of ensuring adequate medical and nursing coverage. Rotations would foster better collaboration and teamwork between the two sites; this can be expected to facilitate site-to-site transfers, and to reduce patient risks. It would also reduce the nursing time spent off site accompanying patients.

Over time, renovations to the MMH facility would contribute to improved patient flow and better use existing capacity. In turn, these improvements could enable MMH to support higher patient volumes and possibly some bypassing of nearby ARH for urgent care patients (CTAS 4 and 5) if the advantage of less wait time and comparable care were evident to these patients. MMH also has low volumes, averaging between 4-5 patients between 1 a.m. and 7 a.m., which opens up additional possibilities for reduced hours of service and strengthened ambulance presence for connection to ARH.
9. **Consider establishing an alternate payment system for emergency physicians at MMH.**

While MMH ER volumes are now at 20,000 per year, 24/7 coverage is only maintained—and precariously at that by a mix of fee-for-service and other funding mechanisms. To attract highly competent physicians, joint ARH-MMH emergency program planning needs to proceed, and with the expected growth, the encouragement of patient mobility from ARH for CTAS level 4 and 5s. MMH should also consider increasing local market by providing better service than walk-in clinics.

10. **Establish strong on-site emergency nursing leadership at MMH.**

While the Emergency Department at MMH would be administered overall by the Emergency Program, for continuity and stability, there must be strong nursing leadership based at MMH. Without this, the fragmentation and accountability issues evident in current Fraser Health structures at MMH will persist. This individual needs to work closely with the site director to manage day-to-day operations and to ensure close collaboration with the other MMH services, all the while maintaining close ties to the ARH emergency program.

11. **To maximize the benefits of the two campus Emergency Program, there must be collaboration with ambulance services in order to establish protocols for direct transport to ARH—and thereby bypassing MMH, for trauma, stroke, cardiac, and other critically ill patients.**

The ER at MMH is very dependent on ARH for definitive diagnosis and treatment of many true emergencies. In order to avoid untimely delays in treatment—as well as to reduce medical and nursing time lost to orchestrating transfers—a triage system needs to be put in place. This will require ER physicians to work with paramedics to take full advantage of the two campus system and transport critically ill patients directly to ARH.

- **Inpatient Ward**

  **If MMH retains an acute care medical ward**

The following recommendations (12 to 14) are in offered in support of Option 1 (outlined above in Recommendation #2): retain an acute care medical ward and take the necessary steps to improve the quality of care. If Option 1 is pursued, these recommendations will support, over time, improvements to general practice coverage, internal medicine support and, most importantly, quality of nursing care.

12. **In support of maintaining and strengthening quality of care in MMH Inpatient Ward, establish at MMH a robust and readily available ARH internal medicine consultation service.**

The service needs to be available on site, five days a week, with provisions made for weekend support as needed, by phone, visits, or transfers to ARH. To better serve Mission and to help sustain the acute care program, efforts should also be made to see ER consults and “next day” referrals from general practitioners in the community.

Lack of medical coverage is the principal problem on the “ward with no doctor.” Roles and responsibilities of the ward physician(s) need to be redefined and implemented. Possible approaches range from a tailored rotating weekly “hospitalist” role mornings and evenings to a less structured, yet reliable, doctor-on-duty and personal physician system of coverage. The proposed internal medicine consultation service (see Recommendation #12) should facilitate the process by supporting general practitioners with backup for their patients on the Ward and in the community. Improved medical coverage and internal medicine consults will also do much to improve nursing confidence and morale.

14. In support of maintaining and strengthening quality of care in MMH Inpatient Ward, develop and put in place protocols (in collaboration with ARH) to expedite transfers between the two sites and reduce time lost from nursing duties.

Further steps involving closer relationships and integration with the ARH nursing department are also recommended for the ward. Specific initiatives, as already outlined in the recommendations under Nursing, are transferring the responsibility for nursing education to ARH and to implementing nursing rotations at both sites.

The Consultants identified a tense relationship between nursing staff of the Inpatient Ward and the Emergency Department. It was observed that Inpatient Ward nursing staff are overly dependent on the Emergency Department for both medical and nursing care of sicker patients. Efforts to improve the standard of medical and nursing care on the ward should go a long way toward rectifying this situation.

The Ward will still require strong nursing leadership to work well with the site director and the two other services. This individual will need to work closely with the medical leadership to ensure quality and sustainable medical ward coverage, in addition to maintaining close ties with colleagues in the medicine program at ARH.

This recommendation addresses another challenge: the temporary loss of staff needed for patient transports to and from ARH for investigations and treatment. This issue is complicated and runs the gamut from shortages of staff to nurses being stranded at ARH and having to take taxis back to Mission. Clear protocols common to both sites will go a long way to reducing the negative impacts of the current situation on staff and patients.

If MMH converts the Inpatient Ward into a Continuing Care Ward

The following recommendations are in offered in support of Option 2 (outlined in Recommendation #2): convert the Acute Care Ward into a continuing care ward and take the necessary steps to improve the quality of care. This service realignment calls for Fraser Health to:
15. Develop and implement effective protocols for timely ambulance transfers of critically ill patients and probable acute care admissions from the MMH ER to ARH.

16. Develop and implement a comprehensive ARH-MMH plan to establish the continuing care role for MMH, and for the eventual transfer of resources necessary for high quality geriatric care. This plan would include a physical plant assessment to determine how many beds could be added and how other space could be used.

Mission Memorial Hospital has excess physical capacity, essentially vacant space, and an effort should be made beyond changing the ward, to converting the facility into a continuing care centre. Fraser Health would need to work closely with the two hospitals to plan and implement this transition. MMH would not absorb all the chronic care pressures for ARH so a cooperative partnership needs to be developed. Nursing complements would need to be reassessed, the role of a hospitalist explored, and effective resources for quality geriatric care provided including the services of geriatricians, psychology occupational therapy, physiotherapy, and recreational therapy.

17. Explore partnerships for care of the frail elderly with the soon-to-be-built community health centre, residential care home and other service providers.

Equally there are a number of community partners that are on or proximal to the Mission campus, principally the future community health and residential care centres.

Fraser Health has the opportunity to develop a system for geriatric care integrating chronic disease management, home care, residential care, and continuing care. This would help relieve daily pressures for acute care beds, but more importantly address health care’s most daunting challenge, care of the frail elderly.

Ambulatory Day Care

18. Provide more administrative, nursing, and medical oversight to Ambulatory Day Care.

This service appears marginalized from other hospital operations. Booking guidelines are informal, and little effort is made to monitor utilization and clinical quality. Good data and clinical information was not readily available. There is no formal nursing leadership connected to the other services, and medical oversight is absent. Patients are regularly transferred to the ER for completion of IV therapy, and there are safety concerns about the endoscopy unit. Lastly, physicians are free to use the service without any input or commitment to other hospital services, namely ward work and ER rotations. Ambulatory Day Care is an increasingly important part of clinical care, and MMH needs to better integrate the unit with other services.

19. Reassess the target clientele and caseload of the Ambulatory Day Care and develop a strategy (in partnership with ARH and community programs) to best meet the needs of the local population. Specifically there is a need to plan and implement an IV therapy program that combines the respective roles of the Ambulatory Day Care, the Emergency Department and the Home IV Service.
In 2011-2012 there were some 2,000 IV therapy treatments and over 1,000 endoscopies performed. The mix of patient care is roughly 42% IV therapy, 25% endoscopies, and the remaining 33% is blood transfusions and minor surgeries. The clinic hours are Monday to Friday from 730 to 1400 and many IV therapy patients are transferred to the Emergency Department at closing for completion of treatment. Roughly 10% of ER patients are for IV therapy so this begs the question about the ER/Ambulatory Day Care interface, and the possible benefits of extending the clinic hours to alleviate congestion in the ER. Furthermore, joint planning needs to include the home IV program to determine the respective capacity and complimentary roles of each. Outpatient therapies will continue to be in increasing demand, and there is both an opportunity and a requirement to meet that demand.

The endoscopy unit requires two nurses, which puts pressure on the small nursing staff, and creates legitimate concerns about post-operative management safety. Fewer one-time endoscopies at MMH would allow for longer hours and a larger IV therapy caseload for older and sicker local patients with frequent and/or chronic needs. This would address the need for a balance between the mix of activities and the available budget, and needs to be evaluated within the framework of a partnership between the two hospitals.

**F. Pharmacy**

20. Require Pharmacy to provide increased support service (i.e., review orders in a timely fashion) so that nurses can access medications from the automatic dispensing cabinet.

Timely access to medications is a challenge for nurses and adds friction to the ER-ward relationship.

**G. Quality of Care and Patient Safety**

21. Put in place formal structures to address quality and patient safety—establish an interdisciplinary quality council involving medical, nursing, and allied health professionals. A mechanism to establish close ties with existing structures at ARH and Fraser Health is required, with accountability vested in the site director. Both patient safety and learning system data need to be tracked and analyzed to determine trends.

MMH has had a number of patient safety concerns over the past few years. While most of the recommendations in this report should improve patient care, a distinct focus on quality and safety as a priority is essential to generate attention, implement formal structures, and to monitor progress.
H. Communication and Stakeholder Engagement

22. Develop and implement a communication strategy and stakeholder engagement plan to articulate the goal of integrating the two hospitals, the rationale behind it, the time frames and steps along the way to achieving this end.

Concerns about the quality of care at MMH and sustainability of service were the driving forces leading up to this review, and consequently were used as the lens in the review process. This point should be emphasized in communications with the community and the health professionals involved throughout the transition process. The plan should stress the value of ARH to MMH and, equally, MMH to ARH, in a smooth flowing two campus model that improves quality, access and capacity, in a sustainable system.