Haldimand War Memorial Hospital and Edgewater Gardens

Final Report

May 15, 2017

Updated June 12, 2017

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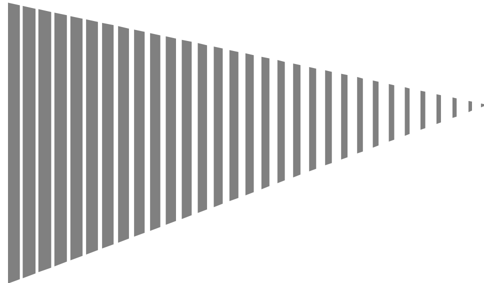

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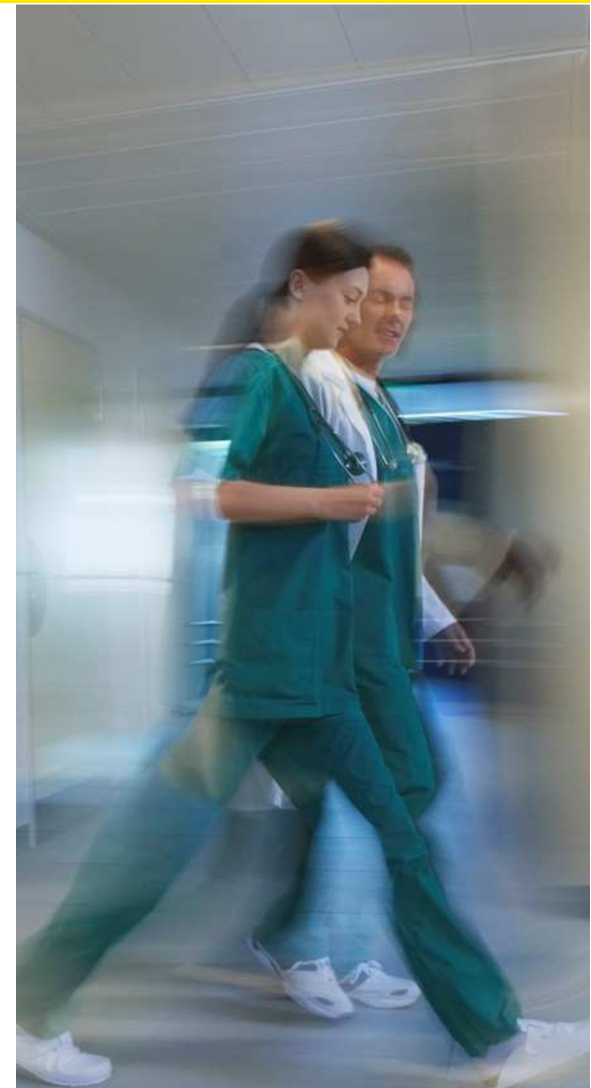

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Introduction

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Introduction

In December 2016, Haldimand War Memorial Hospital (HWMH) engaged EY to conduct an Operational Review of the hospital and long term care facility – Edgewater Gardens (EWG). The goals of the Operational Review were to maximize quality, system effectiveness and efficiency:

- Identify 'best practices' and make suitable recommendations in keeping with the mandate of an acute care hospital and long-term care home in the present and coming years
- Frame all recommendations through an understanding of the LHIN and the MOHLTC's strategic plans and expectations
- Objective examination designed to determine whether resources are being used wisely
- Identified opportunities must include estimated dollar savings, cost/benefit
- Considerations and opportunities for increased revenue

The review considered the following key elements:

- The surplus for 16/17, after a year-end transfer of a portion of realized gains of $125,000 from Haldimand War Memorial Charitable Corporation is reported by the hospital to be approximately $500
- All opportunities and action plans have been informed by contributions from internal and external interviews and the Executive
- Although some selected investments may be required, these have not been explicitly addressed

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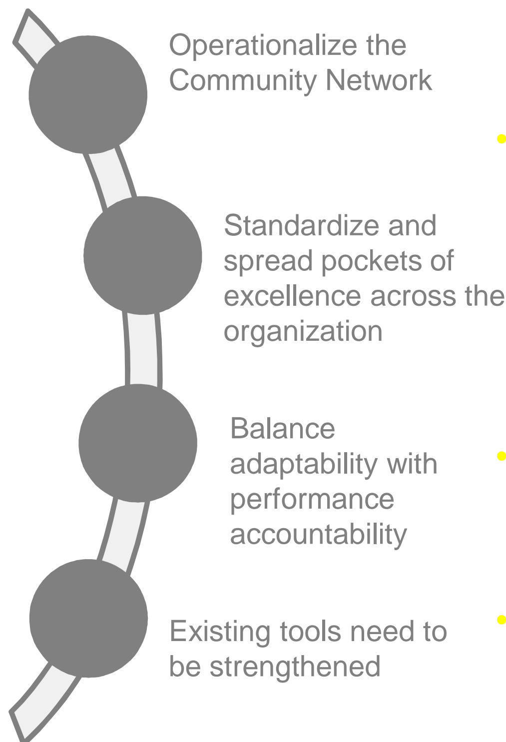
Sustaining your Future



- The cost curve is bent and bending further. Measures to manage expenditures are a new reality for hospitals and will become a key component of HWMH and EWG futures
- You have an opportunity to define your organizations as an integrated centre for the sub-region which will drive your future focus and opportunities as well as continuing to be aligned to *Patients First*. This aspiration requires realignment of services, continuing advocacy and further partnership development including integrated care models
- Links between quality, value and performance will need to mature through measurement and management of results and transparency in decision making
- Further fiscal restraint in coming years will require structural changes to the way the hospital thinks of, and delivers services

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Approach to the Operational Review

To provide a comprehensive view of the organization and facilitate broad participation, EY developed the following plan to realize the identified necessary savings. There was strong engagement from the organization during this process.

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Recommendations

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A Note on Savings Estimates

- Savings estimates as presented in the Recommendations section of the report as well as in the Opportunity Summary sections were derived from a variety of approaches including:
  - Variance from peer performance
  - Internal variation
  - Estimate of expected savings based on experience from similar hospitals
  - Interviews with hospital staff and associated validation/lack of supporting financial evidence
- The assumptions and other source information to support the calculations are found in each of the specific departmental/functional areas sections
- Page references for specific data are provided after each recommendation
- The savings estimates as set out are based on analysis using available data at the time of the review as well as the current state context
- As the hospital considers implementation of any of the recommendations, it is assumed that a validation of the opportunity will be undertaken

The Hospital has Significant Opportunity for Savings

Recommendations	Actions	Potential Benefit
1. Improve management of inpatient beds and length of stay	This can be achieved through a variety of consistent actions such as: managing to ELOS, implement consistent discharge methods, develop engagement and implementation plans with community partners to define service delivery options for selected ALC patients. In addition maintain Assess and Restore occupancy to maintain level of funding.	**Manage within budget**
2. Continue to manage overtime and sick time across the organization	Implement optimal scheduling and replacement practices, establish corporate controls and escalation processes to monitor and manage overtime, level set budgeted vs scheduled vs actual staffing, set priorities for resource allocation. Build cross trained capacity. (please refer to page 36)	**Manage within budget**
3. Improve management of OR and ambulatory care services	Implement measures for greater management of block utilization. Track utilization of assigned time by surgeon and service. Plan and track surgical volume monthly and cost in order to maximize revenue. Business case for additional ambulatory day cases and scope work. (please refer to page 54)	**Increase ambulatory care capacity, reduce cost**
4. Improve utilization of Nurse Practitioner in the Emergency Department	Assess the profile of CTAS 4 and 5 patients seen by the NP in the emergency department for appropriateness of best use of NP resources. Assess alternate care model to be provided by NP to support services provided on an ambulatory basis such as chronic disease management, senior care, back to home or other reflecting ambulatory care needs of the community.	**Increase ambulatory care capacity, reduce cost**

Recommendations, continued

Recommendations	Actions	Potential Benefit
5. Focus HWMH rehabilitation services on inpatient care	Local resources exist for outpatient rehabilitation. Given the inpatient needs, rehabilitation resources should focus on this population and not be provided on an outpatient basis by the hospital.	**Increase access for inpatient rehabilitation**
6. Increase revenue opportunities with preferred accommodation revenue, collection of revenue for physician billing, billing reconciliation and cost recovery for specific physician activity costs	Both preferred accommodation revenue and chronic care co-payment is declining. There are opportunities to better manage billings and cost recovery. (please refer to pages 43, 46, and 59)	**Increase revenue**
7. Increase revenue from leased property and office space	Rental rates are inconsistently applied. Standard rates can be developed and revenue increased (please refer to page 34)	**Increase revenue**
8. Reduce\Leverage Support Services Costs	Printed pay stubs and mailing, Automatic on and off lights, Maintenance of empty building (Ecker House), Assess power factor penalties, Manage Meals on Wheels costs	**Reduce cost of operations**

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Recommendations, continued

Recommendations	Actions	Potential Benefit
9. Redesign, optimize and divest selected programs and services	Expand selected, strategic regional roles, such as CT to maximize capacity and generate revenue. Define fit for delivering service at HWMH (e.g. selected ambulatory and outpatient activity) with another hospital or community partners, assess volume and staffing allocation for selected programs e.g. booked ED activity.	**Increase capacity without increase cost**
10. Develop more targeted communication with staff and physicians regarding mental health services	The community profile reflects high needs for mental health and addiction services yet local providers do not receive expected referrals from HWMH. Support education program for staff to facilitate access and referral for mental health and addition services. Engage mental health and addiction community providers to assist with education.	**Increase access for mental health patients**
11. More effectively manage financial, HR, IT and clinical records resources	Explore opportunities for regional models, capacity building to enhance these roles and ability to meet core hospital needs. Consider expanding services to local community providers e.g. Foundation to increase local capacity	**Capacity building and potential revenue**

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Recommendations, continued

Recommendations	Actions	Potential Benefit
12. Implement more stringent financial controls across the hospital	Increase budget management mechanisms and variance management, implement pro-active budget planning and monthly review cycle. Review specific reporting needs for budget holders.	**Facilitator for improvement sustainability**
13. Conduct Budget Reviews across all budget areas	Budget review entails a detailed discussion with budget holders to review line by line all over/under spends. The review sessions are used to understand the drivers of over/underspend to support budget lines to be "right-sized" so genuine overspends can be budgeted appropriately and standard budget assumptions are implemented. Typically savings in the order of 0.5% of total budgets has been achieved with other clients.	**Facilitator for improvement sustainability Enhanced financial processes**
14. Implement specific strategies to improve service and program financial and operational accountability	Develop a financial performance framework that defines how the hospital conducts works - standard processes, policies and integrated accountability that holds key individuals to account, effective and accurate management of information in support of service delivery, performance tracking and management, analytics driven from finance, clinical and activity data to provide a robust evidence base for action.	**Facilitator for improvement sustainability**
15. Implement a 1 and 3 year operating plan	Define the HWMH operating model that aligns with delivering the organization's strategy and builds a consistent view of priorities, actions and investments.	**Facilitator for improvement sustainability**

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Recommendations, continued

Recommendations	Actions	Potential Benefit
16. Implement more rigorous and standard data capture and analysis processes	Develop performance and data quality management practices, including capture / input, storage and analysis, review data documentation and coding practices to ensure accurate capture of data. Specific examples include under-capture of complex care assessment data and ED CTAS levels. Improve consistent and complete documentation and reporting of complex care patients.	**Facilitator for improvement sustainability**
17. Continued focus on community partnerships and service, program integration	To achieve many of the opportunities coming from the review, the hospital will need to continue to access, establish and build relationships and partnering opportunities with community and other hospitals to leverage expertise, resources and capacity.	**Facilitator for improvement sustainability**
18. Increase visibility and review for service contracts at EWG and HWMH	Review service contracts for best terms and pricing	**Facilitator for improvement sustainability**
19. Continue to leverage resource spend between EWG and HWMH by sharing resources	Appropriate cost allocation will be an important facilitator for this strategy. Increase visibility for cost allocation for resource sharing	**Facilitator for improved financial management**

Recommendations, continued

Recommendations	Actions	Potential Benefit
20. Implement specific strategies to increase CMI	EWG CMI is lower than expected. Specific strategies to capture all activity that will have an impact on CMI such as • ADL activity sheet • Physician visits • ED visits and associated interventions • Targeted chart audits Explore opportunity for subsidy for Convalescent Care	**Maximize revenue**
21. Assess real estate strategy and develop short and longer term plan to reduce costs	Review best use of existing space and opportunities to generate revenue and reduce cost	**Maximize revenue**
22. Assess billing reconciliation and coding optimization	Reduce potential lost revenue and rejected OHIP billing	**Maximize revenue**

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Community and Hospital Profile

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HNHB LHIN Sub Region Profile*

HWMH's referral population experiences health risk factors that impact care needs. Overall, the region does better on ALC days and ED visits although does not perform as well for ED visits that are best managed elsewhere.

HNHB Sub LHIN Characteristic	Haldimand Norfolk	HNHB LHIN	Ontario	Highest in LHIN
Health Status				
% Age 65+	17.7	17.5	15.6	20.5 (Niagara)
Reported heavy drinking	21.6	18.3	15.9	Haldimand Norfolk
Reported daily/occasional smoking	22.2	21.3	18.9	28.6 (Brant)
Service Utilization				
# Primary care physicians per 10,000 people	4.7	5.8	MA	6.8 (Burlington)
Specialists per 100,000 population	16	100	97	
% Alternate level of care (ALC) days	9.6	16.3	14.5	18.5 (Hamilton)
Rate of emergency department (ED) visits best managed elsewhere per 1,000 people	48	20	18	Haldimand Norfolk
Rate of hospitalizations for conditions that could be treated in ambulatory setting per 1,000 people	15.4	18.8	20.2	21.2 (Hamilton)
% ED visits within 30 days for substance abuse conditions	16	30	33	38.2 (Hamilton)
% Repeat unscheduled visits within 30 days for mental health conditions	15.4	18.6	20.2	21.2 (Hamilton)

*source: HNHB LHIN

Opportunity Summary

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Opportunity Summary

The following pages set out the savings and efficiency opportunities identified during the review. These are indicative opportunities that provide the hospital with options for savings in terms of required level of effort and expected benefit. In addition, there are a number of opportunities that are to be determined which means that there is an indication that this is an area of savings however there was insufficient data to quantify this opportunity.

The range of savings set out below indicates the range of potential within the program or service area

Realization of the opportunity is dependent on further validation, prioritization and work effort

		Estimated Value ($000)	
Opportunity Area	**Initiatives**	**Low**	**High**
Corporate & Support Services	6	417	478
Workforce	4	103	103
Short Term Measures	3	33	55
Supply Chain	7	120	200
OR	4	82	119
Inpatient Beds and LOS	3	50	161
Outpatient Services	3	63	63
Diagnostic Imaging	2	28	28
Emergency Department	2	0	0
Edgewater Gardens	3	2	4
Total		**898**	**1211**

Opportunity Summary (1/4)

#	Site	Area	Opportunity	Description	Estimated Value ($000)	
					Low	High
1.1	HWMH	Corporate & Support Services	Improve cost on Food Services	Benchmarked higher than peers in terms of % of overall spend and expense per meal day. Save $2 per patient day by moving to median cost	22	22
1.2	HWMH	Corporate & Support Services	Improve revenue collection from leased property	Set standard and market rates	290	290
1.3	HWMH	Corporate & Support Services	Printed pay stubs and mailing, Automatic on and off lights, Maintenance of empty building (Ecker House), Assess power factor penalties, Manage Meals on Wheels costs	Requires some investment to implement lighting.	15	60
1.4	HWMH	Corporate & Support Services	Conduct budget review across all cost centres	Asses and correct mis-alignment of budget and activity, consistent under spend or management of cost pressure	90	106
1.5	HWMH/ EWG	Corporate & Support Services	Improve documentation and coding to enhance complexity benefit	Lower than provincial level of complexity for complex care and long term care	TBD	TBD
2.1	HWMH	Workforce	Improve Sick Time and OT to within internal average for clinical and non-clinical	Reduce ED OT rate to that closer of Acute Care (5% to 1%) through better planning and staff scheduling	50	50
2.2	HWMH	Workforce	Assess business case impact of call-backs in DI	Cost-benefit analysis	TBD	TBD
2.3	HWMH	Workforce	Eliminate agency use	Implement processes that will avoid the need for agency use	23	23
2.4	HWMH	Workforce	Reassess need and appropriateness of the 0.5 Ambulance Escort RN	This position is currently being filled by a FT RN, consider a PT RPN instead	30	30

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Opportunity Summary (2/4)

#	Site	Workstream	Opportunity	Description	Estimated Value ($000)	
					Low	High
3.1	HWMH	Short Term Measures	Aligning spend to budget: photocopy, printing, and supplies; patient traveling; and non-patient traveling	Strategically plan, appropriately budget for expenses, and employ financial controls to remain within budget	22	22
3.2	HWMH	Short Term Measures	Charge 1% - 3% admin fee for Physician Billings	Since the hospital does the OHIP billing for some physicians, the hospital should charge 1% - 3% admin fee	11	33
3.3	EWG	Short Term Measures	Align Resident Care, Plant & engineering, recreation therapy, maintenance, and materiels management to budget	Budget review and robust financial controls to be put in place	TBD	TBD
4.1	HWMH	Supply Chain	Combined sourcing function between HWMH and EWG	Negotiate lower pricing, through higher volumes, on like items	120	200
4.2	HWMH	Supply Chain	Link items to contracts in the data base	Better visibility to proportions of items being or not being on contracts	TBD	TBD
4.3	HWMH	Supply Chain	Establish supplier performance program	SKU reduction, shipping cost reduction	TBD	TBD
4.4	HWMH	Supply Chain	Conduct bi-monthly category analysis	Reduce number of unique items	TBD	TBD
4.5	HWMH	Supply Chain	Define selection process for equipment purchases	Reduce lifetime operating costs associated with equipment – service contracts, parts and service	TBD	TBD
4.6	HWMH	Supply Chain	Create supply profile for each area of the hospital	Specific to IPU, LTC, Lab and Pharmacy - combine orders	TBD	TBD
4.7	EWG	Supply Chain	Utilize MediSolutions for EWG nursing supplies	Overall efficiency and maximize pricing and minimize shipping cost	TBD	TBD

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Opportunity Summary (3/4)

#	Site	Workstream	Opportunity	Description	Estimated Value ($000)	
					Low	High
5.1	HWMH	OR	Reduce operating capacity in line with demand	Maintains existing volumes but reduces staffing costs	53	90
5.2	HWMH	OR	Formalize duties for RN & RPN during OR downtime	Reduce OT/agency spend in other hospital departments	TBD	TBD
5.3	HWMH	OR	Consider alternate uses for excess operating capacity for revenue generating activity	e.g.. increase volume of OR time to generate revenue	TBD	TBD
5.4	HWMH	OR	Recover all costs for Eye Surgery	Renegotiate contract with Dr. Sharda / seek LHIN funding	29	29
6.1	HWMH	Beds and LOS	Reduce acute length of stay to within 15% of ELoS	Reduce OT expenditure created by excess bed demand related to occupancy level	TBD	TBD
6.2	HWMH	Beds and LOS	Review collection rate for inpatient co-payments	Ensure that collection of co-payments is optimized	50	161
6.3	HWMH	Beds and LOS	Align Chronic Care and Assess & Restore staffing to demand	Low occupancy in these areas suggest opportunity to reduce staffing	TBD	TBD

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Opportunity Summary (4/4)

#	Site	Workstream	Opportunity	Description	Estimated Value ($000)	
					Low	High
7.1	HWMH	Outpatient Services	Reduce clinics which are not core to HWMH ED and IPU	Outpatient clinics are a cost to the service thus should only run if they directly support core hospital services	TBD	TBD
7.2	HWMH	Outpatient Services	Full cost recovery for outpatient expenses from all physicians	Currently Hospital assumes costs for some clinics but not others	63	63
7.3	HWMH	Outpatient Services	Complete a business case to assess the impact of selected program and service changes such as the addition of clinics, surgical services etc.	Establish expected benefits and outcomes including cost across all department including DI and Lab, and patient access	TBD	TBD
8.1	HWMH	Diagnostic Imaging	Eliminate second X-ray List	Analysis indicates sufficient capacity to accommodate this workload in evening and weekend lists.	28	28
8.2	HWMH	Diagnostic Imaging	Increase volumes for Ultrasound, Mammography (with OBSP) and CT	Potential to increase volume and thus increase revenue	TBD	TBD
9.1	HWMH	Emergency Department	Match NP shifts to volume by time of day	Fri-Tue between 8am-8pm are the busiest days in ED	TBD	TBD
9.2	HWMH	Emergency Department	Align 3rd RN working hours to match periods with highest probability of transfers	Analysis indicates 8am to 10pm is the time frame with most transfers	TBD	TBD
10.1	EWG	Workforce	Improve Sick Time and OT to within internal average for clinical and non-clinical	Reduce Clinical Management Sick and OT rate to Nursing's (2.2% to 0.8 % and 1.7% to 1.5% respectively)	2	2
10.2	EWG	Workforce	No agency use	Apply processes and policies that will avoid the need for agency use	4	4

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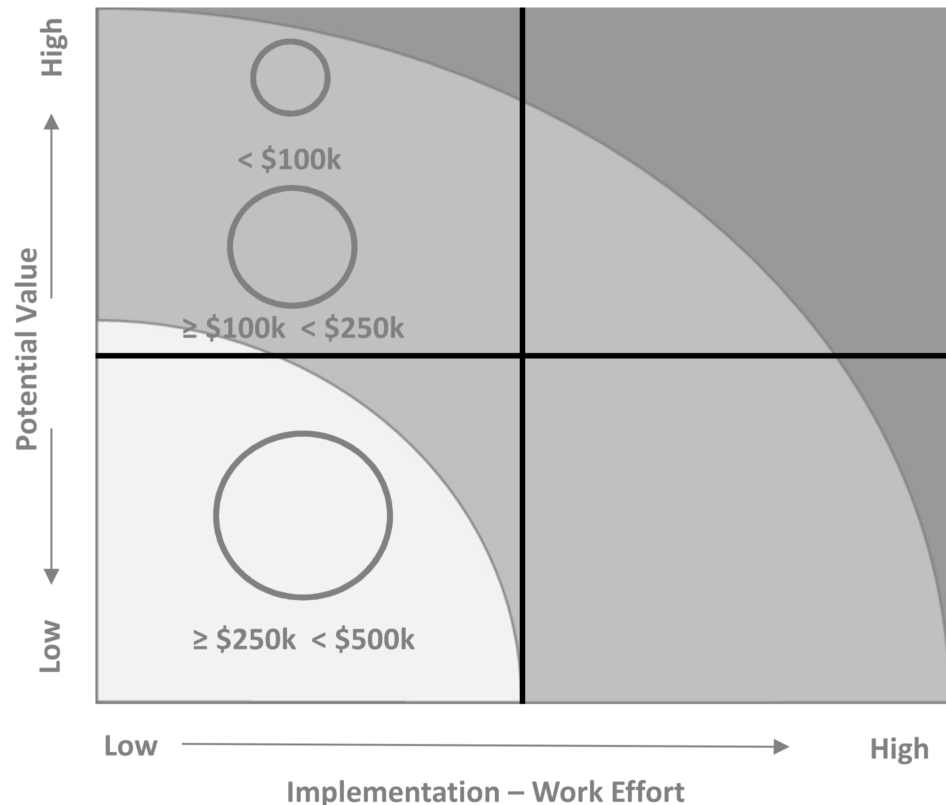
Opportunity Assessment Overview

All validated opportunities were assessed for Ease of Implementation/Work Effort and Potential Value based on EY experience with similar engagements.

To provide HWMH with one view of all opportunities by workstream and opportunity size, a consolidated view is presented on the following page. Only those opportunities that have available financial impact are presented.

The results indicate a mix of opportunities in all categories (effort and value).

This view has been prepared for a diagnostic level of analysis and will need to be validated for impact as part of project implementation.



The prioritization matrix consists of three different evaluation variables: the scale of the work effort (x-axis); relative value (y-axis) and estimated 2017/18 in-year positive financial impact (size of the bubble)

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Overview of all Opportunities – Estimated Value and Work Effort

Potential Value (Low → High)

Implementation – Work Effort (Low → High)

High value / low effort: 1.4, 3.3
High value / high effort: 1.2, 6.2, 3.2, 4.1
Low value / low effort: 3.1, 2.4, 7.2, 1.1, 1.3, 8.1
Low value / high effort: 2.1, 2.3, 5.4, 5.1, 10.2, 10.1

Legend: Supply Chain; Workforce; OR; Corporate and Support Services; Short Term Measures; Beds; OP, DI & ED; EWG

The prioritization matrix consists of three different evaluation variables: the scale of the work effort (x-axis); relative risk (y-axis) and estimated 2017/18 in-year positive financial impact (size of the bubble)

Haldimand War Memorial Hospital

Corporate & Support Services

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Area Overview – Corporate & Support Services

Diagnostic Approach

- Budget variances were analyzed for all cost centres to identify largest variances
- Peer hospitals were selected for benchmark comparison based on similar inpatient or attendance volumes
- Budget variances were analyzed alongside peer benchmarks for corporate and support services
- Analysis of present rental leases was used to quantify potential for additional rental revenue

Findings

- Largest adverse variances were seen in ER and X-Ray budget lines. The largest positive variances were from the revenue and IPU cost centres
- Spend on food services was significantly higher than peers and average cost per patient day was $2 higher than peer median
- HWMH has formed a Charitable Corporation to better manage the distribution of investment income
- Budget inconsistencies exist with allocation and non budgeted over spend to create a pool of budget dollars that can be used to address recognized/legitimate pressure
-

Findings, continued

- The hospital is carrying a $6.6m debt which is paid at $50k per month principal and interest
- Rental income can be significantly improved on application of best rates across all tenants
- IT services cost the hospital $90,586 of which $64k is a service contract. This should be reviewed for assessing receipt of appropriate level of service
- The hospital's reimbursement for cleaning for the FHT does not match expenses

Indicative Opportunities

Opportunity	Description	Estimated Value ($000s)
Improve cost on Food Services	Benchmarked higher than peers in terms of % of overall spend and expense per meal day.	$22
Set standard rates for rental income	Set standard rates and set market rental rates	$290
Corporate operations	Enhanced building and corporate	$15
Budget Review	Identify expense reduction and/or revenue increase opportunities estimated at 0.5% of total budget	$106

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Financial Performance

- HWMH's Operating budget for fiscal year 2016-17 is **$17,849K**
- The YTD financial position as of month 9 was an adverse variance of $95K with (pro-rated) forecast deficit of $126K
- LHIN reported Q3 deficit of $160k
- Review of cost centres reveals a number of large variances to budget
- ER and X-Ray are the cost centres with the largest adverse variances ($224K and $215K respectively)
- Revenue and IPU are the cost centres with the largest favourable variances ($188K and $105K respectively)
- Large overspend may indicate unresolved cost pressures or weak spend control
- Large underspends may indicate opportunities for budgetary reduction and savings

Top 10 adverse variances

Cost Centre	Annual Budget	YTD Budget	YTD Actual	YTD Variance	Forecast YE Variance ($000)	% Variance
ER	2,069	1,552	1,720	-168	-224	-11%
X-ray	1,033	775	937	-162	-215	-21%
Health Links	0	0	77	-77	-103	n/a
IT	0	0	64	-64	-86	n/a
Maintenance	377	283	334	-51	-68	-18%
Chronic	613	460	498	-38	-51	-8%
Rentals	-368	-276	-252	-24	-32	9%
Finance	706	529	553	-23	-31	-4%
Pharmacy	174	130	147	-17	-23	-13%
Laundry	0	0	15	-15	-20	n/a

Top 10 favourable variances

Cost Centre	Annual Budget	YTD Budget	YTD Actual	YTD Variance	Forecast YE Variance	% Variance
Revenues	-1,276	-9,934	-10,075	141	188	-15%
IPU	3,079	2,310	2,231	79	105	3%
OR Cataract	-0	-0	-66	66	88	N/A
CT	334	251	192	59	79	24%
Administration	1,008	756	704	51	69	7%
Assess & Restore	113	84	38	46	62	55%
Food Services	621	466	434	31	42	7%
Cafeteria	411	308	280	28	37	9%
Admitting	92	69	47	22	29	31%
OR	747	560	539	21	28	4%

Data Source: FY 2016-17 GL for Month 9

Peer Organizations For Benchmarking

- Peer hospitals for comparison were selected based on similar volumes
- Criteria for selection were:
  - Small Hospital Category
  - **Visits Face-to-Face (In-House) (incl. ER Visits)** was +/- 10% of HWMH annual volume and/or:
  - **Acute Patient Days)** was +/- 10% of HWMH annual volume
  - Peers in the North East and North West Region were excluded due to significantly different demographics served

Peer Hospitals
NAPANEE LENNOX & ADDINGTON
GODERICH ALEXANDRA MARINE & GEN
KEMPTVILLE DISTRICT
CAMPBELLFORD MEMORIAL
DYSART ET AL HALIBURTON HEALTH SER
ARNPRIOR & DISTRICT MEMORIAL
ALEXANDRIA GLENGARRY
HANOVER & DISTRICT
LISTOWEL MEMORIAL

Healthcare Indicator Name	HWMH	All Hospital 50th Percentile	Variance
Acute Inpatient Days	5,109	4,652	-457
Complex Continuing Care Inpatient Days	3,686	2,633	-1,053
Total Inpatient Days (includes ER)	8,795	8,030	-765
Total Surgical Cases	1,240	1,502	262
Average Daily Emergency Visits	64	60	-4
Emergency Face-to-face In house Visits	17,694	16,420	-1,274

ALEXANDRIA GLENGARRY	ARNPRIOR & DISTRICT MEMORIAL	CAMPBELLFORD MEMORIAL	DYSART ET AL HALIBURTON	GODERICH ALEXANDRA MARINE & GEN	HANOVER &; DISTRICT	KEMPTVILLE DISTRICT	LISTOWEL MEMORIAL	NAPANEE LENNOX & ADDINGTON
3,732	5,851	8,753	3,891	3,769	5,100	4,203	3,923	8,936
1,330	2,633					448	3,653	
7,457	8,484	8,753	3,891	8,911	5,100	4,651	7,576	8,936
561	1,668	1,549		987	1,502	4,375	935	2,689
60	51	60	83	43	45	60	38	72
16,428	14,020	16,411	22,740	11,887	12,425	16,561	10,346	19,810

Source: extract from the HIT tool and is using FY 2015/16 data. For the HIT tool, the most recent full year was FY 2015-16.

Budgetary Performance

- Financial performance of the corporate and support services departmental budgets is shown below alongside the benchmarked median of HWMH peers
- Maintenance and Finance had the largest adverse variances as of Q3, 2016-17. These were also the functions for which HWMH's spend was significantly higher than peer organizations
- While Administration and Food Services were within budget, spend on these functions was significantly higher than peers. There are opportunities to assess root cause for the variance
- The annual IT budget is $0 however has had $64K spend against this YTD. Internal allocation is being corrected. There are financial allocation anomalies within the MIS framework that require correction

	Budgetary Performance*				Benchmarking**		
Cost Centre	**Annual Budget ($000)**	**YTD Budget ($000)**	**YTD Actual ($000)**	**YTD Variance**	**HWMH**	**Peer Median**	**Difference (HWMH – Peer Median)**
Administration	1,008	756	704	51	6.8%	5.3%	2%
Finance	706	529	553	-23	4.9%	2.1%	3%
Food Services	621	466	434	31	4.6%	3.1%	2%
Plant Engineering	475	357	349	8	3.4%	3.2%	0%
Maintenance	377	283	334	-51	3.2%	2.8%	0%
Housekeeping	378	284	288	-5	2.9%	3.5%	-1%
Nursing Admin	228	171	173	-2	1.7%	1.5%	0%
Health Records	198	149	155	-6	1.6%	2.1%	-1%
Materials Management	40	30	31	-2	1.0%	1.3%	0%
Admitting	92	69	47	22	0.5%	2.1%	-2%

Data is representative of Q3, 2016-17
* From HWMH GL
** From Ontario HIT benchmarking

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Corporate Benchmarks

- HWMH has an operating margin result of -1.6% compared to a margin of 0.1% for the median peer organization
- HWMH performs slightly better than the 50th percentile for non-MOHLTC/LHIN revenue
- HWMH has a large long term debt as a % of corporate revenue which is indicative of long term sustainability challenge for the organization. HWMH long term debt is at 49.9% of corporate revenue compared to the peer mean of 3.9%
- Inventory turnover is 35 which is 2 days above the peer average. Optimized supply chain functions typically operate at 7-14 day turnover for inventory (excepting single source items)
- Average inpatient food expense per patient day was $1.99 higher than the peer median

Indicator	HWMH	50th Percentile	Variance
Total Revenue *	$13,607	$14,890	$1,283
Total Expenses**	$13,823	$14,930	$1,107
Operating Margin	-1.6%	0.1%	1.7%
% Non-MOHLTC/LHIN Revenue to Total Revenue	12.7%	12.1%	-0.6%
Working Capital	-$9,194	$902	$10,096
Long Term Debt as a % of Corporate Revenue	49.9%	3.9%	-46.0%
Long Term Investment as a % of Corporate Revenue		-11.5%	-11.5%
Inventory Turnover (Days held)	35	33	-2
Inpatient Cost per Patient Day	$335	$396	$61
Inpatient Food Expense per Patient Day	$56.39	$54.40	-$1.99

All data relates to fiscal year 16-17, quarter 3 year to date position

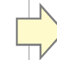
* including external recoveries and reduced by amortization of building grant, internal and within entity recoveries

** reduced by interdepartmental charges, building amortization and internal recoveries

Financing a Campus of Care

- The Hospital has been interested in supporting the development of a campus of care model and have supported the financing for building of Village by the Grand apartments, Edgewater Gardens Long Term Care and the Family Health Team building
- Each entity has a pay back plan to the hospital however this does not offset the total cost for the hospital to carry this debt

Description	Interest Rate	Blended Monthly Payments	Balance January 31, 2017
CIBC Bank Loan – Village by the Grand	Prime minus .25%	$11,520.00	$1,147,011.93
CIBC Bank Loan- Edgewater Gardens	Prime minus .25%	$29,411.00	$4,350,864.50
CIBC Bank Loan – Primary Health Care Centre	Prime minus .25%	$6,545.00	$985,529.51
Capital Lease – O2 Concentrator – TD Bank	4.15%	$2,919.85	$194,122.77
Total		**$50,395.85**	**$6,677,528.71**



Original Loan		$5,525,699.00
Total Interest on loan		$1,482,617.85
Total cost of Loan		$7,008,316.85
MOHLTC funding for Building	$241,776.00 for 20 years	-$4,835,520.00
Annual Rent	$240,000.00 for 20	-$4,800,000.00
After 20 years		$ 2,172,796.95

EY

Benchmarked Expenditure By Category

- Total staff compensation for HWMH is 2% lower than the peer median but spent 3.2% more than peer median on medical and nurse practitioner remuneration
- HWMH spent 0.4% more on Medical/Surgical supplies and 1.6% more on Equipment expenses as % or total expense than the peer median. This may be indicative of opportunities from optimizing HWMH's supply chain function which is considered in greater detail in the supply chain section of this report
- HWMH spend on contracted out services was 0.9% compared to 3.6% for the peer median. This means that HWMH utilizes external contractors to a lesser degree than peers and should explore alternative service delivery models which can be used to deliver support functions at a better value (cost/quality)

Expenditure Category (% of total operating expenses)	HWMH	50th Percentile	Variance
Total Compensation (Unit Producing, Management & Support)	55.4%	57.4%	2.0%
Medical Staff & Nurse Practitioner Remuneration	15.4%	12.2%	-3.2%
Supplies - Medical & Surgical	2.9%	2.5%	-0.4%
Supplies - non Medical / Surgical	5.9%	6.0%	0.1%
Drugs & Medical Gases	1.3%	1.3%	0.0%
Equipment Expense (including amortization)	8.9%	7.3%	-1.6%
Contracted Out Expense	0.9%	3.6%	2.7%
Amortization - Building & Building Service	3.8%	3.8%	0.0%
Building & Ground Expenses (excluding amortization and rent)	0.3%	0.6%	0.3%
Sundry Expenses & Employee Future Benefit Compensation	5.2%	4.0%	-1.2%

All data relates to fiscal year 16-17, quarter 3 year to date position

EY

Rental Income

- HWMH currently has 8 properties within which space is leased to external parties and for which HWMH receives revenues
- This is inclusive of office spaces within HWMH main site
- The rent charged per square foot varies significantly between tenants
- The total potential additional revenue is $290k if HWMH applies the highest rent /square foot rate across all units within that property
- The majority of leases have a 90-180 day notice period for lease termination

Property	Tenant	Monthly Rent per Sq. Foot ($)	Annual Rent ($000s)	Additional Revenue Potential ($000s)
Edgewater (LTC)	Edgewater (LTC)	n/a	250*	114*
Foundation House	Alzheimer Society	1.98	5	0
	Canadian Mental Health	2.08	6	0
	Dunnville Hospital Healthcare Foundation	0.07	1	34
HWMH	Dr. McMichen	1.00	8	1
	Dr. Smith/Scallan	1.00	12	2
	Pain Clinic	1.14	4	0
Village by the Grand	Independent Living	0.00	0	0
Leaf House	Women's Shelter	0.50	1	0
Locke Street	PT Healthcare (Dunnville Physio)	1.04	42	0
Manse Bldg.	Dr. D. Baker	1.00	16	0
	Midwives of East Erie	0.43	7	9
Medical Arts	Adult Mental Health	2.03	11	5
	Haldimand Family Health Team	1.20	74	125
	Pharmasave	2.99	14	0
			452	290

* Annual rent received by HWMH is less than repayment due to the bank.

EY

Haldimand War Memorial Hospital

Workforce

EY

Area Overview - Workforce

Diagnostic Approach

- 2016/17 YTD FTE data was used to calculate variance between Budget and Actual FTEs and Salary and Benefits per cost centre. Variances are linearly pro-rated to show an estimate of the full year effect
- Workforce data is used to calculate and assess trends of OT, Sick Time, Agency Usage, Stand-by, and Call-back expenses per cost centre

Findings

- ER, Chronic Care and Housekeeping have the largest overspend in Salary and benefits while Food Services; Cafeteria; CT; physio; Assess & Restore and OR have large underspends which may indicate a budget reduction opportunity
- Housekeeping is estimated to be $43k overspent on salary in FY 2016-17
- Front-line nursing activities contribute to 79% - 85% of OT and Sick Time costs to HWMH in FY 15/16 and 16/17 respectively
- HWMH spent more than $129k in Sick Time and $269k in OT within FY 16/17

Findings, continued

- Projected total call-back spend in 16/17 is $73k, with 65% of the overspend occurring in DI. This was however a significant drop from 15/16 Call-back total spend of $122k with 80% DI contribution
- No call back hours previously budgeted in DI – this has been corrected for FY17/18. in addition to DI budget corrections related to salary from DI rather than CT
- Pharmacy over budget due to increase in FTE
- Clinical and support areas have not budgeted for sick time
- Starting in 2017/18 sick time and OT will be budgeted

.

Indicative Opportunities

Opportunity	Description	Value ($000)
Improve Sick Time and OT to within internal average	Reduce ED OT rate to IPU rate (5% to 1%) through better planning and staff scheduling	~$50
Assess business case of call-backs in DI	Cost-benefit analysis	TBD
No agency use	Develop internal bank with ER trained staff	~$22.7
Reassess need and appropriateness of the 0.5 Ambulance Escort RN	This position is currently being filled by a FT RN, consider a PT RPN instead	~$30

EY

Workforce – Staffing Profile (Nursing and Allied Health)

16/17 YTD Pro-rated/Annualized FTE Data

Findings Summary

- Nursing cost centres are over-spent by 1.4 FTE and overspent by $14k in salary and benefits
- Within Nursing cost centres, ED has the highest Salary and Benefits overspend ($103k), which would likely be mostly driven by more FTEs and hours worked; followed by Chronic Care ($19k over budget) that is mainly due to a ~$44k reduction in budgeted salary from 15/16
- Within the Allied Health cost centres, DI has the highest overspend of FTE (by 1.3) and salary (by $130k). While this is slightly lower than 15/16 (over by $138k in salary), it also had a significant increase in the Budgeted and Actual Salary in 16/17 by $116k and $125k respectively

FTE Report – Nursing and Allied Health	BUDGET		ACTUAL		VARIANCE		
Cost Centres	Total FTE	Salary and Benefits ($000s)	Total FTE	Salary and Benefits ($000s)	Total FTE	Salary and Benefits ($000s)	% Over or Under Budget
Nursing*	**46.8**	**$4,030**	**48.2**	**$4,015**	**-1.4**	**$14**	**-**
ER	12.4	$1,215	13.7	$1,318	-1.3	-$103	-8%
Chronic Care	7.7	$458	8.7	$477	-1.0	-$19	-4%
Nursing	22.2	$1,996	22.5	$1,965	-0.3	$31	2%
OR**	3.0	$269	2.6	$220	0.4	$48	18%
Assess & Restore	1.5	$92	0.7	$35	0.8	$56	62%
Allied Health	**18.8**	**$1,548**	**19.5**	**$1,535**	**-0.7**	**$13**	**-**
DI	5.5	$563	6.8	$693	-1.3	-$130	-23%
Pharmacy	1.9	$125	2.2	$150	-0.4	-$25	-20%
Lab	7.3	$542	7.1	$539	0.2	$3	1%
Activity	1.3	$72	1.7	$57	-0.3	$15	21%
Clinical Nutrition	*Pur. Serv*	$27	*Pur. Serv*	$16	*Pur. Serv*	$11	41%
Physio	2.0	$133	1.6	$75	0.4	$58	44%
Occupational Therapy	0.1	$4	0.0	$2	0.0	$2	50%
CT Scanner	0.8	$82	0.0	$3	0.7	$79	96%

**Only includes Front Line FTEs; Non-Front Line FTEs are captured in the "Non-Clinical" category*

***OR includes Cataract in terms of FTEs (i.e. same hospital staff), but salary and benefits are excluded to avoid double counting*

EY

Workforce – Staffing Profile (Other Clinical and Non-Clinical) 16/17 YTD Pro-rated/Annualized FTE Data

- Housekeeping is projected to be the Non-Clinical cost centre with the largest overspend on Salary and Benefits in 16/17. This is primarily driven by an increase of 1.6 PT FTE ($83K)
- Cafeteria, Food Services, Plant and Admission have the largest underspends in salary and benefits (a total of $203k) within the Non-Clinical cost centres. It is recommended that HWMH assess if these are likely to be recurrent underspend and thus the savings can be released by reducing their current budgets and reallocating them to other cost centres with higher recurrent FTE overspend

FTE Report – Non-Clinical and Clinical Management	BUDGET		ACTUAL		VARIANCE		
Cost Centres	Total FTE	Salary and Benefits ($000s)	Total FTE	Salary and Benefits ($000s)	Total FTE	Salary and Benefits ($000s)	% Over or Under Budget
Other – Clinical and Non Clinical	**34.99**	**$2,972**	**35.11**	**$2,742**	**-0.12**	**$231**	**-**
HSKP	5.6	$267	6.4	$309	-0.79	-$43	-16.0%
Nursing	1.9	$98	1.9	$100	-0.05	-$2	-2.2%
Purchasing	1.0	$54	1.0	$55	0.01	-$1	-2.4%
Nursing Admin	1.0	$50	1.0	$50	0.01	$0	0.2%
Laundry	1.1	$48	1.0	$45	0.06	$3	6.5%
CSR	1.5	$88	1.5	$84	0.06	$4	4.3%
Administration	3.3	$364	3.2	$359	0.16	$5	1.3%
ER	4.2	$230	4.2	$222	-0.03	$8	3.3%
Maint	3.5	$232	4.1	$225	-0.58	$8	3.3%
Finance	5.0	$363	5.1	$354	-0.08	$9	2.4%
Health Records	2.5	$118	2.3	$108	0.16	$10	8.5%
Plant	2.0	$110	1.8	$99	0.20	$11	10.1%
Admissions	1.4	$66	1.1	$48	0.34	$17	26.6%
DI	1.0	$53	0.6	$25	0.41	$28	52.7%
Cafeteria	*Pur. Serv*	$375	*Pur. Serv*	$296	*Pur. Serv*	$80	21.3%
Food Services	*Pur. Serv*	$456	*Pur. Serv*	$361	*Pur. Serv*	$95	20.8%
Clinical Management	**6.2**	**$591**	**6.3**	**$614**	**-0.2**	**-$23**	**-**
DI	1.1	$101	1.2	$112	-0.1	-$12	-11.4%
Activity	0.4	$26	0.5	$35	-0.1	-$8	-31.2%
Nursing	1.0	$93	1.0	$95	0.0	-$2	-2.2%
OR	0.5	$46	0.5	$48	-0.0	-$2	-4.5%
ER	0.5	$46	0.5	$48	-0.0	-$2	-4.4%
Lab	0.5	$46	0.5	$47	-0.0	-$1	-3.2%
Physio	0.2	$14	0.1	$13	0.0	$0	1.8%
Nursing Admin	1.0	$126	1.0	$124	0.0	$1	1.1%
Health Links	1.0	$93	1.0	$91	0.0	$2	2.6%

Workforce – Overtime, Sick Time, and Agency Usage Snapshot Based on Pro-rated 2016-17 Data

In the following table, the staff group with the largest total value and rate of Sick and OT dollars is Nursing, although the rates are relatively low at 3% and 2.1% respectively

Sick and OT by Staff Group — 2016/17 ($000s)**

Staff Group	Sick Dollars	Sick Rate	OT Dollars	OT Rate	Total Sick + OT $	Rate of Total Sick + OT
Nursing*	$227	3.0%	$108	2.1%	$335	2.6%
Non-Clinical	$64	2.3%	$15	1.6%	$79	1.6%
Allied Health	$11	0.8%	$6	0.5%	$17	0.5%
Clinical Management	$10	1.8%	-	-	$10	1.8%
Grand Total	**$311**	-	**$129**	-	**$440**	-

Includes RNs, RPNs, and PSWs in the hospital

***Pro-rated/annualized data*

- HWMH does not currently budget for either Sick Time and/or OT
- Sickness rate across ED, IPU and LTC are broadly similar with OR being the lowest at 0.16%
- ED has the highest OT rate at 4.6% compared to the other Nursing cost centres (~1%)
- Agency usage by ED is also the highest ($19.7k) among its peers and should be investigated to isolate causes

Sick Time, OT, and Agency Usage by Unit

FISCAL	Staff Group	Dept.	Sick Calls (000)			Overtime (000)					Agency Usage (000)	
			Sick Hours	Sick Dollars	Sick Rate	OT Hours	OT Dollars	OT Rate	Total Sick + OT	Total Sick + OT Rate	Agency Use Dollars	Agency Use Rate
16/17**	Nursing	Emergency	0.8	$32.4	3.3%	1.1	$70.5	4.6%	$102.9	7.8%	$19.7	1.8%
		IPU	1.3	$44.6	3.1%	0.5	$23.7	1.1%	$68.3	4.2%	$3.0	0.2%
		Long Term Care*	0.5	$14.0	2.7%	0.3	$10.8	1.8%	$24.7	4.5%	-	-
		OR	0.0	$0.4	0.3%	0.1	$3.4	0.9%	$3.8	1.2%	-	-
			2.6	$91.4	-	1.9	$108.3	-	$199.6	-	$22.7	-

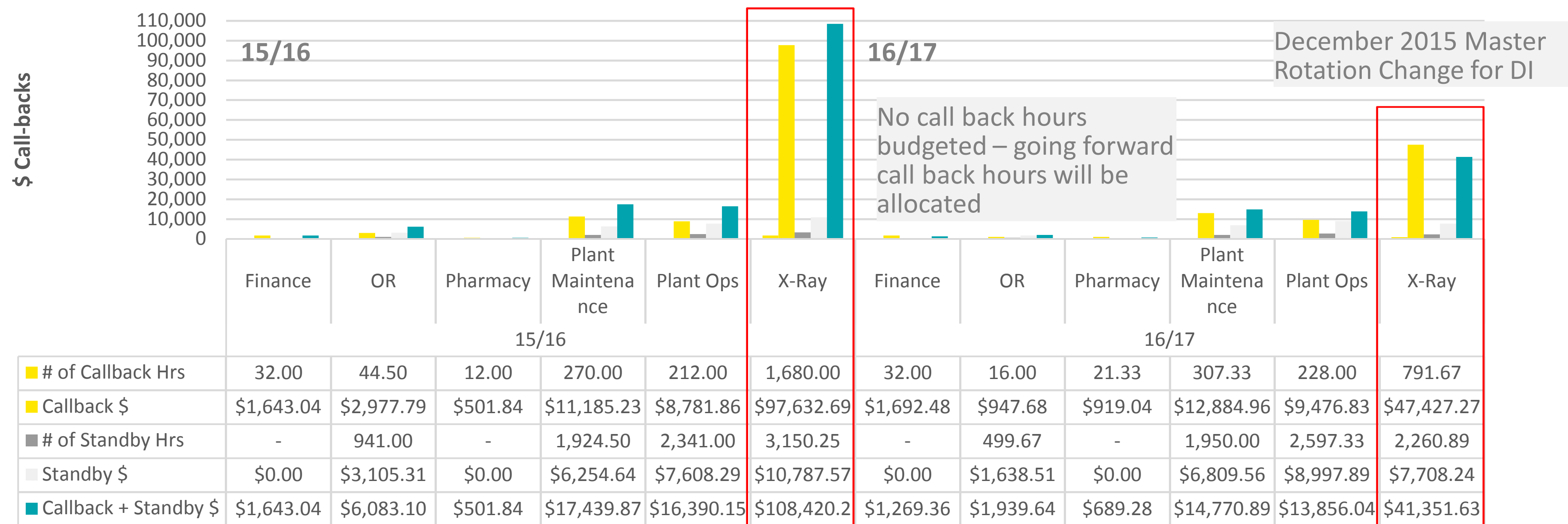
Includes Chronic and Assess & Restore

***Pro-rated/annualized data*

EY

Workforce – Call-backs and Standbys

- The X-Ray department has the highest Call-back hours and dollars in both FY 15/16 and 16/17 (prorated/annualized), with $97k and $47k respectively, which made up 80% and 65% of Total inter-departmental Call-backs in 15/16 and 16/17 respectively
- Standbys expenditures also follow the same trend as call-backs with X-Ray department incurring a total cost of $10k and $7k in FY 15/16 and 16/17 YTD as can be seen in the chart below. DI has worked with Finance to align hours worked with budget
- While it is expected for the X-ray department to have higher amount of Standbys and Call-backs than other departments, there is a significant value in investigating reasons for Call-backs, especially since there is a significant decrease of almost $50k when comparing the total Callback $ of 15/16 and 16/17
- While Finance does not incur much Call-backs at all ($1.6k) compared to some other cost centres, Finance should not generate any Call-backs



	15/16						16/17					
	Finance	OR	Pharmacy	Plant Maintenance	Plant Ops	X-Ray	Finance	OR	Pharmacy	Plant Maintenance	Plant Ops	X-Ray
# of Callback Hrs	32.00	44.50	12.00	270.00	212.00	1,680.00	32.00	16.00	21.33	307.33	228.00	791.67
Callback $	$1,643.04	$2,977.79	$501.84	$11,185.23	$8,781.86	$97,632.69	$1,692.48	$947.68	$919.04	$12,884.96	$9,476.83	$47,427.27
# of Standby Hrs	-	941.00	-	1,924.50	2,341.00	3,150.25	-	499.67	-	1,950.00	2,597.33	2,260.89
Standby $	$0.00	$3,105.31	$0.00	$6,254.64	$7,608.29	$10,787.57	$0.00	$1,638.51	$0.00	$6,809.56	$8,997.89	$7,708.24
Callback + Standby $	$1,643.04	$6,083.10	$501.84	$17,439.87	$16,390.15	$108,420.2	$1,269.36	$1,939.64	$689.28	$14,770.89	$13,856.04	$41,351.63

EY

Workforce – Inpatient Unit Staffing Profile

Findings

- Overall in FY 15/16, the Inpatient Unit (IPU) was 0.98 RN FTE over its budget, and 0.22 RPN FTE under budget. This coincides with the RN overtime observed in the ED section
- Staffing – Interviews indicated the IPU is staffed with 3 RN and 2 RPN per 12-hour shift, with 2 shifts per day for the 22 beds.
- Full-time and Part-time Mix – 59% FT : 41% PT actual, while the budget was 57% FT : 43% PT
- Skill Mix – Based on actual FY 15/16 data the skill mix is 65% RN : 35% RPN, while the budget was 63% RN : 37% RPN

FY 15/16	Actual	Budget	Variance
RN – FT	8.84 FTE	8.00 FTE	-0.84 FTE
RN – PT	5.98 FTE	6.03 FTE	0.05 FTE
RN - Agency	0.19 FTE	0 FTE	-0.19 FTE
RN Total	**15.01 FTE**	**14.03 FTE**	**-0.98 FTE**
RPN – FT	2.11 FTE	2.00 FTE	-0.11 FTE
RPN – PT	5.57 FTE	5.82 FTE	0.25 FTE
RN – Ambulance Escort	0.42 FTE	0.50 FTE	0.08 FTE
RPN Total	**8.10 FTE**	**8.32 FTE**	**0.22 FTE**
Nursing Total	**23.11 FTE**	**22.35 FTE**	**-0.76 FTE**

	Day (12 hours)	Night (12 hours)
RN	3	3
RPN	2	0
Nursing Total	**5**	**3**

Haldimand War Memorial Hospital

Short Term Measures

EY

Overview – Short Term Measures

Diagnostic Approach

- Short Term opportunities were assessed using the 15/16 and 16/17 GL data provided, focusing on non-operationally critical expenses

Findings

- Printing, photocopying, and supplies spend in excess of $8k with a total inter-departmental 16/17 YTD budget of $58k
- Patient travel spend in excess of $11k with a 16/17 YTD budget of $17k
- Non-patient travel spend in excess of $3k with a 16/17 YTD budget of $14k
- HWMH Finance Team performs OHIP MD billing and however physicians did not contribute towards the cost of billing

Findings, continued

- XRay has switched to autofax which should decrease cost of printing
- A Rapid Assessment Cardiac clinic is being established – what is the cost benefit impact?

Indicative Opportunities

Opportunity	Description	Estimated Value ($000s)
Aligning spend to budget: photocopy, printing, and supplies; patient traveling; and non-patient traveling	Strategically plan, appropriately budget for expenses, and employ financial controls to remain within budget	~22
Charge 1% - 3% admin fee for ED Physician Billings	Since the hospital does the OHIP billing for uninsured ED Physician activity and other, hospital should charge 1% - 3% admin fee	$11-$33

EY

Stationery, Printing, Photocopying and Supplies

Findings

- Total YTD spend on printing, photocopying and supplies was $67k with a budget of $59k
- FY 16/17 budget was reduced by 7% from the previous year
- DI switched to auto fax which should impact printing cost

Cost Centre Name	YTD Actual	YTD Budget	Variance	Annual Budget
ER	$18,482	$15,000	-$3,482	$20,000
Administration	$10,930	$10,800	-$130	$14,400
IPU	$9,806	$9,229	-$577	$12,305
Housekeeping	$5,773	$7,500	$1,727	$10,000
X-ray	$5,603	$4,500	-$1,103	$6,000
Lab	$3,714	$3,150	-$564	$4,200
Other	$12,721	$8,737	-$3,983	$11,650
Total	**$67,029**	**$58,916**	**-$8,113**	**$78,555**

Recommendations

- Further reduce spend on printing / photocopying and supplies by targeting expense codes with negative variances
- Reduce budget for expense codes and cost centres with positive variances

Enablers

- Set all printer default to B+W and double sided
- Remove capability to print colour
- Shift to paperless operations
- Switch to generic toners
- Reduce total number of printers and photocopies as appropriate

Impact

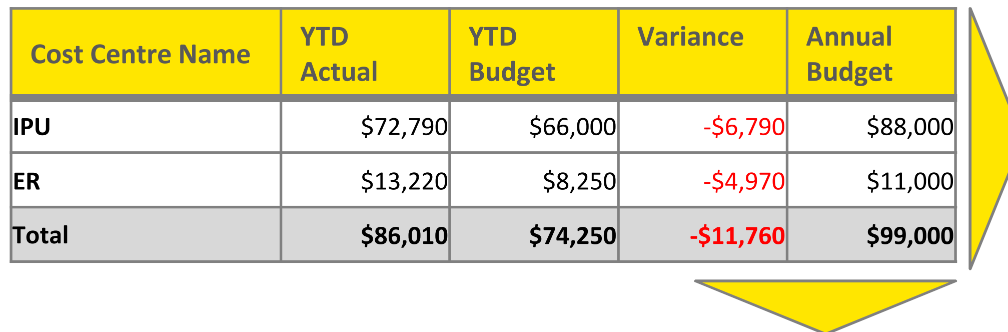
- The impact of aligning to budget is $8k and targeting negative variances is $19k
- Aligning budget to current levels results in budget reduction of $11k

EY

Patient Travel

Findings

- Total YTD spend on patient travel was $86k with a budget of $74k
- FY 16/17 budget was reduced by 4% from the previous year. The variance also increased by 4%
- The data did not provide details on the type of patient travel



Cost Centre Name	YTD Actual	YTD Budget	Variance	Annual Budget
IPU	$72,790	$66,000	-$6,790	$88,000
ER	$13,220	$8,250	-$4,970	$11,000
Total	**$86,010**	**$74,250**	**-$11,760**	**$99,000**

Impact

- The impact of aligning to budget is $11k

Recommendations

- Review and reduce non-essential patient travelling
- Review current contract arrangements with ambulance service provider

Enablers

- Review usage to ensure appropriateness
- Review and refresh patient travel policy
- Review booking process of patient travel to ensure all discounts are utilized (i.e. discounts associated with pre-booking or booking online)

EY

Non-patient Travel

Findings

- Total YTD spend on board and staff travel was $18k with a budget of $15k
- FY 16/17 budget was reduced by 25% from the previous year

Cost Centre Name	YTD Actual	YTD Budget	Variance	Annual Budget
Maintenance	$2,188	$750	-$1,438	$1,000
IPU	$2,558	$1,125	-$1,433	$1,500
ER	$1,344	$375	-$969	$500
Finance	$2,282	$1,500	-$782	$2,000
Administration	$2,905	$2,250	-$654	$3,000
Lab	$927	$375	-$552	$500
Other	$6,062	$8,140	$2,078	$10,853
Total	**$18,265**	**$14,515**	**-$3,750**	**$19,353**

Recommendations

- Review and reduce non-essential non-patient travelling

Enablers

- Review cost and benefits of having 3 drivers vs. other methods
- Review and refresh staff travel reimbursement policy and ensure compliance
- Increase use of technology for meetings (teleconference)

Impact

- The impact of aligning to budget is $3.8k and targeting negative variances is $6.7k
- Aligning budget to current levels results in budget reduction of $3k

EY

Physician Billing

Radiologists, Cardiologists and Uninsured Services

- While HWMH performs OHIP billing for its Radiologists and Cardiologists (reading ECG), it does not charge any administration fees for this task
- HWMH currently shares revenues with their Radiologists by receiving 70% Tech and Professional fees for each scan read
- Since OHIP billing takes HWMH staff time away from their original function, HWMH should consider charging the Radiologists and Cardiologists for this service (recommend between 1% - 3% administration fee of the total amount of OHIP billed to at least offset the costs of performing this function)
- The table on the right provides the amount of OHIP billing done by the hospital for the Radiologists and Cardiologists in FY 16/17, as well as the potential annual revenue of **$11k** - **$33k** for the hospital
- Similar to the Radiologists and Cardiologists, physicians conducting booked procedures in the ED do not pay any admin fees for the billing services provided to them by HWMH. Physician billing services provided to the ED physicians are for cases involving uninsured procedures and/or uninsured patients

OHIP Billing $ (FY 16/17)			Administration Fee Estimate ($000)	
Year	Month	Total (000)	1%	3%
2016	April	$96	$1.0	$2.9
2016	May	$106	$1.1	$3.2
2016	June	$109	$1.1	$3.3
2016	July	$98	$1.0	$3.0
2016	August	$102	$1.0	$3.1
2016	September	$100	$1.0	$3.0
2016	October	$99	$1.0	$3.0
2016	November	$87	$0.9	$2.6
2016	December	$94	$0.9	$2.8
2017	January	$103	$1.0	$3.1
2017	February	$100	$1.0	$3.0
2017	March	$17	$0.2	$0.5
Total		**$1,110**	**$11**	**$33**

Haldimand War Memorial Hospital

Supply Chain

EY

Area Overview – Supply Chain

Diagnostic Approach

- A maturity assessment of HWMH's supply chain was completed using expenditure data and stakeholder interviews
- HWMH was assessed for degree of vendor consolidation; unmanaged spend; cross-site/departmental sourcing coordination; use of competitive bids; spend control and vendor performance measures
- The maturity assessment is used to estimate savings range from improving HWMH's performance against these criteria

Findings

- The maturity assessment indicates potential savings in the range of $120K-$200k
- HWMH already has a high level of vendor consolidation
- Spend control and use of competitive bids was scored medium with some improvements identified
- Managed spend, cross site coordination and use of vendor performance metrics was weak
- There are some data limitations which would improve supply chain maturity and ability to manage spend more robustly if addressed

Findings, continued

- What are the barriers and opportunities to combining supply chain function across HWMH and EWG?
- Additional detail on the approach to supply chain assessment of opportunities can be found starting on page 106

Indicative Opportunities

Opportunity	Description	Estimated Value ($000s)
Combined sourcing function between HWMH and EWG	Ability to negotiate lower pricing, through higher volumes, on like items	$120 - $200
Develop and apply vendor performance metrics	Ability to monitor vendor performance	
Link items to contracts in the data base	Better visibility to proportions of items being or not being on contracts	

EY

Supply Chain – Areas of Focus

1. **Degree of vendor consolidation –** Consolidating volumes with smaller number of vendors allows for improved leverage for price and contract terms. Management of vendors is also made easier. Mature supply chains typically have 80% or more of their total sourceable spend concentrated within 20% of vendors is
2. **Ratio of managed Vs. unmanaged spend –** Evaluate level of P-card spend and spend occurring off-contract. Contracted spend is desirable as this ensures that HWMH achieves the best available price on supplies
3. **Degree of cross-site/cross-function sourcing coordination that occurs –** The level of supply chain collaboration across hospital sites and department increases purchasing power and efficiencies from centralization of procurement processes
4. **Strength and frequency of use of competitive bid process –** Compliance to Broader Public Sector directives and sourcing/procurement processes to ensure best value from vendors
5. **Strength of spend controls –** Assessment of current purchasing policies, processes and infrastructure and extent to which this facilitates appropriateness and best value of purchases
6. **Application of vendor performance measure/assessments –** Assessment of existence and use of vendor performance metrics; infrastructures for monitoring compliance against key performance metrics (e.g.. rebates, late deliveries, stock-outs)

EY

Supply Chain – Overview and Analysis

- HWMH spent $2.4M and $1.6M worth of supplies in 15/16 and 16/17 (pro-rated) respectively. Purchasing and sourcing work at HWMH is primarily facilitated by the Purchasing Coordinator. HWMH also utilizes Shared Services West (SSW) for some procurement and strategic sourcing activities
- HWMH also utilizes Cardinal for their JIT program, which account for $286k - 297k of spend (13% - 18% of total spend) and 81k of item quantities (78% - 80% of total purchased quantity) in 15/16 and 16/17 (pro-rated). 92.5% of these items are under pricing arrangements. The table below provides the summary preliminary assessment of HWMH's current supply chain practices

HWMH Supply Chain Preliminary Operational Assessment

Assessments	Degree	Description
Vendor Consolidation	High	HWMH's top 20% vendors account for 84% and 83% of Total Spend in FY 15/16 and 16/17 YTD respectively
Managed Vs. un-managed spend	Low	HWMH estimates that only 36% of spend is associated with a vendor contract however this could not be verified due to data limitations. Mature supply chain functions typically have upwards of 80% of spend on contract which allows organizations to obtain best value and manage vendor performance. The limitations of the data mean that there is no visibility of contracted spend and thus it is unlikely that vendor contracts can be effectively managed. Based on 15/16 and 16/17 available data (SSW and HWMH data), ~21% of HWMH's total spend within 15/16 and 16/17 were managed through JIT and SSW.
Cross-site/cross-function sourcing coordination	Low	HWMH and EWG undertake strategic sourcing independently of each other. HWMH utilizes the JIT program, while EWG does not.
Strength and frequency of competitive bid process	Medium	HWMH follows the Broad Public Sector directives although there is no formal process (e.g.. yearly audit, etc..) to ensure compliance
Strength of spend controls	Medium	HWMH Purchasing Policy has specified spend limits and approval matrix. The data did not allow for verification of level of direct spend (i.e. not approved by purchasing coordinator/SSW). Department managers can also make purchases without a PO, making it harder to track these expenditure
Application of vendor performance measures/assessments	Low	No vendor metrics are currently being tracked. HWMH currently relies on the vendors to perform as expected

EY

Haldimand War Memorial Hospital

OR Utilization

EY

Overview - OR

Diagnostic Approach

- OR data is used to calculate OR capped utilization
- The opportunity for additional volume or reduction in existing capacity that could be achieved while maintaining existing activity is derived from achieving capped utilization target of 85%

Findings

- HWMH undertakes General Surgery, Ophthalmology and Urology procedures in it's OR suite
- Overall capped utilization was **45%** with General Surgery & Urology Lists both operating at below 35% and ophthalmology lists at 84%
- Achieving 85% utilization would allow OR capacity to be reduced by **52%** while maintaining the same annual activity
- OR staffing consists of 1x RN, 1x RPN and a Recovery RN
- HWMH contracts with Dr Sharda to share the cost of eye surgery provision, as both parties agreed that Dr. Sharda's surgeries were to be cost-neutral

Findings, continued

- Costs for Dr. Sharda may not be fully recovered such as cleaning and re-processing
- Opportunities to ensure that RN & RPN in OR/Recovery are fully utilized during OR downtime
- Assess how much RN/RPN time is required for data entry / inventory management and can this be undertaken by another staff member

Indicative Opportunities

Opportunity	Description	Estimated Value ($000s)
Reduce operating capacity in line with demand	Maintains existing volumes but reduces staffing costs	$53 - $90
Formalize duties for RN & RPN during OR downtime	Reduce OT/agency spend in other hospital departments	TBD
Lease excess operating capacity for revenue generating activity	e.g.. increase volume of lease OR time to a third party to generate revenue	TBD
Recover all costs for Eye Surgery	Renegotiate contract with Dr. Sharda / seek LHIN funding	$29

EY

Physician Activity

- HWMH has 2 OR suites however is budgeted and scheduled to run 1 block per day
- As of Q3 2016-17, the OR budget had a $21K favourable variance
- HWMH has an undertaking with Dr Sharda for the provision of ophthalmic surgery, where Dr Sharda is responsible for the cost of consumables and supplementary staffing
- As of Q3, 16-17 the OR Cataract budget showed a favourable variance of $66K however HWMH is liable for the cost of base nursing staff ($29K).
- OR base staffing consists of 1x RN (1FTE) and 1x RPN (1 FTE) who are scheduled to deliver up to 1,109 hrs of operating time per year. Additionally there is 1x Recovery RN (0.64FTE). When not scheduled to operate, their duties include:
  - OR RN: OR prep; Inventory; check anesthetic equipment; pre-operative assessments; OR Data Entry; ad-hoc cover in ED or IPU
  - OR RPN duties include reprocessing endoscopes and assisting outpatient procedures in ER; chaperone ambulance transfer; RPN does not “float” to other departments
  - Recovery RN: Float to IPU if downtime known in advance
- Tuesday and Wednesday lists are attended by an Anaesthetist who will also see patients for pre-operative assessment

Surgeon	Specialty	Day	Duration	Block Time	Expected Blocks per year	Annualized Operating Hours	Notes
Dr. Baker	General Surgery	Mon	Weekly	0800 - 1300	36	182	
Dr. Baker	General Surgery	Tue	Weekly	0800 - 1300	42	210	Anaesthetist present
Dr. Baker	General Surgery	Wed	Weekly	0800 - 1300	32	162	Not last Wed of month Anaesthetist present
Dr. Shoebridge	Urology	Wed	Monthly	0800 - 1200	10	39	Last Wed of month
Dr. Sharda	Opthalmology	Thu	Weekly	0700 - 1500	42	315	
Dr. Baker	General Surgery	Fri	Weekly	0800 - 1300	40	202	

OR Utilization

- Overall capped utilization is 45% which is very low compared to the recommended target of 85%
- Dr. Sharda's overall utilization is at 84% however overall utilization for Dr. Baker and Dr. Shoebridge is 34% and 32% respectively

Opportunity

- If ORs operated at 85% efficiency in 2016; **681 additional cases** could have been performed in that same capacity
- HWMH was scheduled to operate 203 blocks per year but delivered 174 bocks in 2016. The same activity could have been delivered in 91 blocks if they operated at 85% utilization
- Based on the surgical caseload in 2016, the annual funded operating time required is 527hrs (at 85% utilization). This compares to 1,109 funded operating hours and 1,575 overall working hours per RN and RPN in OR and 1,056 working hours of Recovery RN time
- OR and Recovery staff are utilized in other areas during OR downtime however this is on an ad-hoc basis and, thus, full utilization of these staff members cannot be assured

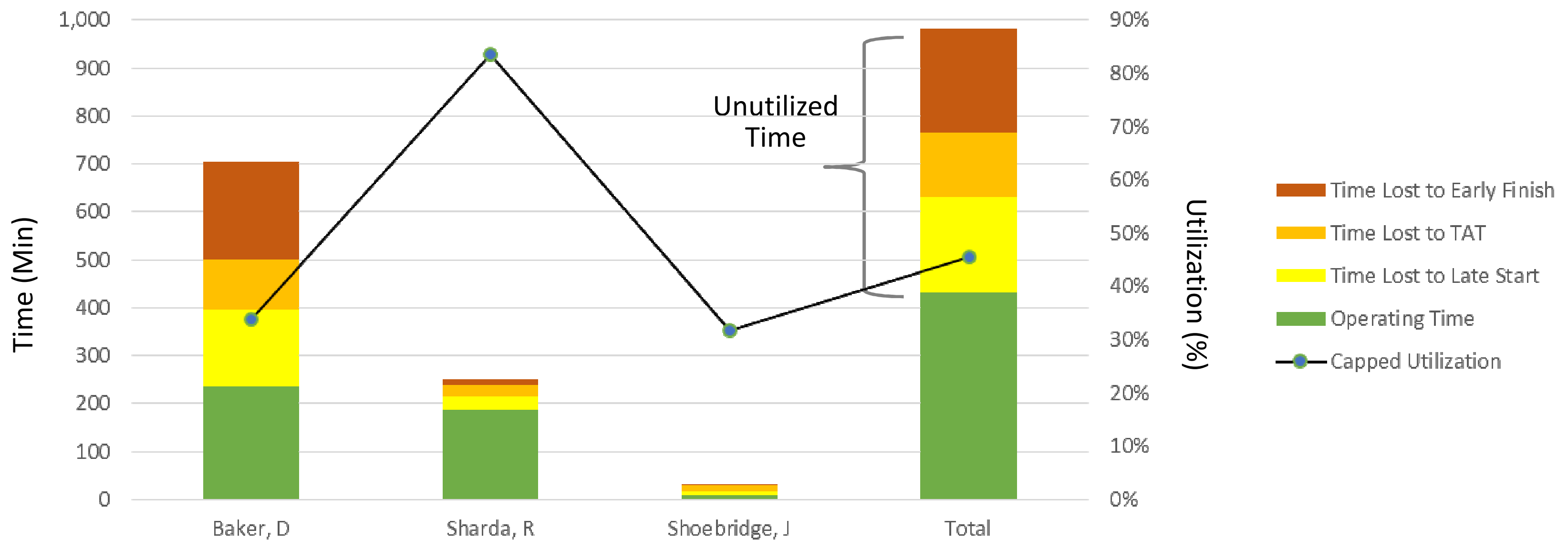
Surgeon	Planned Blocks	Total Blocks	Total Cases	Average Cases per List	Average Case Duration (Mins)	Capped Utilization	Time Opportunity @85% (Hrs)	Case Opportunity @ 85%	Blocks required annually @ 85%
Baker, D	151	139	382	3	39	34%	362	644	58
Sharda, R	42	28	456	16	25	84%	1	17	30
Shoebridge, J	10	7	52	7	11	32%	12	20	3
TOTAL	203	**174**	**890**	**5**	**30**	**45%**	**375**	**681**	**91**

EY

"Unutilized" Time in ORs

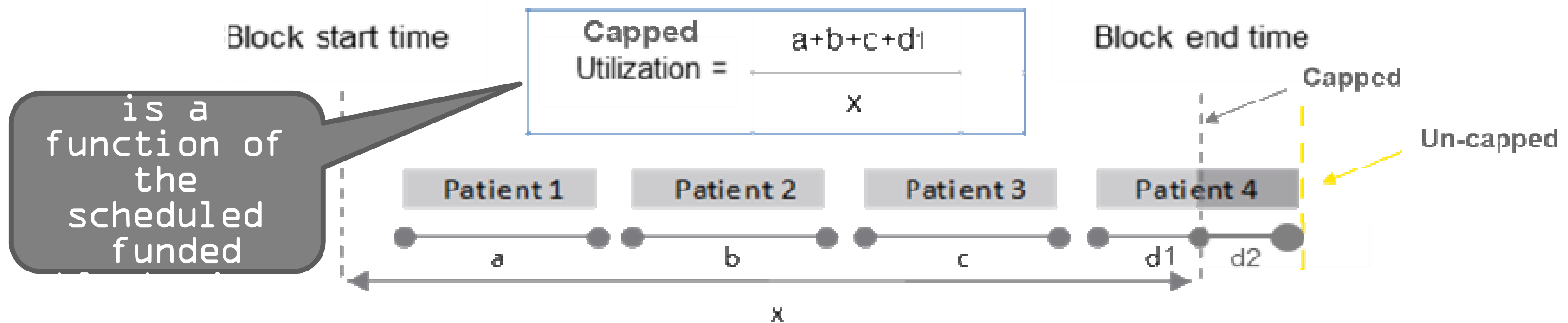
- 56% of OR time is "unutilized" time of which early finishes are the largest contributor (22%), followed by late starts (20%)
- Aligning capacity to demand and introduction of scheduling standards can support the delivery of better utilized OR blocks

Surgeon	Operating Time	Time Lost to Late Start	Time Lost to TAT	Time Lost to Early Finish
Baker, D	235	162	103	204
Sharda, R	187	28	23	12
Shoebridge, J	9	8	11	1
Total	**431**	199	137	217
%	44%	20%	14%	22%



EY

OR Utilization Calculation & Assumptions



pportunity alculations ssumptions

- ll elective urgent and emergency cases are included in this analysis
- apped utilization is calculated based on total operating time excluding any overrun divided by the available block time
- here block utilization is lower than 85 the available operating time is calculated had the block operated at 85 utilization
- he number of additional cases that could have been performed on that list is calculated if the list had operated at 85 utilization he case duration is assumed to be the surgeon's average case time
- he data covers the 12 month period an to ec 2016 inclusive
- ase duration operating time calculated as "patient in" to "patient out" of is considered utilized time
- ata quality issues include overlapping which showed a negative egative was excluded in this analysis

EY

Haldimand War Memorial Hospital

Inpatient Services

Area Overview – Beds and Length of Stay

Diagnostic Approach

- Analysis of daily bed occupancy and variation Vs. budgeted capacity to demonstrate if capacity is in excess of normal expected variation
- Comparison of acute length of stay Vs. expected length of stay for atypical patients to identify opportunities for reduction at HIG level
- Comparison of potential Preferred Accommodation and Co-Payment revenue Vs. Actual
- Acute care staffing levels were assessed to identify variance between budgeted FTEs and skill mix against actual
- Chronic Care RUG data was benchmarked provincially

Findings

- Acute Care annual occupancy is at 102% and thus reduction in IPU beds is not advised
- Length of stay analysis of Acute Care indicates opportunity to reduce demand by 851 bed days.
- Assess & Restore and Chronic Care occupancy rates were 47% and 61% respectively
- RUG III analysis suggests that HWMH Chronic Care would have lower complexity level compared to provincial average
- HWMH achieved $121K in preferred accommodation and co-payment revenue in 2015-16 vs a total overall potential of $202.3K in 2015/16
- Readmissions within 30 days for HIG Condition is 12.6%. Closest performers are JBH (13.6%) and NHS (15.1%)

Findings, continued

- Percent ALC days in acute care is declining in performance compared to November 2016 LHIN report (9.87% -closest performer was HHS at 12.77%). Current days are 17.43% with NGH at 11.76%, JBH at 12.8% and HHS at 13.3%
- ALC rate in post acute is significantly worse at 18.76% compared to best performers - HDS, JBH and SJHH (8.64%, 9.33% and 14.10%)
- Repeat ED Visits for Mental Health is 11.1% and improved from previous quarters. Leading LHIN performer is NGH (8.6%) and WHGH (9.9%)

Indicative Opportunities

Opportunity	Description	Estimated Value ($000s)
Reduce acute length of stay to within 15% of ELoS	Reduce OT expenditure created by excess bed demand related to occupancy level	TBD
Review collection rate for inpatient co-payments	Ensure that collection of co-payments is optimized	$50 - $161
Align Chronic Care and Assess & Restore staffing to demand	Low occupancy in these areas suggest opportunity to reduce staffing	TBD

EY

Beds at a Glance – FY 15/16 Data

- All HWMY beds are funded through the Global Funding
- Under the Global Funding, Assess and Restore receives its own funding bucket, separate from both Chronic and Acute beds
- The following table provides an overview of the 4 inpatient units for the period FY 2015-16

Unit	Funded Beds	Total Admissions	Total Bed Days	Avg. Length of Stay	% Occupancy	Funding and Revenue	Staffing Complement	Annual Budget (Pay)	Annual Budget (Non-Pay)	Annual Budget Revenue
Acute Care (Includes Palliative)	22	710	7,349	9.9	107%	- Global Funding - Revenue from preferred accommodation	**Day** - 3xRN (includes CN)+ 2xRPN **Night** - 3xRN	$2,577K	$560K	$42K*
Chronic Care (includes 2 Respite beds)	15	76	2,906	52.2	61%	- Global Funding - Patient Co-payments per bed day	**Days** - 1 RPN + 2 PSWs **Night** - 1 RPN + 1 PSW	$582K	$59K	$69k**
Assess & Restore (A&R)	4	21	691	36.4	47%	Global Funding – (Specific funding allocation determined by # of beds)	**Days** (5 Hrs) - A&R is mostly covered by the Acute Care staff with PSW support during peak hours	$136K	$8K	-
Respite	2	Included in Chronic			Data unavailable	- Considered rental, does not officially get reported to Ministry	Included in Chronic			

**$36k from preferred accommodation annual budget based on 16/17 GL provided, $6k from operating budget items*
***Co-payment annual budget from 16/17 GL provided, respite beds do not have an annual budget*

Acute Care – Occupancy

- The average daily bed requirement was 21 beds with demand peaks at 30 beds. The IPU operates with 21 funded beds
- Annual overall occupancy in 2015-16 was 107% which may pose a quality and safety risk and is likely to create demand for OT. It may be advisable to target length of stay reductions in order to reduce occupancy levels to the 88% level budgeted for
- Acute Care OT and Sick Time spend in this period was $128.7K. Further analysis to indicate the proportion of OT generated by surge may reveal opportunities from alternate staffing models for inpatient nursing and staff
- Reduction in LoS could support reduction in occupancy to HWMH target of 88% and reduce OT spending related to surge

ov 15 '15 – ct 16 '16	ctual	udget	arian ce	nnual udget	rior ctual
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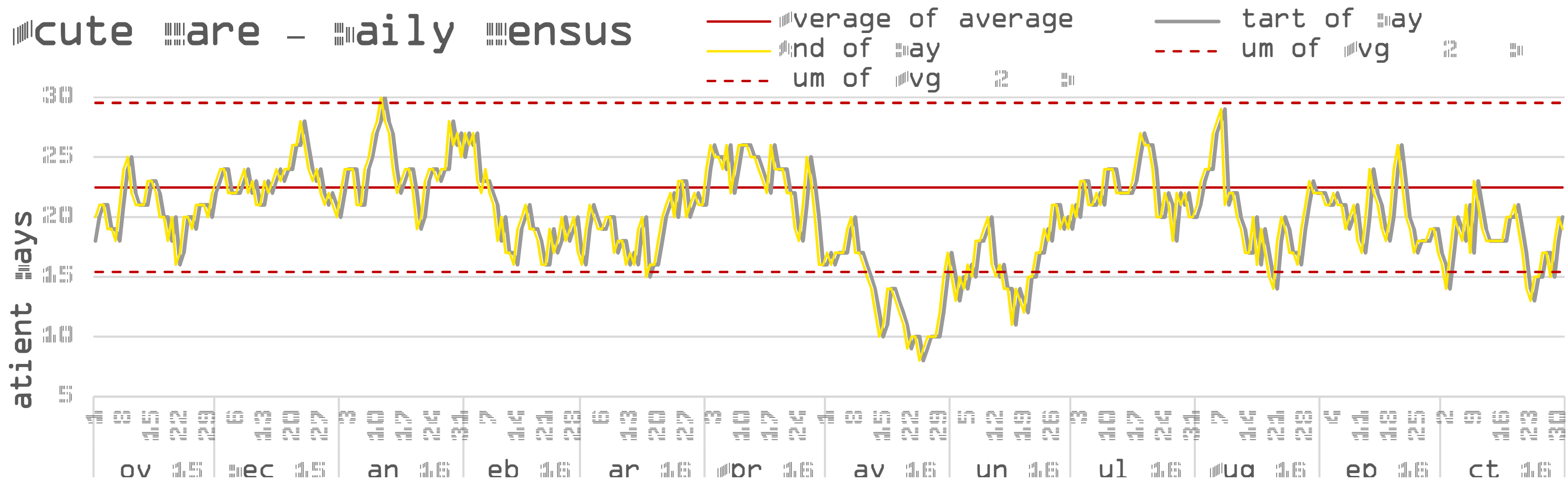

EY

Acute Care – Length of Stay

- In the 12 month period Oct 2015 to Sep 2016 there were 676 admissions (6720 bed days) of which there were 481 “typical” admissions (2979) bed days (typical is defined as no palliative death, no transfer, no LoS outlier)
- For every typical admission, there are 0.3 bed days consumed for ALC. For all admissions including atypical admissions 2.3 beds were consumed
- There was a negligible level of pre-op delay indicating that virtually all patients had their first surgical intervention by day 1
- The hospital could have the equivalent of 2.3 beds if all typical patients could be made ready for discharge within 115% of their (HIG) expected length of stay. This rises to 8.6 beds when atypical patients are included, however ELoS is less applicable to this group as a target length of stay

Admission Route	Total Admissions	Total [illegible]o Acute [illegible]	Total [illegible]o Days	Total Acute	Total [illegible] Days	Total Pre Op Days	Total Bed Days 115% [illegible]o
[illegible]	48	276	231	270	6		77
Urgent/Emergent	48	276	231	270	6		77
[illegible]	392	2 580	1 945	2 462	118		755
Elective	13	74	61	74			20
Urgent/Emergent	379	2 506	1 885	2 388	118		735
[illegible]	41	123	129	123		2	19
Elective	7	20	32	20		2	2
Urgent/Emergent	34	103	97	103			17
Grand Total bed days	481	2 979	2 305	2 855	124	2	851

Top 20 ELoS by HIG Category

Emergent/Urgent Admission

Urgent/Emergent HIG Description	Total Admissions	Total Acute Bed Days	Average Acute LoS	Average HIG ELOS	Tot. Days > 115% ELOS
Total	**461.0**	**2,761.0**	**6.0**	**4.8**	**829.1**
Heart Failure without Coronary Angiogram	29.0	236.0	8.1	6.2	79.7
Viral/Unspecified Pneumonia	33.0	219.0	6.6	5.2	60.4
General Symptom/Sign	14.0	147.0	10.5	5.9	59.4
Palliative Care	6.0	88.0	14.7	8.5	42.7
Arrhythmia without Coronary Angiogram	23.0	108.0	4.7	3.3	33.1
MCC 11 Unrelated Intervention	2.0	59.0	29.5	11.5	32.7
Myocardial Infarction/Shock/Arrest without Coronary Angiogram	11.0	62.0	5.6	3.7	26.6
Organic Mental Disorder	2.0	44.0	22.0	9.2	25.4
Osteomyelitis/Septic Arthritis	1.0	30.0	30.0	7.3	21.6
Knee Intervention except Fixation with Infection	1.0	24.0	24.0	5.1	18.1
Dementia	2.0	42.0	21.0	10.7	17.4
Ischemic Event of Central Nervous System	5.0	39.0	7.8	6.7	16.6
Aspiration Pneumonia	7.0	57.0	8.1	6.7	15.7
Spinal Injury	2.0	34.0	17.0	8.1	15.4
Open Wound/Other/Unspecified Minor Injury	6.0	36.0	6.0	3.1	14.7
Pulmonary Embolism	2.0	33.0	16.5	8.0	14.7
Diabetes, Other	10.0	47.0	4.7	3.7	14.5
Awaiting Placement	1.0	18.0	18.0	3.7	13.7
Disorder of Pancreas except Malignancy	9.0	45.0	5.0	4.2	13.4
Chronic Obstructive Pulmonary Disease without Lower Respiratory Infection	10.0	64.0	6.4	5.2	12.9

Chronic Care – Occupancy

- The average number of occupied Chronic Care beds is 11.4, with peak demands at 15.6 beds from 2 standard deviation from the mean
- The unit operates with 13 Chronic Care beds
- Overall occupancy in 2015-16 was 79.70%, which can be explained by the long periods of low occupancy rates as can be seen in the chart below
- Based on a 79.70% occupancy rate and the generally lower acuity level of this patient cohort, it would be a reasonable expectation for Chronic Care not to have any OT expenses, which was at $7k in FY 15/16
- Considering the high level of occupancy within Acute Care, there may be potential to introduce flexibility between acute and chronic care beds. This may however create a cost pressure due to the higher staffing complement required to care for acute patients

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atient ays	3,782	4,508	726	4,508	3,679
dmissions	87	40	-47	40	73
ercent ccupancy	79.70%	95%	15.3%	95%	77%
verage ength of tay	52.34	90	37.66	90	49
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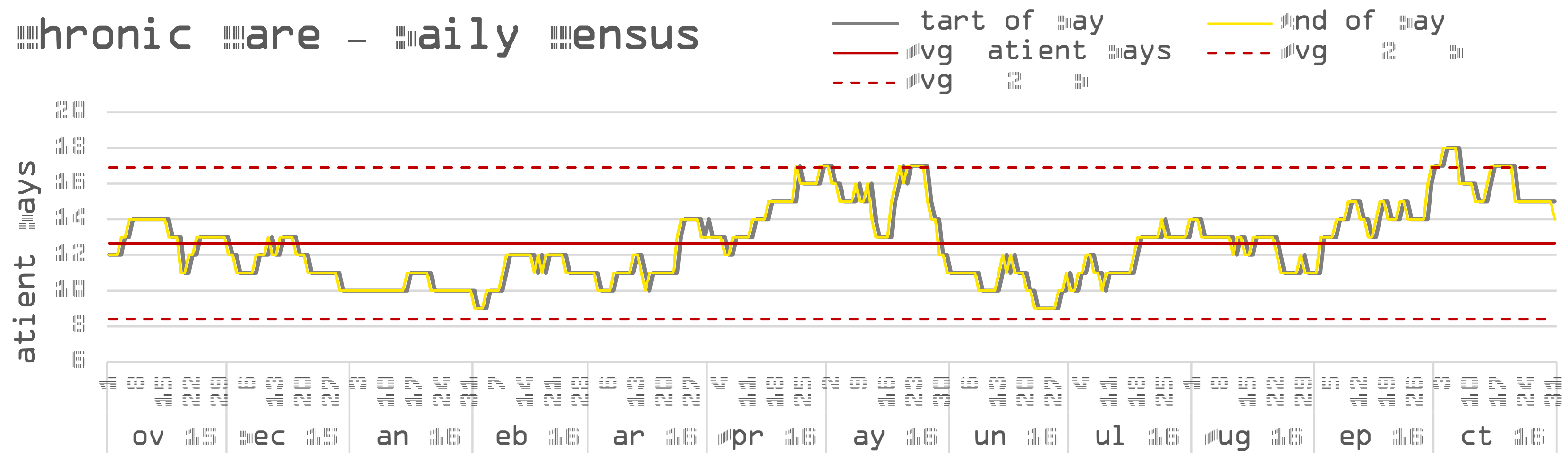


EY

Chronic Care RUG III Class Distribution

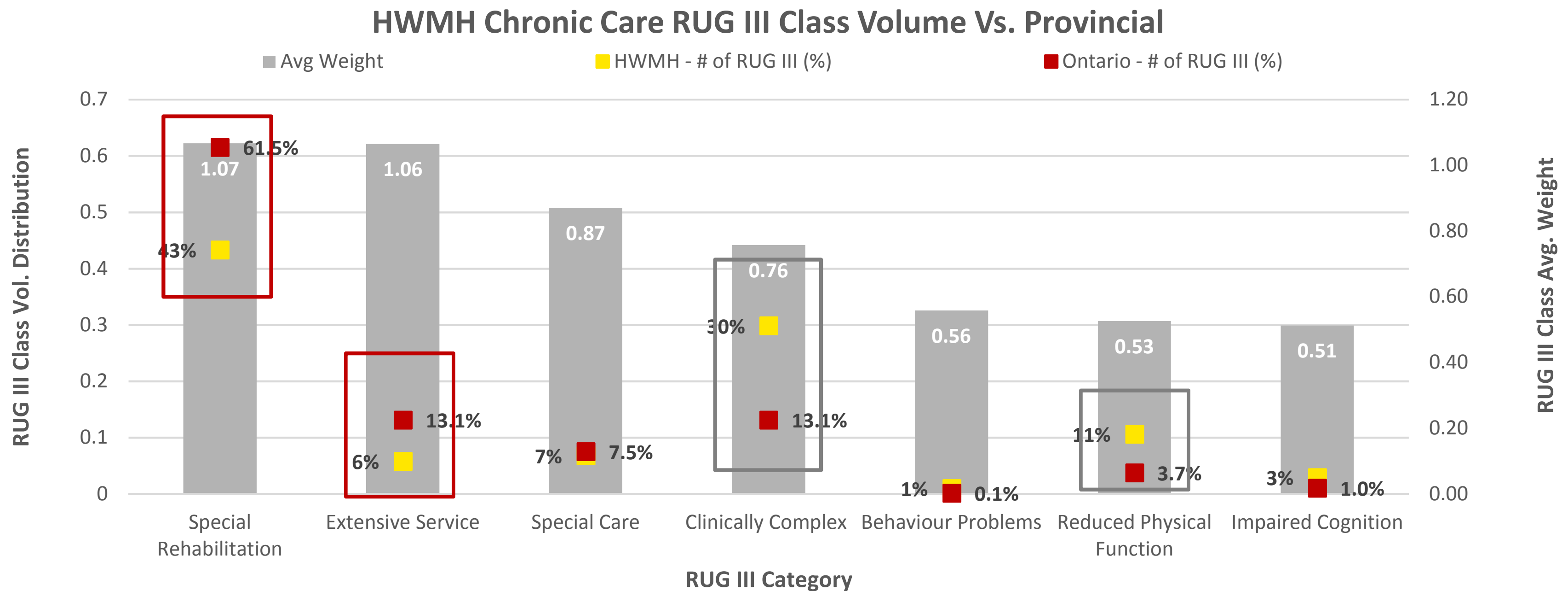
HWMH Vs. Ontario Volume

Summary of Findings

- HWMH Chronic Care generally has less volume of RUG III classes with higher weight (red box), and more volume in classes with lower weight (grey box) when compared against provincial average
- This suggests that HWMH Chronic Care would have lower complexity compared to other Complex Care facilities in the province

Approach

- CCRS data from period Nov '15 – Oct '16 were utilized to perform the analysis
- 10 out of 64 data points were not assigned RUG group, and thus were excluded from the analysis



EY

Chronic Care RUG III Group Distribution
HWMH-specific

Findings

- There is a fairly equal distribution of total % assessment days among the higher complexity groups and lower complexity groups within Chronic Care; the higher complexity RUG III groups within the red box make up 56.3% of total assessed days
- The Chronic Care CMI level is calculated to be 0.79 (RUG III 44), which is lower than EWG's FY 17/18 CMI of 0.95 (RUG III 34)
- 53% of total assessed days are made up by 3 RUG III classes with the highest avg. weights
- A benchmark of RUG III distribution level with other complex care facilities would help to identify the most appropriate staffing level within Chronic Care

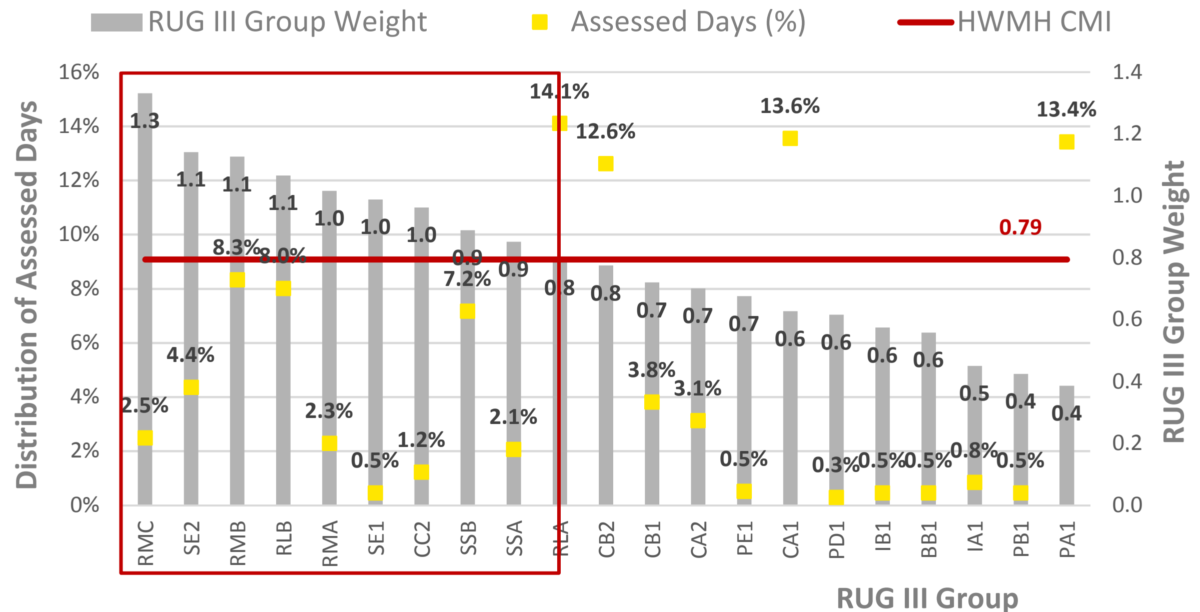


Table x – Assessed Day % by RUG III Class

RUG III Class	RUG III Class Avg. Weight	Assessed Day (%)
Special Rehabilitation	1.07	35.20%
Extensive Service	1.06	4.81%
Special Care	0.87	9.23%
Clinically Complex	0.76	34.33%
Behaviour Problems	0.56	0.45%
Reduced Physical Function	0.53	14.68%
Impaired Cognition	0.51	1.29%

53% of assessed days, avg. weight of **1**

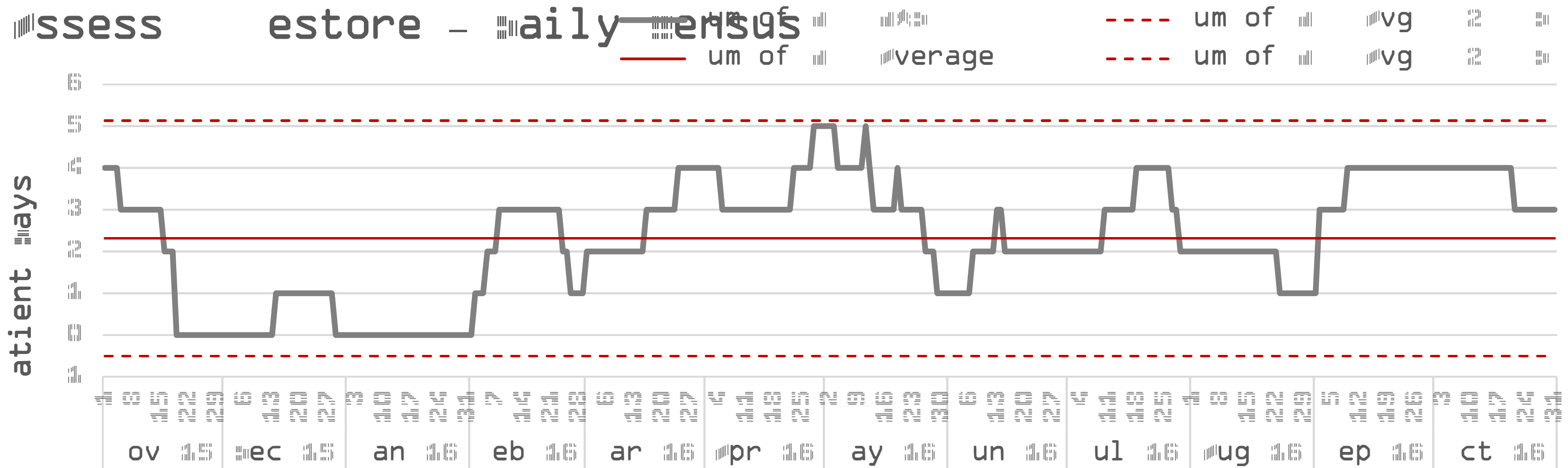
47% of assessed days, avg. weight of **0.6**

EY

Assess and Restore – Occupancy

- Length of stay analysis reveals that the average daily bed requirement for Assess and Restore is 2.3 beds with peak demand at 5 beds
- Assess and Restore has 4 funded beds
- Overall annual occupancy rate was 47%, which is 52% lower than budgeted
- Total bed days used was below the expected activity plan however average length of stay was greater than plan by 8 days
- Similar to Chronic Care, Assess and Restore can be expected to have low level, if any, of OT expenses due to the low level of occupancy rate

Nov '15 – Oct '16	Actual	Planned	Variance	Annual Budget	Prior Actual
Beds Staffed In Operation	4	4	0	4	4
Patient Days	850	1,460	610	1,460	931
Admissions	19	45	26	45	20
Percent Occupancy	58%	99%	41%	99%	63%
Average Length of Stay	44.7	28	-16.7	28	37
Utilized Month And Census Data					



EY

Preferred Accommodation and Co-payments

- Analysis of Preferred Accommodation and Co-payment revenue HWMH generated revenue of $80K vs a total potential of **$161K** in FY 16/17 (Pro-rated using YTD value in GL provided),
- The total potential is calculated assuming Assess and Restore, Acute Care, and Chronic occupancy of 47%, 88% and 61% (respectively); collection rate of 90%, average daily co-payment rate of $30; 7 days Preferred Accommodation collection in a month, and 30 days Co-payments collection in a month (see below)
- Availability of beds may be a barrier to achieving full potential revenue in IPU beds however is less likely to be a barrier in chronic care where occupancy is 67%
- Collection rate and Patient demographics (i.e. eligibility for co-payment discount) may reduce the opportunity in Chronic care

Preferred Accommodation and Co-payments - Realistic Scenario (15/16 Trial Balance Data)

Unit	Type of Room	# of Chargeable Beds	Actual Rev (15/16)	Daily Rate	Pot. Yearly Rev.	Additional Pot. Revenues
Assess & Restore	Ward	4	$0	$0	$0	
			$0		**$0**	**$0**
IPU	Ward	9	$36k	$0	$0	
	Semi	8		$230	$139k	
	Private	2	$8k	$255	$38k	
			$44k		**$177**	**$136k**
Chronic	Ward	6	$83k	$30	$36	
	Semi/Private	8		$30	$48	
Respite	Private	2		$67	$27k	
			$83k		**$111k**	**$31k**
			$127k		**$288k**	**$161k**

Assumptions

Occupancy Level - A&R	47.2%	**Collection Rate**	90%
Occupancy Level - Acute	23%*	**Avg. Monthly Co-payment Rate**	$30
Occupancy Level - Chronic	61%	**Based on Acute Care occupancy rate and historical data on frequencies of preferred accommodation collection*	

EY

Haldimand War Memorial Hospital

Outpatient Services

EY

Area Overview – Outpatient Services

Diagnostic Approach

- Review of annual outpatient volume
- Analysis of clinic productivity and comparison of number of clinics to schedule
- Assessment of patient demographics and percent of patients from out of area
- Comparison of outpatient specialty complement with clinical inpatient workload

Findings

- HWMH assumes staffing and supplies costs for some clinics but not for others. Some physicians are not charged rent for offices
- Significantly higher number of clinics ran compared to outpatient schedule which may be generating cost pressures for the hospital
- The outpatient specialty complement does not reflect the inpatient case mix and thus may not directly support operation of the organization
- Only 38% of Pain clinic visits were from Haldimand residents compared to 78% or greater for all other clinics

Findings, continued

- More rigour required for budgeting annual outpatient plan decided so that funding/revenue/budget is linked to volume

Indicative Opportunities

Opportunity	Description	Estimated Value ($000s)
Reduce clinics which are not core to HWMH ED and IPU	Outpatient clinics are a cost to the service thus should only run if they directly support core hospital services	TBD
Full cost recovery for outpatient expenses from all physicians	Currently Hospital assumes costs for some clinics but not others	$63

EY

Outpatient Services

- HWMH had 6,332 outpatients attendances in the period Jan-Dec 2016
- HWMH has 15 scheduled outpatient clinic services although activity data indicated 19 distinct outpatient services. Services in the data that did not appear in the schedule were: Orthopaedics, Ophthalmology, Laboratory and Echo
- Clinics take place either in physician offices or in the Hospital Pain Clinic area. HWMH provides the clinic space and, for some clinics, assumes the cost of staffing and supplies (see schedule)
- Appointments are scheduled by physician offices and staffing varies by clinic
- HWMH has an activity plan for 4,500 visits in FY 2016-17. The activity plan for FY 16/17 increased by 500 visits from the previous year but HWMH has already seen over 4900 visits as of Dec 2016
- Localization of patients did not change significantly over the 2 year period, with 71-76% of patients coming from the immediate surrounding area and over 98% of patients were Hamilton Niagara Haldimand Brant (HNHB) residents

Type of Clinic	MD Name	Frequency	When (Day)	When (Time)	Location	Expenses
Minor Procedures	Dr. Baker	Weekly	Monday & Tuesdays	0800 - 1100	Pain Clinic	Supplies and Nursing
Cardiology	Dr. Brian Sealey	Monthly	1st Monday	0800 - 1600	Clinic Offices	
Rheumatology Clinic	Dr. Walter Keane	Monthly	2nd Wednesday of month	0800 - 1600	Pain Clinic	Supplies, not incl medication
Cardiology/Echoes	Dr. Tomlinson	Weekly	Q Thursday	0800 - 1600	Pain Clinic	
Pediatric	Dr. Hilda Makken	Weekly	Q Thursday	0800 - 1600	Clinic Offices	
Neurology	Dr. Michel Rathbone	Monthly	Q last Friday	0700 - 1700	Clinic Offices	
Pain Clinic	Dr. Chris Ray	Monthly	Q Wednesday, Friday	1300 - 1700	Pain Clinic	Supplies only
Pediatric	Dr. Hilda Makken	Monthly	Q 3rd Friday	0800 - 1600	Clinic Offices	
Psych / Memory Clinic	Dr. Sulis (+/-Jenny Schiffl (NP))	Monthly	Q last Tuesday	0800 - 1700	Clinic Offices	
Urology	Dr. Shoebridge	Monthly	Q last Wednesdays	0800 - 1600	Clinic Offices	
Lump and Bump	Dr. Baker	q Monthly	Q Thursday	0800 - 1300	ED	Supplies and Nursing
Derm Surg Clinic	Dr. King and Dr. Baker	Usually q monthly	Monday	0800 - 1200	Pain Clinic	Supplies and Nursing
ENT	Dr. Jenny	Ad-Hoc	Ad-Hoc	Ad-Hoc	Ad-Hoc	
Orthopedic	Dr. Song	Ad-Hoc	Ad-Hoc	Ad-Hoc	Ad-Hoc	
Spirometry/Smoking Cessation	Jenny Schiffl (NP)	Weekly	Tuesday	Ad-Hoc	Unsure	

HWMH Pain Clinic

Largest outpatient service with significant proportion of patients from outside the Haldimand area

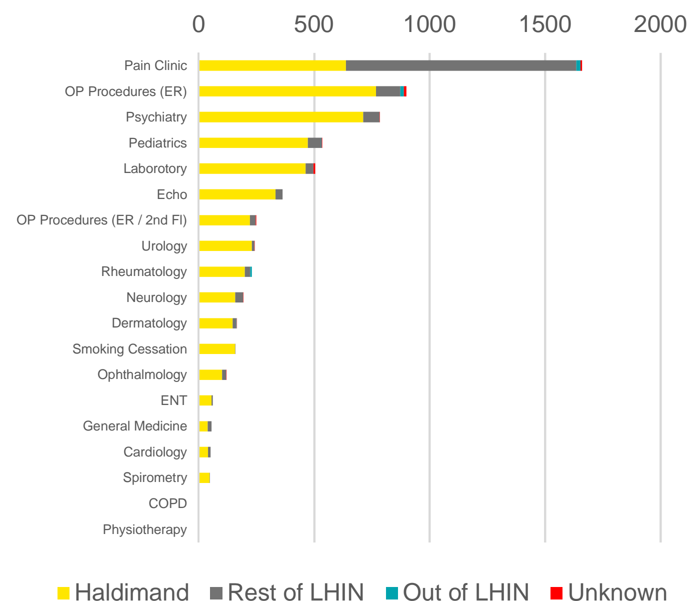
- 76% of all outpatient attendances were by Haldimand residents. A further 23% of patients were from outside of the Haldimand area but within the HNHB LHIN and only 1% were from outside the LHIN
- Outpatient services do not reflect the inpatient clinical workload. Cardiology, Gastroenterology and Respiratory conditions make up the largest cause of hospitalization however Pain is the largest clinic by volume
- Pain Clinic was the largest Outpatient Program by volume of which only 38% of attendances were from the Haldimand area compared to the average of 76%

Inpatient admissions by clinical area (Oct 15–Sep 16)

Clinical Area	Admissions	Bed Days	% Admissions
Cardiology	152	1124	22.5%
Gastroenterology	105	711	15.5%
Respiratory	87	580	12.9%
Rehab	61	1107	9.0%
Unspecified	34	759	5.0%

Specialty	HNHB LHIN		Out of LHIN	Unknown	Total
	Haldimand	Rest of LHIN			
Pain Clinic	38%	60%	1%	0%	1,660
OP Procedures (ER)	85%	12%	2%	1%	899
Psychiatry	91%	9%	0%	0%	785
Pediatrics	88%	10%	1%	1%	535
Laboratory	92%	6%	0%	2%	505
Echo	91%	9%	0%	0%	364
OP Procedures (ER / 2nd Fl)	89%	10%	0%	1%	249
Urology	95%	5%	0%	0%	243
Rheumatology	87%	10%	3%	0%	230
Neurology	81%	18%	0%	1%	194
Dermatology	89%	10%	1%	1%	165
Smoking Cessation	99%	1%	0%	0%	159
Ophthalmology	84%	15%	0%	1%	121
ENT	90%	10%	0%	0%	61
General Medicine	71%	29%	0%	0%	55
Cardiology	77%	23%	0%	0%	52
Spirometry	96%	4%	0%	0%	49
COPD	67%	0%	33%	0%	3
Physiotherapy	100%	0%	0%	0%	3
Total	**76%**	**23%**	**1%**	**1%**	**6,332**

**Haldimand area includes patients from Danville (N1A), East Haldimand (L0R), West Haldimand (N0A), and Caledonia (N3W).*



EY

HWMH Outpatient Clinics

Covers Staff and supplies costs for 4 specialty clinics

- HWMH contributes to the running costs (staff, supplies and space) of 4 outpatient services:
  - Pain Clinic
  - Rheumatology
  - Surgery
  - Dermatology
- For all other clinics HWMH provides the clinic premises only (primarily physician offices)
- Some physicians are not charged for the use of outpatient space
- The table outlines the actual activity undertaken between Jan-Dec 2016 compared to the expected activity for OPD services where HWMH covers staff and/or supplies costs
- HMWH carried out more clinics than expected in this period and this may have incurred additional costs above budget

Recommendation

- Agree expected clinic utilization by outpatient service
- Set approvals process prior to booking any additional outpatient activity
- Where clinic utilization is below expected utilization, reduce clinic hours of operation

Specialty Clinic Hours Costs Assumed	Weekday	Blocks Planned	Blocks Actual	Patients	Patients per Block
Pain 1300 - 1700 (Supplies + 10Hrs of RN time)	Mon	?	44	550	12.5
	Tue	?	50	603	12.1
	Wed	52	45	300	6.7
	Thu	?	17	55	3.2
	Fri	50	46	152	3.3
	TOTAL	**102**	**202**	**1,660**	**8.2**
Rheumatology 0800 - 1600 (Supplies not incl Meds)	Mon	?	1	10	10.0
	Wed	12	16	192	12.0
	Fri	?	3	28	9.3
	TOTAL	**12**	**20**	**230**	**11.5**
Surgery 0800 - 1100 (Supplies & RN)	Sun	?	2	3	1.5
	Mon	45	28	65	2.3
	Tue	51	30	61	2.0
	Wed	?	31	219	7.1
	Thu	?	36	483	13.4
	Fri	?	30	67	2.2
	Sat	?	1	1	1.0
	TOTAL	**96**	**158**	**899**	**5.7**
Dermatology 0800 - 1200 (Supplies & RN)	Mon	45	7	142	20.3
	Tue	?	1	23	23.0
	TOTAL	**?**	**8**	**165**	**20.6**

Number of clinics and patient volumes undertaken Jan-Dec 2016 for HWMH for specialties where HWMH hospital covers staff/supplies

EY

Haldimand War Memorial Hospital

Diagnostic Imaging

Area Overview – Diagnostic Imaging

Diagnostic Approach

- Review of annual diagnostic imaging volumes
- Analysis of DI block productivity and understand the hourly throughput per staff resource
- Estimate the additional volume that could be achieved through existing capacity
- Analysis of annual revenue vs target

Preliminary Findings

- Improved budgeting will assist Departmental leadership with more effective management of resources and ability to build business cases for any service changes
- Utilization of evening and weekend X-ray lists is considerably lower than daytime lists
- Fewer USS appointments than expected were delivered
- Monday has the largest volume of OOH activity

Findings, continued

- LHIN Report on Access to CT shows HWMH is performing similarly for priority cases completed within target at 96%
- Change in collection of professional fee process will result in a $37k reduction in DI revenue
- The Department is not part of Clinical Connect which limits the ability of HWMH to share results with other facilities
- Opportunity to create more visibility for DI leadership in terms of visibility for contracts and Mohawk pricing

Indicative Opportunities

Opportunity	Description	Estimated Value ($000s)
Eliminate second X-ray List	Analysis indicates sufficient capacity to accommodate this workload in evening and weekend lists	$28
Increase volumes*	Potential to increase volume in modalities where there is associated revenue (after expenses) either from local or regional referrals	TBD

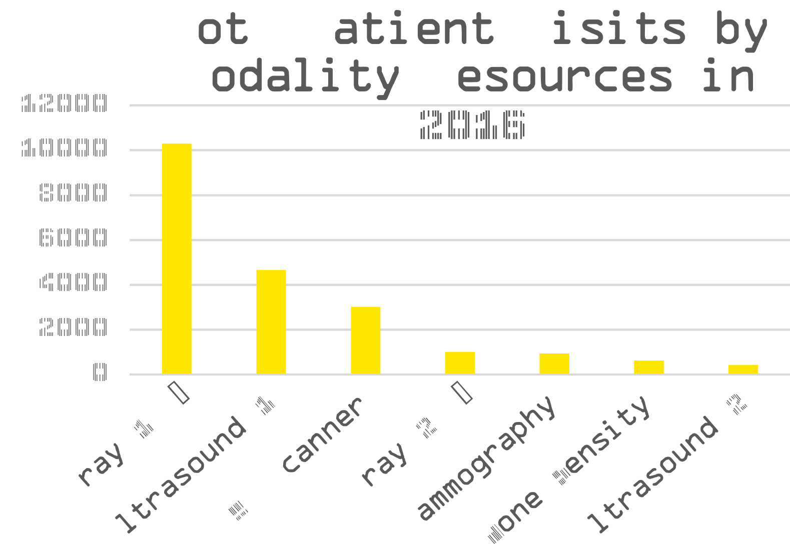
*Opportunity cannot be pursued if capacity is reduced in that modality

EY

Diagnostic Imaging

HWMH's Diagnostic Imaging department operates 5 types of modalities, which are depicted on the following table.

Modality	Machines	Tot Hours of Operation (excluding On-call)	Tot. Patient Vol.*	Tot. # of OOH Patient Vol.**
X-Ray	2	5,928	11,285	245
Ultrasound	2	3,016	5,075	50
CT	1	1170	3013	76
Mammography	1	585	930	10
Bone Density	1	390	626	-



ime period is an 2016 ec 2016
ut of ours activities are cases that started either 15 minutes before or after scheduled hours of operation for that modality

- The DI department provided services to over 600 to 11,200 patients per modality in 2016. The chart above provides a high level reflection of this.
- Diagnostic Imaging patient visit data were extracted from the RIS and PACS data base and were then reviewed and analysed to identify modality throughputs, out of hours (OOH) activities, and case mix
- Analysis was done on a time period of 2016 Calendar Year

EY

DI Revenue and Expenditure Overview

Overview

- The DI financial position was $92K adverse on a $786K M09 YTD budget (11.7%)

Findings

- Management worked Salaries was the largest single overspend in the DI Budget. When combined with Mgmt. benefits and HOOPP this created a total overspend of $58K YTD
- Typically we would not expect management salaries to be overspent
- Employee Worked Salaries was the second largest overspend ($28K)
- Revenue was below target within X-Ray
- Revenue for ECG and Ultrasound was above target

DI - 16/17 YTD ($000s)

Modalities	Annual Budget	YTD Budget	YTD Actual	YTD Variance
X-ray	$1,033	$775	$937	-$161
ECG	-$29	-$21	-$25	$4
Ultrasound	-$291	-$218	-$224	$6
CT	$334	$251	$192	$59
Grand Total	$1,048	$786	$879	-$93

DI Adverse Variances > $5K - FY16/17 YTD ($000s)

	Modalities	Annual Budget	YTD Budget	YTD Actual	YTD Variance
	X-ray	**$1,033**	**$775**	**$937**	**-$162**
Pay	MANAGEMENT WORKED SALARIES	$39	$30	$70	-$40
	EMPLOYEE WORKED SALARIES	$548	$411	$439	-$28
	UNIT PROD. H.O.O.P.P.	$35	$26	$37	-$11
	MGMT. BENEFIT SALARIES	$7	$5	$15	-$10
	MGMT H.O.O.P.P.	$6	$4	$12	-$8
Non-Pay	SERVICE CONTRACTS - MISC	$175	$131	$160	-$28
	REPLACEMENT OF MAJOR PARTS	$13	$9	$23	-$13
Revenue	PROVINCIAL HEALTH INSURANCE	-$420	-$315	-$295	-$20
	Grand Total	$1,048	$786	$879	-$93

EY

Productivity Summary by Modality

- The average throughput of patients was calculated per modality per block (Jan-Dec2016)
- The expected total annual capacity was calculated using the DI schedule and assuming that every block achieved the average block throughput per modality
- This was compared to the actual number of blocks that operated and actual activity through each block to determine if the modality delivered activity above it's expected capacity
- This analysis indicates that improving utilization X-Ray could present an opportunity to
  - Reduce existing capacity and realise pay cost reductions
  - Increase activity where demand exists to improve revenue within existing capacity
- X-ray evening and weekend list utilization was markedly lower than weekday daytime lists

	Actual				Planned (Based on DI Schedule)		
Resource	**Blocks**	**# Patients**	**Pts Per Block**	**Pts per hour**	**Blocks**	**# Patients (@ Average throughput)**	**Variance**
X-Ray	678	11,040	31	1.8	730	21,876	-10,836
Ultrasound Total	337	4,810	14	2.0	298	4,463	347
CT Scanner Total	348	2,937	8.4	1.1	147.0	1,241	1,696
Mammography Total	106	920	8.7	1.2	77.0	668	252
Bone Density Total	49	626	12.8	1.7	51.0	652	-26

X-Ray

Average Patient Volumes by Technician hour

The heat map highlights relative activity with red/orange indicating highest activity compared to less activity (yellow) and lowest activity (green)

- The heat map indicates the daily average hourly patient volumes per room by time and day of week (average patients per machine hour)
- CT activity taking place outside of scheduled CT lists are incorporated into this heat map as this activity is undertaken by the X-ray technician
- The hourly average per machine hour ranges from 0.7 to 3.5 patients seen during normal operating hours
- Average hourly throughput is generally highest on weekdays between 13:00 to 15:00 and considerably lower during weekday evenings and weekends. This is suggestive of an opportunity to smooth out the demand throughout the week and close

Opportunity

- Closure of X-ray Room 2 – cassette would mean approximately 941 x-ray appointments would need to be accommodated elsewhere
- This volume could be accommodated in evening and weekend lists if they operated at an average of 1.75 patients per machine hour
- This volume could be accommodated in evenings lone lists if they operated at an average of 2.2 patients per machine hour
- This assumes that there is sufficient elective x-ray activity that could be rescheduled to evenings and/or weekends
- The volumes during on-call hours are generally very low and suggests that on-call hours are appropriate

Time	Average daily patients per Technician hour						
	Mon	Tue	Wed	Thu	Fri	Sat	Sun
12:00AM	0.1	0.0	0.2	0.0	0.0	0.1	0.0
01:00AM	0.0	0.2	0.1	0.0	0.0	0.2	0.0
02:00AM	0.0	0.1	0.0	0.1	0.0	0.1	0.0
03:00AM	0.0	0.0	0.0	0.0	0.0	0.2	0.1
04:00AM	0.1	0.0	0.0	0.0	0.0	0.3	0.0
05:00AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0
06:00AM	0.1	0.0	0.1	0.0	0.0	0.1	0.0
07:00AM	0.1	0.3	0.0	0.1	0.1	0.2	0.3
08:00AM	3.6	4.5	3.4	3.0	3.1	2.4	1.6
09:00AM	2.3	2.9	2.4	2.5	2.7	1.7	1.4
10:00AM	1.9	2.3	2.1	2.1	1.9	1.9	1.6
11:00AM	2.3	2.5	2.5	2.7	2.7	1.8	1.6
12:00PM	1.6	1.5	1.1	1.5	1.4	1.4	1.3
01:00PM	3.9	3.9	3.4	3.0	3.8	1.3	1.4
02:00PM	4.3	4.1	2.7	2.3	2.4	1.5	1.3
03:00PM	3.3	3.1	2.1	3.0	2.9	1.6	1.4
04:00PM	2.1	1.5	1.4	1.5	1.7	1.2	1.2
05:00PM	1.4	1.1	1.3	1.3	1.3	1.4	1.0
06:00PM	1.2	1.2	0.9	1.0	1.3	1.1	1.1
07:00PM	1.5	1.0	1.0	1.0	0.8	1.0	1.4
08:00PM	1.2	1.4	1.1	1.3	1.2	1.5	1.6
09:00PM	1.5	1.3	0.6	0.7	1.1	0.9	0.7
10:00PM	0.8	1.1	0.5	0.6	1.3	0.5	0.8
11:00PM	0.3	0.4	0.1	0.2	0.4	0.2	0.2
Daily Average	33.7	34.5	27.0	27.7	30.1	22.4	20.2

Block Throughput

CT & X-Ray

		Actual					Planned			
Resource	**DOW**	**Blocks**	**Hrs per Block (Estimate)**	**# Patients**	**Pts Per Block**	**Pts per hour**	**Blocks**	**Hrs per Block (Estimate)**	**# Patients (@ Average throughput)**	**Variance**
X-ray 1 - Digital	Sunday	52	12.0	736	14.2	1.2	52.0	12.0	2,296	-1,560
	Monday	52	14.0	1,873	36.0	2.6	52.0	14.0	2,678	-805
	Tuesday	52	14.0	1,768	34.0	2.4	52.0	14.0	2,678	-910
	Wednesday	52	14.0	1,636	31.5	2.2	52.0	14.0	2,678	-1,042
	Thursday	52	14.0	1,536	29.5	2.1	52.0	14.0	2,678	-1,142
	Friday	53	14.0	1,771	33.4	2.4	53.0	14.0	2,730	-959
	Saturday	53	12.0	779	14.7	1.2	52.0	12.0	2,296	-1,517
X-ray 2 - Cassette	Sunday	37	0.0	60	1.6	0.4	52.0	0.0	0	60
	Monday	46	4.0	178	3.9	1.0	52.0	4.0	765	-587
	Tuesday	47	4.0	185	3.9	1.0	52.0	4.0	765	-580
	Wednesday	44	4.0	111	2.5	0.6	52.0	4.0	765	-654
	Thursday	50	4.0	154	3.1	0.8	52.0	4.0	765	-611
	Friday	46	4.0	175	3.8	1.0	53.0	4.0	780	-605
	Saturday	42	4.0	78	1.9	0.5	52.0	0.0	0	78
X-Ray		**678**	n/a	**11,040**	**31**	**1.8**	**730**	n/a	**21,876**	**-10,836**

Resource	DOW	Blocks	Hrs per Block (Estimate)	# Patients	Pts Per Block	Pts per hour	Blocks	Hrs per Block (Estimate)	# Patients (@ Average throughput)	Variance
CT Scanner	Sunday	43	7.5	157	3.7	0.5	0.0	0.0	0	157
	Monday	51	7.5	749	14.7	2.0	45.0	7.5	380	369
	Tuesday	52	7.5	284	5.5	0.7	0.0	0.0	0	284
	Wednesday	51	7.5	669	13.1	1.7	52.0	7.5	439	230
	Thursday	48	7.5	191	4.0	0.5	0.0	0.0	0	191
	Friday	53	7.5	693	13.1	1.7	50.0	7.5	422	271
	Saturday	50	7.5	194	3.9	0.5	0.0	0.0	0	194
CT Scanner Total		**348**	n/a	**2,937**	**8.4**	**1.1**	**147.0**	n/a	**1,241**	**1,696**

Block Throughput

US, Bone Density & Mammography

		Actual					Planned			
Resource	**DOW**	**Blocks**	**Hrs per Block (Estimate)**	**# Patients**	**Pts Per Block**	**Pts per hour**	**Blocks**	**Hrs per Block (Estimate)**	**# Patients (@ Average throughput)**	**Variance**
Ultrasound 1	Monday	49	7.5	785	16.0	2.1	45.0	7.5	684	101
	Tuesday	51	7.5	915	17.9	2.4	51.0	7.5	775	140
	Wednesday	52	7.5	847	16.3	2.2	52.0	7.5	790	57
	Thursday	51	7.5	808	15.8	2.1	52.0	7.5	790	18
	Friday	50	7.5	795	15.9	2.1	50.0	7.5	760	35
	Saturday	37	5.5	256	6.9	1.3	16.0	5.5	178	78
Ultrasound 2 (list started 12/09/16)	Tuesday	21	7.5	197	9.4	1.3	16.0	7.5	243	-46
	Thursday	24	7.5	207	8.6	1.2	16.0	7.5	243	-36
	Friday	2	7.5		0.0	0.0	0.0	0.0	0	0
Ultrasound		**337**	n/a	**4,810**	**14**	**2.0**	**298**	n/a	**4,463**	**347**
Mammography	Monday	18	7.5	92	5.1	0.7	0.0	0.0	0	92
	Tuesday	48	7.5	649	13.5	1.8	51.0	7.5	443	206
	Wednesday	24	7.5	115	4.8	0.6	0.0	0.0	0.0	0.0
	Thursday	13	7.5	64	4.9	0.7	26	7.5	226	-111
	Friday	3	7.5		0.0	0.0	0.0	0.0	0	0
Mammography Total		**106**	n/a	**920**	**8.7**	**1.2**	**77.0**	n/a	**668**	**252**
Bone Density	Monday	1	7.5	6	6.0	0.8	0.0	0.0	0	6
	Tuesday	47	7.5	611	13.0	1.7	51.0	7.5	652	-41
	Wednesday	1	7.5	9	9.0	1.2	0.0	0.0	0	9
Bone Density Total		**49**	n/a	**626**	**12.8**	**1.7**	**51.0**	n/a	**652**	**-26**

Out-of-Hours Activities

Findings Summary:

- 381 out of hour (OOH) diagnostics were performed in 2016 with X-ray being the most common tests required during OOH times
- The number of OOH US tests ordered over the weekend could not be determined as a number of additional booked lists occurred and could not be distinguished from OOH tests
- Mammography has little OOH activities, while Bone Density did not have any OOH activities at all, which are as expected
- Monday has the largest volume of OOH activity and may reflect a build up of urgent requests over the weekend

Assumptions:

1. OOH activities are cases that started more than 15 minutes before the regular start day and time, and 15 minutes after the regular finish day and time of a specific shift associated with that modal

	OOH Activities per Modality Resource (Jan – Dec 2016)						
	Ultrasound 1*	**X-ray 1**	**CT Scanner**	**X-ray 2**	**Ultrasound 2**	**Mammography**	
Sunday	Unknown	56	22	17	-	-	**95**
Monday	7	13	2	4	-	-	**26**
Tuesday	9	16	15	5	4	-	**49**
Wednesday	2	12	6	4	-	6	**30**
Thursday	5	8	5	3	10	-	**31**
Friday	10	7	10	2	3	4	**36**
Saturday	Unknown	75	16	23	-	-	**114**
	33	**187**	**76**	**58**	**17**	**10**	**381**

nable to identify activities from the data since activity data does not identify activities and ltrasound runs weekend day either aturday or unday per week

EY

Out-of-Hours Activities by Requesting Physician

- The table above lists the top 10 requesting physicians for Out-of-Hours tests in 2016
- DI data does not currently identify unit these physicians were practicing (e.g. ED, IPU or OPD)
- Further analysis to identify physician referral volumes for out of Hour DI tests vs Physician workload and case-mix will identify physicians whose referral rate is higher than peers (and thus potentially avoidable)

Top 10 Physician Requestors for OOH DI procedures (2016)

Physician Names	CT Scanner	Mammography	Ultrasound 1	Ultrasound 2	X-ray 1 - Digital	X-ray 2 - Cassette	Grand Total
DR. HAIBO XU	16	2	32	2	53	9	114
DR. REZA KAZEMI	14	1	10	0	55	16	96
DR. AHMED KAMOUNA	9		42	1	27	11	90
DR. NATALE DESROCHERS	8	0	4	2	12	4	30
DR. ANDREW RUST	9		7		15	4	35
DR. DALIA BERNARD			35				35
DR. KERRY BEAL	1		13		4		18
DR. JOHN MICHIELS	1		9		4	4	18
DR. JEFFREY REMINGTON	2		5		3	3	13
DR. ELIZABETH BLAKE	4	2	13	0	2	1	22

Haldimand War Memorial Hospital

Emergency Department

Area Overview – Emergency Department

Diagnostic Approach

- Review of ED activity to understand patterns of demand by time and day
- Profile acuity of ED demand through analysis of CTAS scores
- Review of attendances by catchment area
- Assess alignment of ED demand profile to current allocation of staffing within ED

Findings

- 90% of ED attendances are by Haldimand residents
- Monthly ED attendances have remained stable in 2016
- CTAS 4 & 5 patients comprised 49.8% of all attendances
- Volume and acuity pattern is consistent throughout the week with Monday and Sunday being slightly busier
- The 3rd RN post is expected to create an overall cost pressure for the organization

Findings, continued

- HWMH ED LoS is a leading indicator in the LHIN at 5.47 hours (up from 5.13 hours Nov 2016). This is similar to WHGH at 6.20 hours (LHIN Performance Indicator Report Feb 2017). ED LoS for Minor Uncomplicated is 2.18 hours – also LHIN leading with WHGH at 3.7 and NHS at 3.97 hours
- CTAS Level 9 (regular ED visit with no recorded CTAS level) comprise 4.5% of total visits, while blank CTAS level data points (0.2% of total) represent scheduled ED visits

Indicative Opportunities

Opportunity	Description	Estimated Value ($000s)
Match NP shifts to high volume time	Fri-Tue between 8am-8pm are the busiest days in ED	TBD
Align 3rd RN working hours to match periods with highest probability of transfers	Analysis indicates 8am to 10pm is the time frame with most transfers	$0

EY

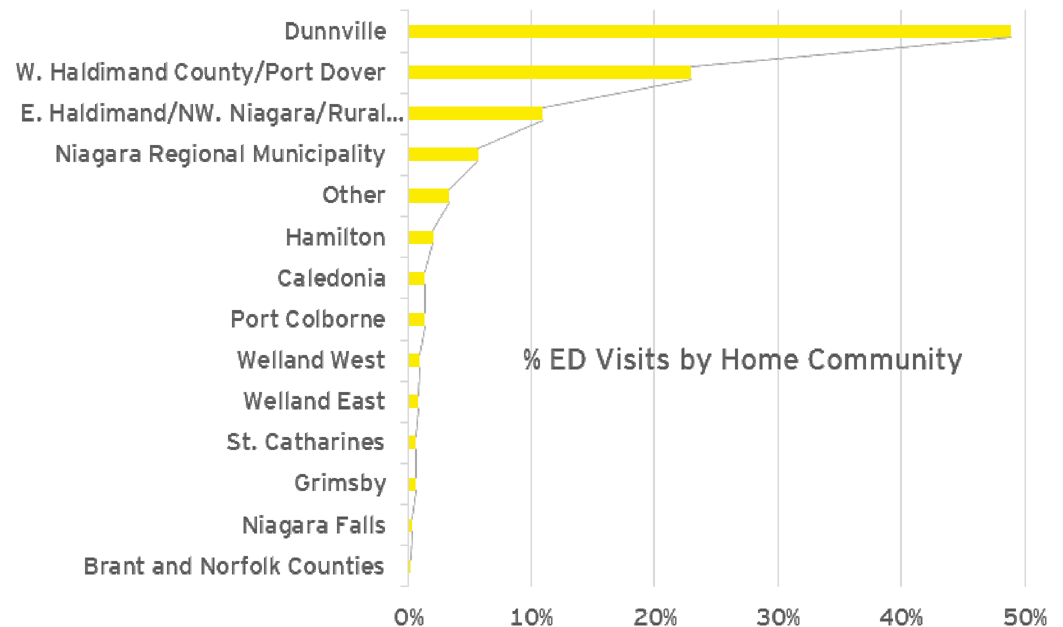
ED Attendance Profile

Acuity, Day of Week and Patient Locality

- The HWMH ED received 23,563 patient visits in 2016 (Note: previous ED visit data utilized the HIT tool to support hospital to hospital comparisons while this data is raw data covering the calendar year 2016)
- The majority of ED visits were patients from the immediate areas of Dunnville, West and East Haldimand, Fonthill, and Hamilton making up 90% of the total patient volume in 2016
- While 45.4% of attendances were CTAS 3 or lower; 49.8% of all attendances were CTAS 4 or 5 indicating a large proportion of low acuity patents who may not require ED care. Funding has been secured for a NP practitioner to see CTAS 4&5 patients who attend ED
- 3,3% of attendances were by patients from outside the LHIN or did not have an area code recorded. Only 167 attendances did not have a recorded area code (0.01% of all attendances

CTAS	Attendances	%
1	69	0.3%
2	2,223	9.4%
3	8,414	35.7%
4	10,536	44.7%
5	1,201	5.1%
9	1,029	4.4%
Unknown	91	0.4%

Day	Attendances	%
Mon	3,586	15.2%
Tue	3,341	14.2%
Wed	3,225	13.7%
Thu	3,164	13.4%
Fri	3,310	14.0%
Sat	3,451	14.6%
Sun	3,486	14.8%
Total	**23,563**	

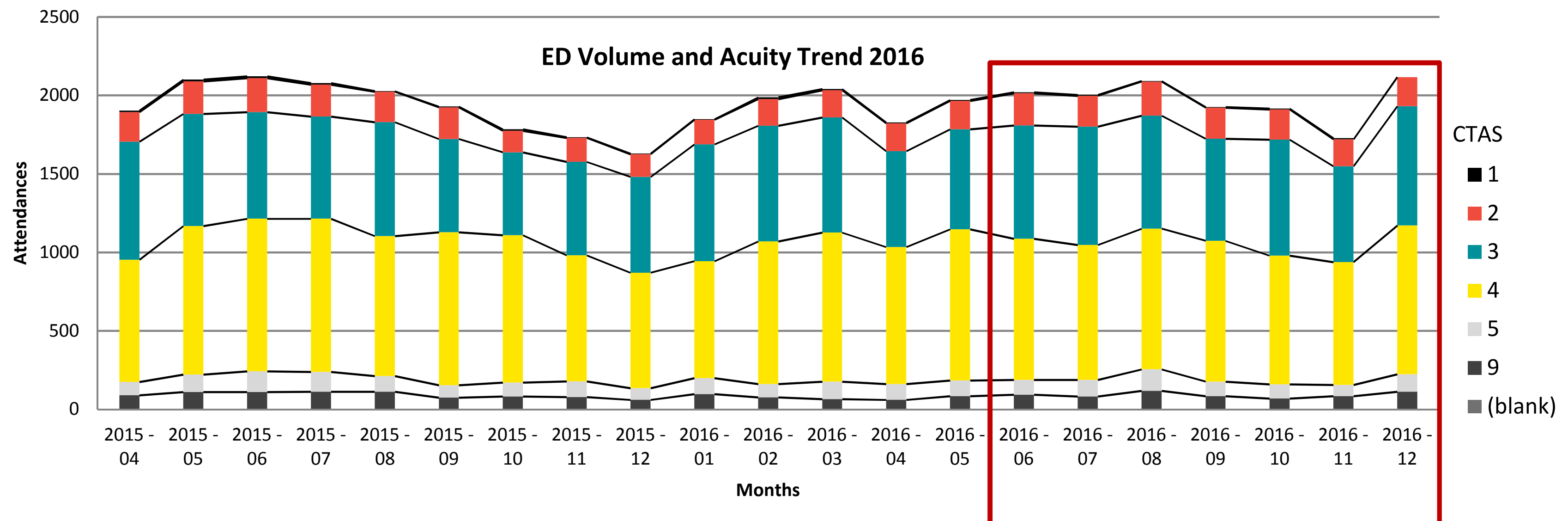


Note: The lumps and bumps attendances couldn't be separated out in the ED data as the blank category would have included patients who left prior to triage

2016 Monthly Trend
Acuity and Volume

Overview

- The Emergency Department (ED) at HWMH serves the Dunnville community and its surrounding area within the HNHB LHIN.
- In 2016, the monthly patient volume was 1,963 patients per month with a the highest attendances being 2,128 attendances in December and a low of 1,732 in November
- A general surgery/minor ops clinic operates within ED and thus 5.6% of ED activity data is scheduled visits
- CTAS levels also vary, with CTAS level 4 and 3 being the highest level, amounting to 45% and 36% of the total annual volume.



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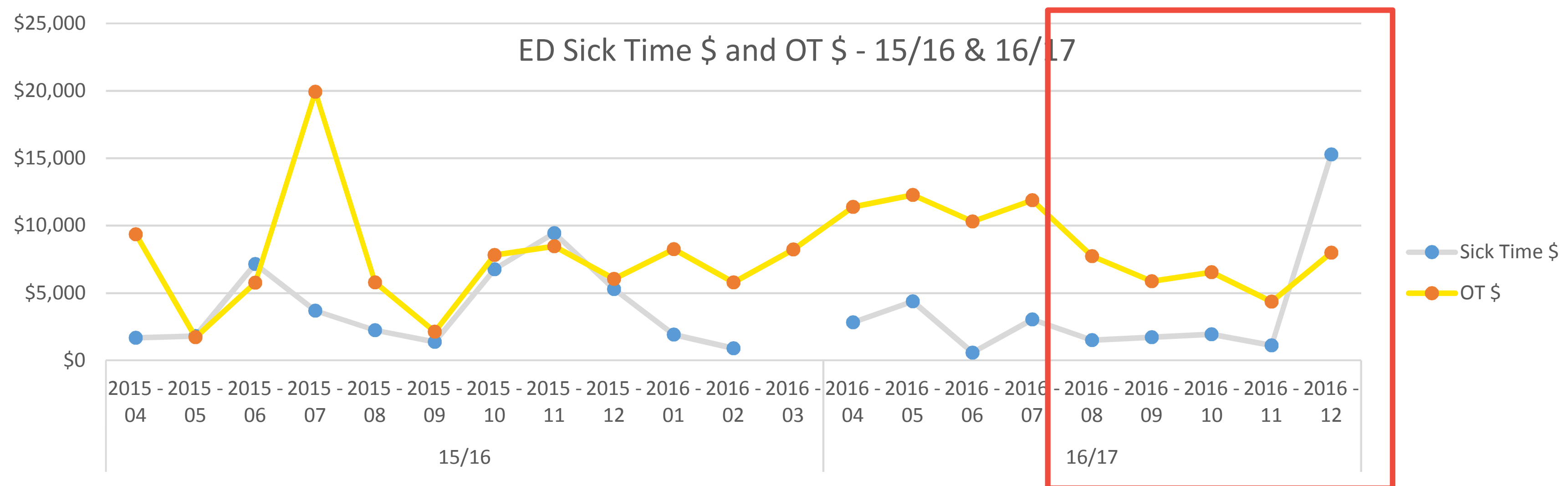
The Acuity Profile of ED Demand is Consistent Throughout the Week

- The heat map demonstrates that the daily acuity profile of the hospital is consistent across the week with a small rise in the proportion of CTAS 4 patients on Sunday and Monday. This end of weekend effect may reflect lower level of family medicine provision in the community during weekends
- CTAS 3 and 4 are the greatest proportion of attendances and activity tends to be greatest between 08:00 to 22:00
- HWMH has funding for a Nurse Practitioner (NP) to see CTAS level 4 and 5 patients. The NP works three 12-hr weekday shifts and an 8-hour shift on alternate Saturdays.
- The Heat map would suggest that Friday – Tuesday are the busiest days for CTAS 4 &5 patients between the hours of 08:00 to 20:00

Day	Monday							Tuesday							Wednesday							Thursday							Friday							Saturday							Sunday							Mean
Hour	1	2	3	4	5	9	?	1	2	3	4	5	9	?	1	2	3	4	5	9	?	1	2	3	4	5	9	?	1	2	3	4	5	9	?	1	2	3	4	5	9	?	1	2	3	4	5	9	?	
12:00 AM		0.1	0.3	0.2	0.0	0.1		0.0	0.1	0.3	0.4	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.0	0.0			0.2	0.3	0.2		0.0			0.2	0.1	0.2	0.0	0.1			0.1	0.4	0.3	0.1	0.0			0.1	0.4	0.3	0.0	0.0		0.7
1:00 AM		0.1	0.3	0.1					0.1	0.3	0.1	0.0	0.1			0.1	0.3	0.2	0.0	0.1			0.1	0.2	0.1	0.0				0.1	0.2	0.1	0.0			0.0	0.2	0.2	0.1	0.1	0.0			0.1	0.3	0.3				0.5
2:00 AM	0.0	0.0	0.2	0.1					0.1	0.2	0.0		0.0			0.1	0.2	0.1					0.0	0.2	0.1				0.0	0.0	0.2	0.1	0.0			0.0	0.2	0.2	0.1				0.0	0.2	0.2	0.2				0.4
3:00 AM		0.1	0.1	0.2				0.0	0.1	0.2	0.1	0.0				0.1	0.1	0.1					0.0	0.1	0.1	0.0				0.0	0.2	0.1					0.0	0.2	0.1					0.1	0.2	0.2				0.4
4:00 AM		0.1	0.1	0.1		0.0				0.1	0.2				0.0	0.1	0.3	0.1					0.0	0.2	0.1					0.0	0.3	0.1		0.0			0.1	0.2	0.1	0.0	0.0			0.1	0.1	0.1	0.0	0.0		0.4
5:00 AM	0.0	0.2	0.3	0.1		0.0			0.1	0.3	0.1	0.0				0.0	0.1	0.1	0.0	0.0		0.0	0.1	0.3	0.2					0.1	0.3	0.2	0.0				0.1	0.2	0.1	0.0				0.0	0.3	0.2		0.1		0.5
6:00 AM		0.1	0.4	0.3	0.1				0.1	0.4	0.4	0.1	0.0			0.1	0.3	0.3	0.0	0.0			0.1	0.3	0.3	0.1				0.1	0.2	0.4	0.0				0.1	0.3	0.2	0.1	0.0			0.1	0.3	0.3	0.0	0.0		0.8
7:00 AM		0.2	0.7	0.8	0.1	0.1			0.2	0.7	0.7	0.3	0.0		0.0	0.1	0.4	0.7	0.1	0.0			0.2	0.6	0.9	0.1	0.1			0.1	0.5	0.9	0.0	0.0			0.2	0.6	0.9	0.1	0.0			0.1	0.6	1.0	0.0	0.0		1.7
8:00 AM		0.3	1.5	2.0	0.2	0.0		0.0	0.4	1.2	1.9	0.3	0.1			0.2	1.2	2.0	0.3	0.1		0.0	0.3	1.2	1.7	0.2	0.2			0.2	1.3	1.6	0.2	0.2			0.1	1.6	1.9	0.3	0.2			0.3	1.1	1.3	0.3	0.2		3.8
9:00 AM		0.5	1.8	2.5	0.3	0.2	0.0		0.4	1.4	2.1	0.3	0.1	0.0		0.3	1.6	2.2	0.2	0.1			0.4	1.3	2.0	0.2	0.2			0.3	1.3	2.5	0.4	0.1		0.0	0.5	1.7	2.3	0.2	0.4		0.0	0.3	1.9	2.3	0.3	0.2	2.0	4.7
10:00 AM		0.4	2.0	2.8	0.3	0.2	0.1	0.0	0.5	1.5	2.1	0.3	0.1	0.0		0.5	1.6	2.4	0.2	0.1	0.0	0.0	0.5	1.5	1.8	0.2	0.2			0.5	1.6	2.8	0.3	0.2			0.3	1.7	2.6	0.3	0.3	0.1	0.0	0.5	1.8	3.1	0.5	0.2		5.2
11:00 AM		0.4	1.7	2.2	0.3	0.2	0.1		0.7	1.7	2.1	0.2	0.1			0.4	1.7	2.1	0.3	0.1	0.0	0.0	0.4	1.4	2.1	0.3	0.2	0.0		0.4	1.8	2.5	0.3	0.2	0.0		0.5	1.7	2.4	0.2	0.3	0.1	0.0	0.5	1.2	2.2	0.5	0.2		4.8
12:00 PM	0.0	0.5	1.6	1.7	0.2	0.3	0.0	0.0	0.3	1.4	1.7	0.2	0.1	0.0	0.0	0.5	1.5	1.7	0.3	0.1	0.0		0.3	1.5	1.6	0.1	0.1	0.0	0.0	0.5	1.3	2.0	0.2	0.2	0.0		0.4	1.1	2.1	0.3	0.5	0.0	0.0	0.5	1.8	2.7	0.4	0.2	1.0	4.3
1:00 PM		0.6	1.5	2.2	0.3	0.1	0.1		0.3	1.1	1.7	0.2	0.2	0.0		0.4	1.2	1.9	0.1	0.1		0.0	0.3	1.0	1.9	0.2	0.1		0.0	0.4	1.3	1.8	0.2	0.1	0.0	0.0	0.4	1.6	2.3	0.2	0.3	0.0		0.4	1.4	2.0	0.3	0.3	1.0	4.1
2:00 PM	0.0	0.4	1.6	2.1	0.1	0.1			0.4	1.2	1.9	0.2	0.1	0.0		0.5	1.5	1.7	0.1	0.1		0.0	0.4	1.5	1.5	0.1	0.1		0.0	0.4	1.4	1.6	0.3	0.3	0.0		0.4	1.1	1.6	0.2	0.4	0.0	0.0	0.3	1.4	2.3	0.2	0.1	1.0	4.0
3:00 PM	0.0	0.3	1.4	1.8	0.2	0.2			0.4	1.3	1.5	0.2	0.1	0.1	0.0	0.4	1.3	2.1	0.1	0.1		0.0	0.2	1.5	1.8	0.2	0.1		0.0	0.3	1.3	1.8	0.2	0.2	0.0		0.4	1.4	2.0	0.2	0.2	0.0	0.0	0.3	1.5	1.8	0.2	0.1	3.0	3.8
4:00 PM		0.4	1.2	1.8	0.2	0.2	0.0		0.4	1.3	2.2	0.2	0.2			0.3	1.0	2.0	0.2	0.0		0.0	0.3	1.2	1.4	0.2	0.3		0.0	0.3	1.3	1.6	0.1	0.3	0.0		0.3	1.4	1.6	0.2	0.2	0.0		0.4	1.4	1.6	0.1	0.2	3.0	3.7
5:00 PM		0.3	1.6	1.8	0.2	0.1		0.0	0.4	1.3	2.2	0.2	0.1	0.0	0.0	0.3	1.0	1.8	0.2	0.2		0.0	0.4	1.4	1.5	0.2	0.3		0.0	0.4	1.2	1.6	0.3	0.1			0.5	1.1	1.3	0.2	0.5	0.0		0.3	1.5	1.7	0.1	0.1	1.0	3.8
6:00 PM		0.4	1.5	2.3	0.2	0.1	0.0	0.0	0.3	1.4	1.9	0.3	0.1	0.0	0.0	0.3	1.4	2.4	0.1	0.2		0.0	0.3	1.3	1.6	0.2	0.3	0.0	0.0	0.3	1.5	1.5	0.2	0.3	0.0		0.3	1.3	1.2	0.1	0.2	0.0	0.0	0.5	1.5	1.3	0.2	0.2	2.0	3.9
7:00 PM		0.3	1.5	2.5	0.1	0.1	0.1	0.0	0.3	1.6	1.8	0.3	0.2	0.0	0.0	0.3	1.6	2.1	0.2	0.2	0.0		0.4	1.5	1.8	0.2	0.2		0.0	0.3	1.7	1.5	0.2	0.1	0.0	0.1	0.3	1.6	1.4	0.1	0.2	0.0		0.4	1.5	1.4	0.3	0.2		4.1
8:00 PM		0.4	1.4	1.7	0.2	0.3	0.0		0.4	1.5	1.8	0.3	0.2		0.0	0.2	1.3	1.8	0.2	0.1			0.2	1.1	1.2	0.2	0.1			0.3	1.3	1.2	0.1	0.2	0.0	0.0	0.5	1.6	1.1	0.1	0.3			0.2	1.4	1.3	0.3	0.2	2.0	3.5
9:00 PM		0.2	1.1	1.1	0.1	0.1		0.1	0.3	1.1	1.0	0.1	0.1	0.0		0.2	0.8	1.2	0.1	0.2			0.2	1.1	0.8	0.2	0.1			0.2	0.9	1.1	0.2	0.1		0.0	0.2	1.3	1.1	0.1	0.2	0.0		0.2	1.1	1.1	0.1	0.1		2.6
10:00 PM		0.1	0.6	0.5	0.1	0.1		0.0	0.2	0.8	0.6	0.1	0.1			0.1	0.5	0.7	0.0	0.1	0.0		0.2	0.7	0.8	0.1	0.1			0.1	0.9	0.9	0.1	0.2			0.2	0.9	0.8	0.1	0.2		0.1	0.3	0.8	0.6	0.1	0.2		1.8
11:00 PM		0.2	0.3	0.2		0.1		0.0	0.2	0.4	0.5	0.0	0.1	0.0		0.1	0.5	0.3	0.0	0.1			0.2	0.5	0.5	0.1	0.1			0.2	0.6	0.5	0.1	0.1			0.2	0.7	0.3	0.1	0.1			0.1	0.4	0.4	0.1	0.1		1.2
Total	0	7	25	31	3	3	0	0	6	23	29	4	2	0	0	6	21	30	3	2	0	0	6	22	26	3	3	0	0	6	23	29	3	3	0	0	6	24	28	3	4	0	0	6	24	29	4	3		64.6

Overtime, Sickness & 3rd RN Business Case

- HWMH has 2RNs working at all times in 12 hour day and night shifts
- The hospital is currently trialling the addition of 1 RN to the day shift which is expected to alleviate higher demand, improve safety and efficiency and reduce overtime and sick time rates
- There appears to be a sustained reduction in overtime of $2.3K per month following the introduction of the 3rd RN
- Sick time also appears to have reduced however due to the greater variability in sick time spend we have not assumed reductions can be directly attributed to the 3rd RN and may be driven by a number of other factors (e.g.. long term sickness)
- Overall the introduction of the 3rd RN is expected to create an annual cost pressure of $177K when accounting for the expected OT savings
- HWMH should carefully consider if the non-financial benefits justify the cost pressure introduced from the 3rd RN position



EY

Edgewater Gardens (EWG)
Long Term Care

EY

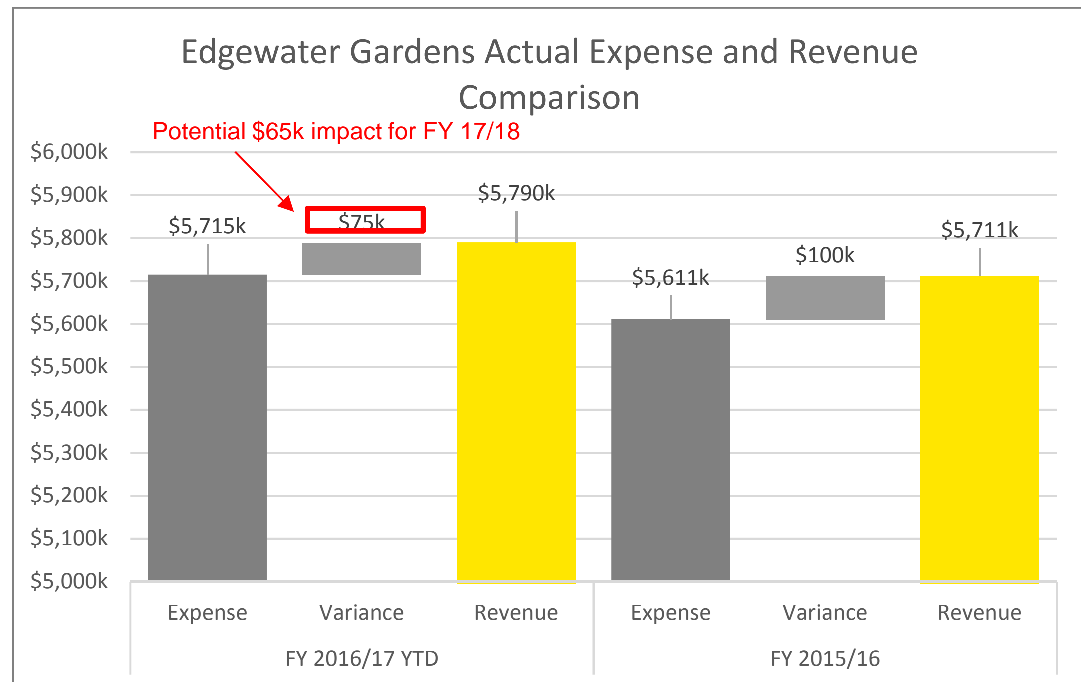
Edgewater Gardens Long Term Care Home

Introduction

Edgewater Gardens Long Term Care Home (EWG) is a 64 bed Long Term Care facility part of Haldimand War Memorial Hospital serving the catchment area of Haldimand County and surrounding areas. The facility is comprised of two floors with an equal division of beds on each floor, and a total of 60 rooms, comprised of 56 single bed rooms and 4 double bed rooms

Findings Summary

- Based on the GL data provided, Edgewater Gardens has had a surplus in 3 out of the past 4 years; however, the home is facing a negative funding impact for FY 17/18 based on a re-indexing factor applied to all LTC homes in the province
- Through stakeholder engagements, it has been identified that the home is unable to capture residents' behavioural complexity that may increase their CMI level, and thus improve funding level
- A discrepancy was observed through comparative analysis of the published financial statements and the General Ledger (GL) obtained from Finance



EY

RUG III Group Analysis

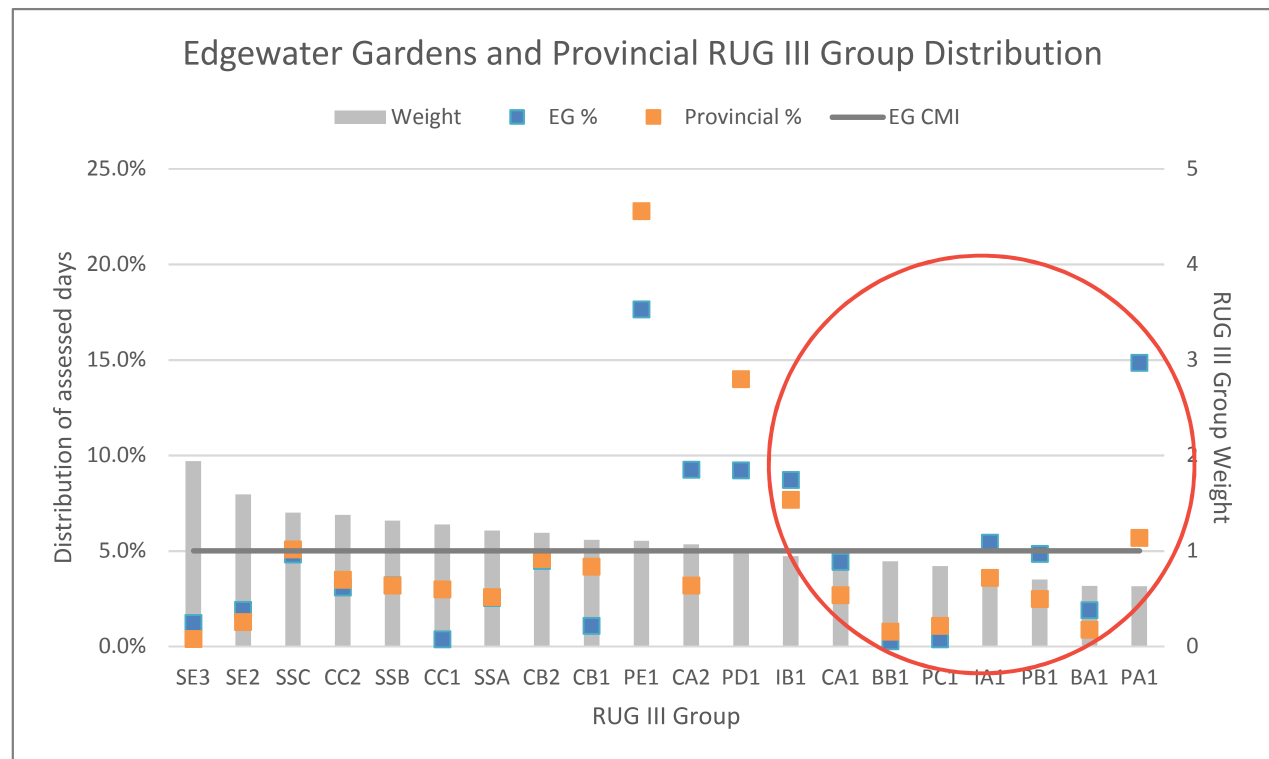
EWG had Overall Less Complex Residents Compared to the Provincial Average

Summary of Findings

- Distribution of EWG assessment days for more complex RUG III groups (left hand side of the graph) is aligned with provincial distribution.
- EWG assessment days distribution for less complex groups with lower weight is relatively higher than the provincial distribution (highlighted in red).

Approach

- Assessment days distribution data and relative weight for each RUG III group were obtained from the Financial Impact Calculator document for Edgewater Gardens and the province.
- The assessment days distribution is plotted using the main y-axis on the left with EG in blue and the province in orange.
- The relative weight for each RUG III group and the CMI for Edgewater Gardens are plotted as the bar graph and the line graph using the secondary y-axis.



EY

Maintaining Favourable Financial Position

EWG needs additional Financial Controls

Findings

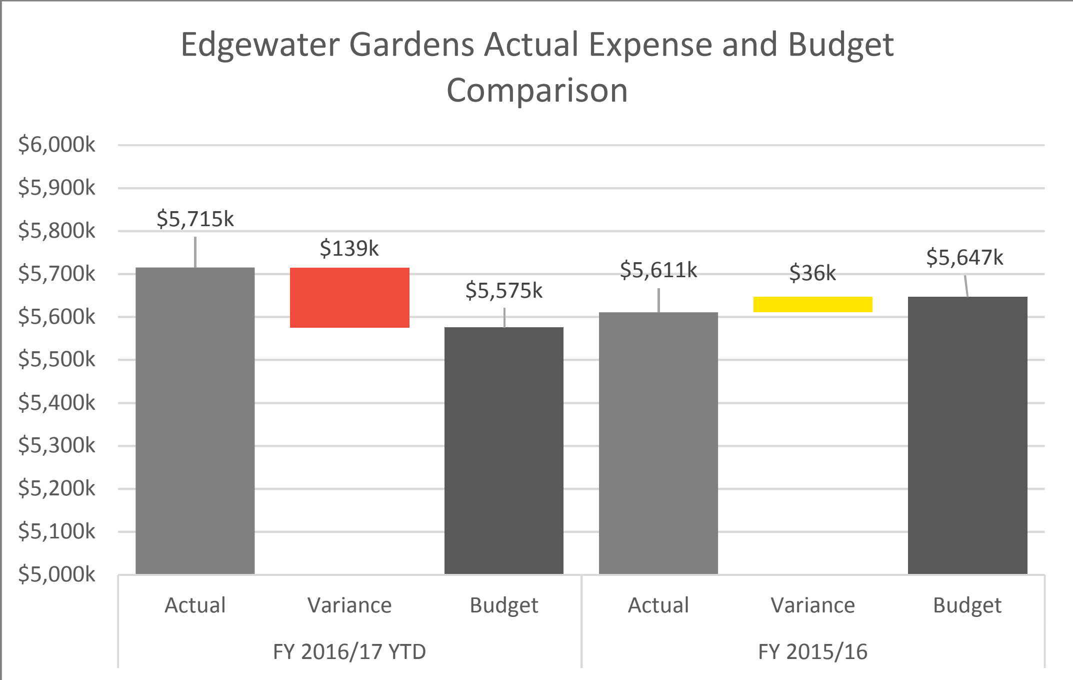
- In FY 15/16, Edgewater Gardens operated with a positive variance of $36k within their budget of $5,647k
- Year-to-date (YTD) data for FY 16/17 indicates actual expense is $139k over budget.
- There are two main factors contributing to this negative variance:
  - 1. an unbudgeted MOH recovery of $121k and
  - 2. there was a $71k (1.3%) reduction in the FY 16/17 budget compared to the previous year.

Recommendation

- Detailed analysis is required to understand expense codes and cost centres that are contributing to the negative variance.
- Further action is to be taken to mitigate the gap between actual and budgeted expenses.

Approach

- The general ledger was reviewed to identify variance between actual and budgeted expenses for FY 16/17 (YTD, 3 quarters of data) and FY 15/16.



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EWG Expense Codes (1/2)
Largest Actual and Budget Variance

Findings

- The top 10 expense codes with negative variance presented below accounted for -$499k (83%) of the total -$597k in negative variance
- Employee worked salaries is the expense code that had the largest variance, similar variance was also observed in FY 15/16

Expense Code	Actual	Budget	Variance
EMPLOYEE WORKED SALARIES	$1,592,872	$1,397,699	-$195,173
MOH "RECOVERY"	$120,829	$0	-$120,829
MOH OTHER VOTES	$0	-$68,472	-$68,472
MANAGEMENT WORKED SALARIES	$611,530	$559,299	-$52,231
ELECTRICITY	$130,084	$113,500	-$16,584
INCONTINENT SUPPLIES	$35,060	$24,000	-$11,060
AWARDS DINNER	$9,932	$300	-$9,632
SUPPLIES GENERAL	$18,732	$9,600	-$9,132
MOH LESS BASIC RESIDENT	$1,259,778	$1,251,251	-$8,527
EQUIPMENT REPAIRS	$8,956	$1,500	-$7,456
Other	$1,927,043	$2,286,799	$359,756
Total	**$5,714,817**	**$5,575,476**	**-$139,341**

Recommendations

- Investigate cause of budget variance for employee and management salaries
- Improve control on discretionary spend (i.e. awards dinner)
- Raise staff awareness on energy saving and avoidance of supplies wastage

Enablers

- Track reasons for additional worked hours required for employees
- Track compliance to established policy
- Increase authority level for sign-off on discretionary spend
- Initiate staff awareness and education on energy saving and waste avoidance

EWG Expense Codes (2/2)
Largest Actual and Budget Variance

Findings

- Half (6 out of 12) of the cost centres reported a negative variance.
- The variance in the “Revenues” cost centre is mainly driven by the MOH recovery variance. Most causes of variance in the other 5 cost centres are related to the expense codes presented in the previous slide. For example, employee and management salaries in Resident Care, Recreation Therapy and Maintenance, while Plant & Engineering is caused by overage in electricity cost.

Cost Centre Name	Actual	Budget	Variance
Revenues	$1,382,736	$1,251,251	-$131,485
Resident Care	$2,268,609	$2,184,961	-$83,649
Plant & Engineering	$432,002	$414,500	-$17,503
Recreation Therapy	$251,620	$247,828	-$3,792
Maintenance	$106,920	$105,695	-$1,226
Materiels Management	$513	$0	-$513
Revenue	$35,500	$35,500	$0
Laundry	$96,238	$96,706	$468
Nursing Admin	$67,521	$70,820	$3,299
Housekeeping	$228,527	$238,056	$9,529
Dietary	$551,725	$593,357	$41,632
Administration	$292,904	$336,803	$43,898
Total	**$5,714,817**	**$5,575,476**	**-$139,341**

Recommendations

- Reduce actual expense to budgeted level for the other 5 cost centres.

Enablers

- Conduct budget review exercise for cost centres with variance
- Initiate staff awareness education on energy saving and waste avoidance

Impact

- Aligning actual expense to budget for the 5 cost centres is a reduction in expense of $106k.

EY

Edgewater Gardens

Workforce

EY

Area Overview - Workforce

Diagnostic Approach

- EWG FTE data is used to calculate variance between Budget and Actual FTEs and Salary and Benefits per cost centre
- Workforce data is also used to calculate and assess trends of OT and Sick Time per cost centre
- GL data is used to assess amount of Agency Usage

Findings

- The Nursing cost centre, under the Clinical Management staff group, had the highest overspend in salary ($56k) among the other staff groups due to over-established FTEs
- The Nursing staff group has the highest Sick + OT rate at 2.3%
- Total Sick Time and OT dollars at EWG in 2016 amounted to over $52k
- The M&S Inpatient unit incurred $3.6k agency usage in 2016

Findings. continued

- There are resources shared between EWG and HWMH that may not be appropriately allocated in the budget
- Given the CMI lower than provincial, opportunities exist to increase coding rigour to reflect complexity

Indicative Opportunities

Opportunity	Description	Value $000)
Improve Sick Time and OT to within internal average for clinical and non-clinical	Reduce Clinical Management Sick and OT rate to Nursing’s (2.2% to 0.8 % and 1.7% to 1.5% respectively)	~$1.5
No agency use	Apply processes and policies that will avoid the need for agency use	~$3.6

EY

Workforce – Staffing Profile by Staff Groups
Calendar Year (CY) 2016

Findings Summary

- The EWG Nursing staff group had an underspend of $94k in 2016, a significant difference from a Nursing overspend of $44k in 2015 and a higher salary and benefits budget of $1.53M ($140k higher than 2016 budget). Drivers to the significant drop of spend should be investigated to identify and sustain good practices that led to the lower spend
- The Nursing cost centre under the Clinical Management staff group had the highest overspend in salary ($56k) among the staff groups due to over-established FTEs.
- Food Services, Administration, and M&S In-patient have the biggest underspends in 2016 (total of $164k) and, if the trend continues, EWG should consider re-allocating the budgets to cost centres that show constant negative salary variances

FTE Report - EWG	BUDGET		ACTUAL		VARIANCE		
Staff Groups/Cost Centres	Total FTE	Salary and Benefits ($000s)	Total FTE	Salary and Benefits ($000s)	Total FTE	Salary and Benefits ($000s)	% Over or Under Salary Budget
Nursing	**30.4**	**$1,393**	**29.2**	**$1,299**	**1.2**	**$94**	**6.7%**
M&S In-patient*	30.4	$1,393	29.2	$1,299	1.2	$94	6.7%
Allied Health	**1.8**	**$92**	**2.0**	**$76**	**-0.2**	**$15**	**16.8%**
Activity	1.8	$76	1.8	$76	0.0	-$1	-1.0%
Nutrition	*Pur. Serv*	$16	0.2	$0	*Pur. Serv*	$16	100.0%
Clinical	**5.7**	**$479**	**6.2**	**$529**	**-0.5**	**-$50**	**-10.5%**
Nursing	4.5	$388	5.1	$443	-0.6	-$56	-14.4%
Nursing Admin	0.6	$51	0.6	$48	0.0	$4	7.2%
Activity	0.6	$40	0.6	$38	0.0	$2	4.7%
Non-Clinical	**7.5**	**$763**	**12.5**	**$688**	**-4.9**	**$74**	**9.8%**
HSKP/Enviro/Health&Safe	0.4	$34	0.5	$40	-0.1	-$7	-19.4%
Maintenance	*Pur. Serv*	$20	0.4	$20	*Pur. Serv*	$0	0.0%
Laundry	1.6	$66	1.5	$63	0.1	$3	4.4%
HSKP	3.5	$144	3.4	$136	0.1	$8	5.6%
Administration	2.0	$115	1.3	$80	0.7	$34	29.8%
Food Services	*Pur. Serv*	$384	5.4	$348	*Pur. Serv*	$36	9.4%

**Includes Front-Line FTEs performing both clinical and admin duties (i.e. RAI Coordinators, etc..)*

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Workforce – Overtime, Sick Time, and Agency Usage Snapshot Calendar Year (CY) 2016

- While Nursing has the highest Sickness dollars out of the Staff Groups ($9.4k), Clinical Management has the highest Sick Rate in 2016 (2.2%); which is mainly because there was only one person under Clinical Management with higher than usual sick rate
- While Nursing also has the highest OT dollars ($28.9k) and an OT rate of 1.5%, Clinical Management again has the highest OT rate of 1.7% despite having 25.3 FTE less than the Nursing staff group
- Therefore, it is recommended that EWG investigates why this staff group has higher Sick and OT rate than other staff groups
- Rate of total sick and OT follows the same trend as above, with Nursing having the highest rate followed by Clinical Management

Table 1 – EWG Sick & OT by Staff Group

	CY 2016 ($000s)					
Cost Centre Category	**Sick Dollars**	**Sick Rate**	**OT Dollars**	**OT Rate**	**Total Sick + OT $**	**Rate of Total Sick + OT**
Nursing*	$9.4	**0.8%**	$28.9	**1.5%**	$38.3	**2.3%**
Non-Clinical	$2.6	**0.8%**	$1.0	**0.5%**	$3.7	**1.1%**
Allied Health	-	-	$0.2	**0.1%**	$0.2	**0.1%**
Clinical Management*	$1.1	**2.2%**	$9.1	**1.7%**	$10.2	**2.0%**
Grand Total	**$13.1**	-	**$39.2**	-	**$52.3**	-

**Includes RNs, RPNs, and PSWs in EWG*

- The In-Patient M&S department utilized clinical agency in 2016, incurring $3.6k in expenses
- While this only made up 0.3% of the M&S In-patient unit's annual budget, EWG could have completely avoided the situation with proper scheduling and rostering

Table 2 - EWG Clinical Agency Usage

			Agency Usage (000)	
CY	Dept. Cat.	Dept.	Agency Use Dollars	Agency Use Rate
2016	Nursing	M&S In-Patient	$3.6	0.3%
			$3.6	-

* Clinical management refers to those that have a clinical and management role

EY

Edgewater Gardens

Supply Chain

EY

Area Overview – Supply Chain

Diagnostic Approach

- A maturity assessment of EWG's supply chain is pending completion with regard to managed vs. unmanaged spend
- EWG is assessed for the degree of vendor consolidation; unmanaged spend; cross-site/departmental sourcing coordination; use of competitive bids; spend control and vendor performance measures
- The maturity assessment is used to estimate savings range from improving supply chain practices

Findings

- During the site visit, some expired stock was observed in the inventory sampled suggesting potential savings from improved inventory management
- Degree of vendor consolidation was scored high, cross-site coordination was scored low, spend control was scored medium, and application of vendor performance metrics was scored low
- Degree of unmanaged spend could not be completed due to limited spend data. Strength and frequency of competitive bid process is not applicable since EWG does not normally engage in large capital purchases
- Expenditure data is not linked to contracts
- EWG's top 3 clinical spend in 2016 were Incontinence products, Nursing services, and Vinyl gloves

Findings, continued

- What is the benefits of a combined procurement function between EWG and HWMH?
- Are the cost shared roles between HWMH and EWG appropriately allocated?
- What specific strategies can be implemented to increase CMI?
- An overall approach to assessing Supply Chain opportunities is presented on page 106

Indicative Opportunities

Opportunity	Description	Estimated Value
Combined sourcing function with HWMH	Use enhanced purchasing power to leverage better value from vendors	$9k - $16k (Pending further clarification)
Embed vendor performance metrics	Ensure vendors deliver to contract / service agreement	
Link items to contracts in the data base	Regular monitoring of contracts	
All purchases are done through a PO	Increase visibility of spend by all authorized staff	
Consider adoption of JIT to avoid inventory management issues	Reduce inventory, expiry and waste	TBD

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Supply Chain – Overview and Analysis

- EWG's total spend in CY 2016 was $169k, with Cardinal Health making up the highest proportion of total spend (48%)
- EWG's top 3 Clinical supplies spend in 2016 were on Incontinence products ($35k, 20% of total spend), Nursing Services ($14k, 9% of total spend), and Vinyl Gloves ($8k, 5% of total spend); there is an opportunity to combine purchases of these supplies with HWMH
- Clinical procurement is undertaken by the Director of Care (DOC), in coordination with a Cardinal rep
- Most Non-Clinical procurement is done by the Director of Plant and Maintenance, Director of Health and Safety, and a Plant Maintenance staff
- A site visit of EWG's inventory storage area revealed a large quantity of expired stock suggesting scope to strengthen inventory management practices
- JIT (stockless program) has not been implemented in EWG owing to concerns about the loss of the current volume rebate. EWG should analyze the costs and benefits of the volume rebate vs the reduction in expired stock and Inventory level
- The table below provides the preliminary assessment summary of EWG's current supply chain practices

EWG Supply Chain Preliminary Operational Assessment

Assessments	Degree	Description
Vendor Consolidation	High	EWG's top 20% vendors (5 vendors) accounted for 80% Total Spend in CY 2016.
Managed Vs. un-managed spend	Pending	Further clarification is required
Cross-site/cross-function sourcing coordination	Low	HWMH and EWG undertake strategic sourcing independently of each other. HWMH utilizes the JIT program, while EWG does not
Strength and frequency of competitive bid process	N/A	Not applicable. EWG does not normally engage in large capital spend
Strength of spend controls	Medium	Based on stakeholder interview, purchases in EWG can be done by 4 individuals (as mentioned above), who operate under the operating policy. However, authorized individuals are able to perform purchases without a PO, which reduces visibility and control of expenditure
Application of vendor performance measures/assessments	Low	Vendor performance metrics are not used, which limits the ability to ensure best value is obtained from vendors

Appendix

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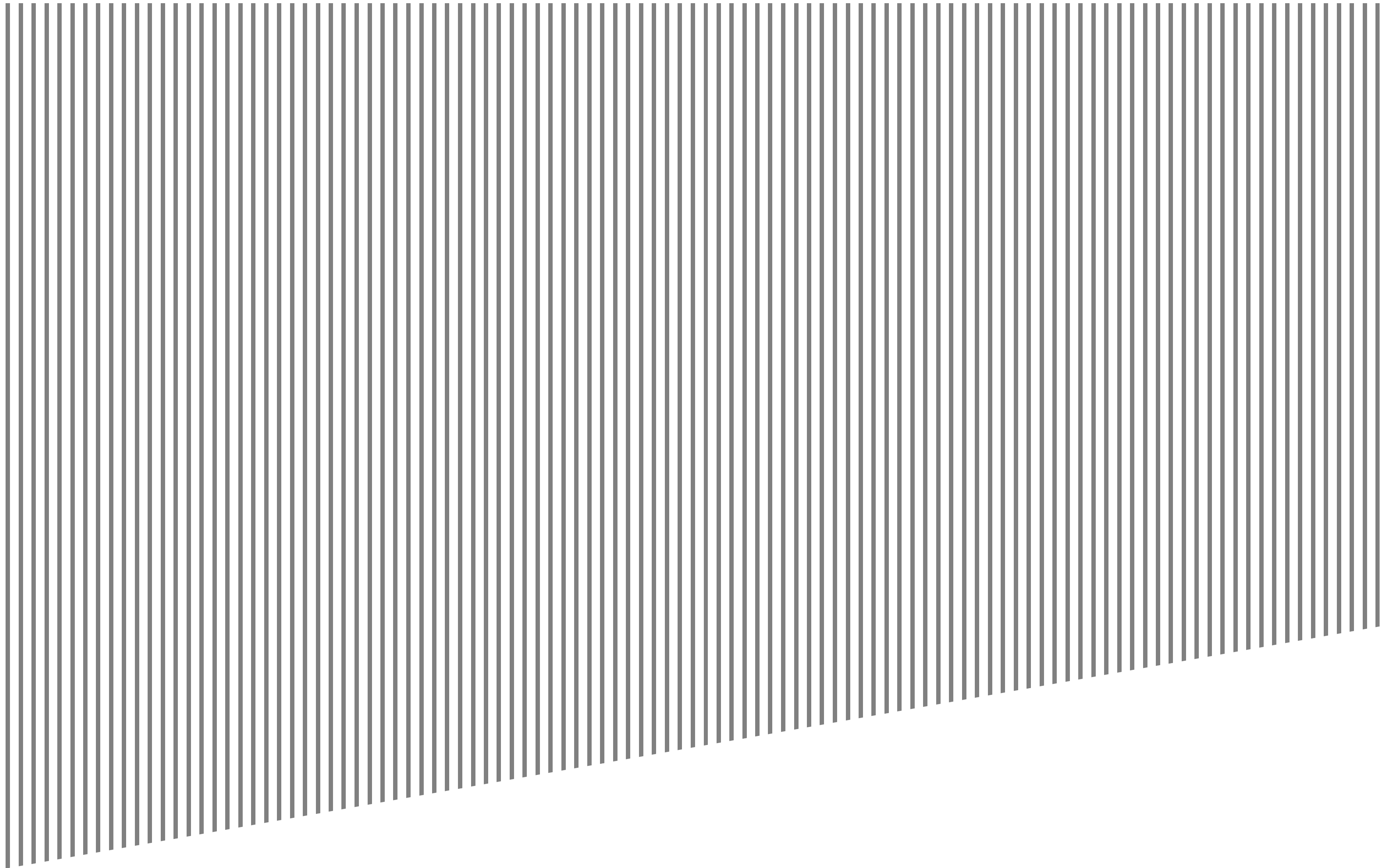
Diagnostic Approach Summary

Area	Description of Diagnostic Approach
Corporate & Support Services	Budget variances were analyzed for all cost centres to identify largest variances Peer hospitals were selected for benchmark comparison based on similar inpatient or attendance volumes Budget variances were analyzed alongside peer benchmarks for corporate and support services Analysis of present rental leases was used to quantify potential for additional rental revenue
Workforce	2016/17 YTD FTE data is used to calculate variance between Budget and Actual FTEs and Salary and Benefits per cost centre. Variances are linearly pro-rated to show an estimate of the full year effect Workforce data is used to calculate and assess trends of OT, Sick Time, Agency Usage, Stand-by, and Call-back expenses per cost centre
Short Term Measures	Short Term opportunities were assessed using the 15/16 and 16/17 GL data provided, focusing on non-operationally critical expenses
Supply Chain	A maturity assessment of HWMH's supply chain was completed using expenditure data and stakeholder interviews HWMH was assessed for degree of vendor consolidation; unmanaged spend; cross-site/departmental sourcing coordination; use of competitive bids; spend control and vendor performance measures The maturity assessment is used to estimate savings range from improving HWMH's performance against these criteria
Operating Rooms	OR data is used to calculate OR capped utilization The opportunity for additional volume or reduction in existing capacity that could be achieved while maintaining existing activity is derived from achieving capped utilization target of 85%
Beds & Length of Stay	Analysis of daily bed occupancy and variation Vs. budgeted capacity to demonstrate if capacity is in excess of normal expected variation Comparison of acute length of stay Vs. expected length of stay for atypical patients to identify opportunities for reduction at HIG level Comparison of potential Preferred Accommodation and Co-Payment revenue Vs. Actual Acute care staffing levels were assessed to identify variance between budgeted FTEs and skill mix against actual Chronic Care RUG data was benchmarked provincially
Outpatient Services	Review of annual outpatient volume Analysis of clinic productivity and comparison of number of clinics to schedule Assessment of patient demographics and percent of patients from out of area Comparison of outpatient specialty complement with clinical inpatient workload
Diagnostic Imaging	Review of annual diagnostic imaging volumes Analysis of DI block productivity and understand the hourly throughput per staff resource Estimate the additional volume that could be achieved through existing capacity Analysis of annual revenue vs target
Emergency Department	Review of ED activity to understand patterns of demand by time and day Profile acuity of ED demand through analysis of CTAS scores Review of attendances by catchment area Assess alignment of ED demand profile to current allocation of staffing within ED
Long Term Care	Application of Workforce, Supply Chain, Beds & Short Term Measures diagnostic approaches

Supply Chain Approach



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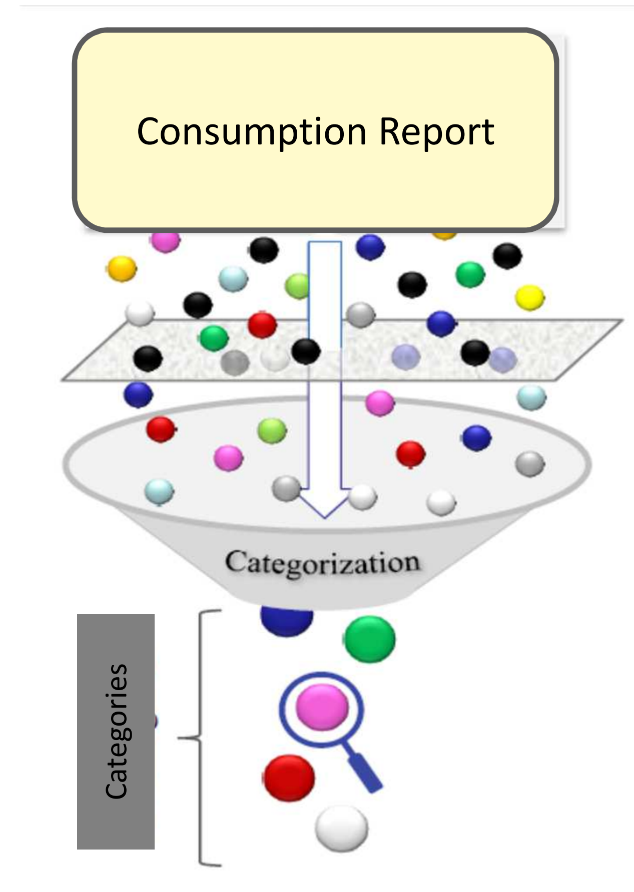
Target Supply Chain Savings Identification Approach

The typical approach utilizes the following steps to assess opportunities. Given some limitation on data access, estimates were developed.

1. Gather raw spend data
2. Identify preliminary savings ranges for HWMH
3. Filter out non-sourceable spend
4. Organize the material groups into broad categories
5. Assign savings ranges to each category
6. Analyze the Categories and adjust savings ranges based on:
   - Relative spend on/off contract
   - Relative vendor fragmentation
   - Existence of partnerships and/or monopolies on products
   - Recently completed sourcing initiatives
7. Group categories into implementation waves



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Strategic Sourcing – What is Category Management?

Overview

Strategic Sourcing is an approach to supply chain management that formalizes the way information is gathered and used so that an organization can leverage its consolidated purchasing power to find the best possible values in the marketplace.

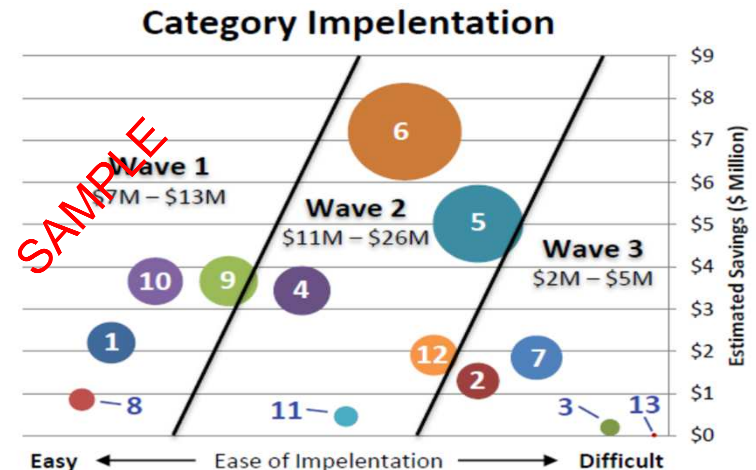
Category Management organizes spend into groups where similar expertise and sourcing strategies can be applied.

For each category, different cost savings approaches (sourcing levers) can be applied based on the type of spend in that category.

The categorization of spend will help HWMH to:

1. Prioritize which categories to focus efforts on based on ease of implementation and magnitude of savings
2. The strategic sourcing expertise and product knowledge required to deliver the savings
3. The approach required to deliver savings
   I. Reduce vendor fragmentation
   II. Increase managed spend
   III. Competitive tender process

- **Price**
- **Safety**
- **Reliability**
- **Productivity**
- **Efficiency**
- **Quality**



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Strategic Sourcing Levers (1/2)

Focus area	Value levers	Added benefits
Supplier management	Supply market analysis	• Deeper understanding of best options in Supply Market
	Supply base review & development	• Deeper understanding of how far incumbents can go
	Supplier onboarding	• Accelerated onboarding eliminates incumbent leveraging threat • Ease of introduction allows for smoother and quicker transition
	Aggregate volume	• Implementation temporarily improve negotiation power for HWMH, creating an opportunity to negotiate more favourable terms
Category management	Volume leveraging	• Improved Prices & Terms with Benchmarks from multi-round negotiations
	Category RFPs and Master Agreements	• Improved terms and prices • Comparative evaluation reduces onboarding risks
	Cross area (Edgewater Gardens and Hospital) category bundling	• Smaller areas get benefit of HWMH size, Larger divisions win on other smaller categories

Strategic Sourcing Levers (2/2)

Focus area	Value levers	Added benefits
Standardization and Value Engineering	Standardization of specifications	• Objective view of Supplier offerings • Alignment of design with what Client is willing to pay for, optimized cost • SKU rationalization and volume savings
	Increase use of market standard products / specifications	• Alignment of design / premiums with Client expectations, optimized cost • Pushing the Supplier base to upsell products and demonstrate value
	Make vs buy	• Leveraged Supplier market enables enforcement of transparency on cost / margin / should cost modeling and better performance management • Category management allows identification / full benefit assessment of insourcing vs buy
	Specifications rationalization	• Greater use of equipment that has common specifications across areas • Larger number of supplier options by using more common specs
Demand Management	Demand planning / project planning forecasting	• Category and cross divisional grouping allows capture of recurring year over year volumes • Recurring spend levels allow for Master Agreement restructuring/renegotiation and reduction of unplanned spend
Process Optimization	Bidding process standardization / optimization	• Category and cross divisional grouping provides input for a consolidated approach to Supplier market • Specification standardization provides objective evaluation process / automated solutions / questionnaires • Automated process allows less manual work, more value add and increased frequency (leads to additional savings)