

A Plan to Evolve the Anesthesia Care Team Model in Ontario

Report of the ACT Implementation Advisory Committee

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1.0 Introduction

The April 2006 report of the Operative Anesthesia Committee, *Transforming the Delivery of Operative Anesthesia Services in Ontario*, recommended the adoption of an Anesthesia Care Team (ACT) model in order to support stable and adequate access to anesthesia services in Ontario hospitals. The committee, chaired by Dr. Jack Kitts, was a joint initiative of the Ontario Medical Association (OMA) and the Ministry of Health and Long Term Care (MOHLTC). The MOHLTC subsequently approved a multi phase ACT demonstration project.

The primary objective of the ACT project was to support stable and adequate access to anesthesia services in Ontario hospitals. The anesthesia care team model was intended to address the shortfall in anesthesiologists and result in increased anesthesia hours. It was anticipated that a reduction in surgical cancellations and delays attributed to availability of anesthesia services would result in reducing wait times and improving access to care. In addition, the ACT would address the pent up demand for services in the areas of pain management, non-operative settings and non-surgical obstetrics, all areas that are currently underserved and where opportunities exist to improve care.

An Implementation Advisory Committee (IAC) was appointed to oversee the initiative. The mandate of the IAC was to provide recommendations to support the implementation of ACT sites in Ontario by:

- § Developing criteria for evaluating Expressions of Interest proposals;
- § Establishing minimum requirements for ACT viability and expected outcomes;
- § Recommending material/resources required for successful ACT Implementation;
- § Overseeing the evaluation process and the ACT Working Group and providing ongoing feedback on the status of the project;
- § Providing recommendations for future direction, and
- § Providing recommendations for long-term sustainability.

The ACT model has now been implemented in 22 hospitals across Ontario (see Appendix A) through funding provided by the provincial Wait Time strategy. Phase 1, now in the third year of funding, includes fourteen hospitals. Phase 2 added eight additional hospital sites and will continue into 2011. In addition, the ACT model was implemented in six high-volume cataract sites based on an innovative, cost neutral funding plan established through negotiations between the MOHLTC and the OMA.

While the IAC continues to oversee the progress of these implementation sites, the focus has shifted to future direction and long-term sustainability for the ACT model. Based on the evaluation results to date, the positive experience expressed by the pilot sites and the support of the anesthesiology profession, the IAC strongly endorses the ACT model and recommends proceeding to a province wide implementation. This report provides a series of recommendations developed following consultation with key stakeholders and review of the evaluation results for the phase one pilot programs.

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2.0 Stakeholder Consultation

In June 2009, the IAC hosted an *ACT Think Tank* to review the initial evaluation results from Phase 1, identify issues going forward and provide advice on sustaining the ACT model into the future. The planning day included over forty participants including Anesthesiologists and Anesthesia Assistants (AA) from pilot hospitals, OMA, MOHLTC, Canadian Anesthesiologist Society (CAS) and AA educational facilities. Following from this session, the IAC appointed three working groups to provide the committee with specific advice on sustainability in three key areas:

1. Financial Models
2. Professional Practice and Education, and
3. Performance Measurement

Over the last several months, each working group has met to develop recommendations, the details of which are outlined in the following sections of this report.

3.0 Phase One Evaluation

In August 2009, the IAC was presented with the *ACT Post-Implementation Evaluation Report* of Phase 1 sites. This report concluded that there were no safety concerns identified with the implementation of the ACT in the setting studied. The quality audit demonstrated positive feedback from AAs, anesthesiologists and surgeons. The economic evaluation identified an overall reduction in cost per case for selected procedures and an increase in number of surgeries completed during the study period. It was noted however that there were additional costs for hospitals in implementing the ACT model.

An overview of the key evaluation findings is included as Appendix B. The complete 133 page report is also provided. The Phase 2 evaluation will be completed in the summer of 2010.

4.0 Working Group Reports

4.1 Estimating Demand

In considering the future demand for anesthesia services and the training requirements for the ACT, reference was made to three key reports that have been authored in the last decade:

- § *"A Physician Workforce Planning Model for the Specialty of Anesthesia"* authored by Eva Ryten in 2000 for the Association of Canadian University Departments of Anesthesia,
- § *"Review of Anesthesia Services in Academic Health Science Centres (AHSC)"* undertaken by Dr. John Marshall (2003) and updated in 2006
- § *"Transforming the Delivery of Operative Anesthesia Services in Ontario"*, a report of the Operative Anesthesia Committee (2006) chaired by Dr. Jack Kitts.

Based on the Ryten Report, there was a shortfall of 114 FTE anesthesiologists in Ontario in 2000. Using a population-based methodology, the report forecasted that the province will require 1,100 FTE Anesthesiologists by 2016. Given that this report was authored in 2000, it in all likelihood underestimates demand given recent trends in anesthesia including increasing need for:

- § Longer operative procedures (e.g. laparoscopic surgery);
- § Out-of-OR services (e.g. insertion/removal of catheters, diagnostic imaging and endoscopy sedation);
- § Pain control and management;
- § Non-surgical obstetrical anesthesia, and
- § After-hours care (as a result of shorter length of stay and ER wait times).

The report of the Operative Anesthesia Committee (2006) identifies an almost parallel increase in the volume of services and the general increase in FTE anesthesiologists. This reflects the pent-up demand for services met by the increasing staff complement. Despite medical school enrollment and increased residencies, the Committee concluded that the impact of attrition and demand will result in a continued gap between availability and service need. A more detailed description of future demand is included in the report of the Professional Practice and Education Working Group (Appendix C).

The IAC concluded that the supply of Anesthesiologists is not expected to keep pace with demand and that 200 AAs would be a reasonable starting point for the Province of Ontario. This would mean an additional 137 ACT team members will need to be added in the coming years to meet the increasing demand for services in settings beyond the existing ACT pilot sites.

4.2 Report of the Professional Practice and Education Working Group

The Professional Practice and Education Working Group report is provided as Appendix C. The primary mandate of this group was to clarify the roles and responsibilities of members of the ACT, identify appropriate practice settings, forecast future demand and determine educational requirements in order to evolve the ACT team. Based on the pilot site experience and the phase 1 evaluation results, the Working Group recommended adoption of the ACT across the province as an Anesthesiologist led anesthesia care model. The report provides detailed roles and responsibilities for both the AA and Nurse Practitioner Anesthesia and includes recommendations for regulatory mechanisms. Having reviewed the human resources and educational implications, the Working Group concluded that up to 200 AAs should be deployed across the province in a range of practice settings over the next several years. In order to achieve this number, existing educational programs would need to increase enrollment and hospitals would need to provide appropriate clinical settings in which to train students. The Working Group identified twenty four recommendations in support of evolving the ACT and identified the need for continued investment in existing educational programs.

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4.3 Report of the Performance Measurement Working Group

The Performance Measurement Working Group report is provided as Appendix D. With the key objective of ensuring the provision of safe anesthesia practices, the mandate of this group was to develop a methodology to measure, monitor and report on the ongoing impact of the ACT model. The Working Group adopted a performance measurement framework based on key measurement principles. The framework focused on a number of specific areas: safety, access to care, efficiency and quality. The specification and details of each of these focus areas are detailed in the Working Group report. It was agreed that performance measurement processes should build on existing data bases and measurement practices to the extent possible and that ACT sites should assume responsibility for quality assurance and safety monitoring. In determining how best to ensure effective measurement and reporting processes, the Working Group identified the need for a provincial governance body to provide ongoing oversight to the ACT model especially during the early years of implementation. Through this body, accountability agreements would be established with participating hospitals. The Working Group identified five key recommendations and provided a template of twenty-three performance measures.

4.4 Report of the Finance Working Group

The Finance Working Group report is provided as Appendix E. The mandate of this group was to develop financial models that would ensure continuance of the ACT program. A number of key principles were identified to assist the group in evaluating potential models. For each financial model, mechanisms for cost sharing with the MOHLTC, the OHIP pool of funds and/or hospitals were considered. It was determined that geography, size of hospital, human resource models and case mix may impact the implementation of any financial model and that flexibility would be needed in considering the most appropriate model in any given setting. Following review of a range of potential funding arrangements, the Working Group concluded that the 'Cataract Model' as initiated with selected pilot sites should be deployed in any high volume cataract centre and be considered for other ASA 1 and 2 procedures that have predictable populations with known outcomes (e.g. Endoscopy). The group further recommended three potential approaches to cost sharing models. While any one of these models could be applied for all other anesthesia services not covered by the 'Cataract Model' agreement, the IAC concluded that a tripartite solution to funding should be considered at this time. They therefore endorsed the Shared Model with contribution from each of the MOHLTC, the hospital and the OMA with each organization determining desired team members based on case volume and number of anesthesia settings/operative rooms.

The IAC has reviewed each of the three working group reports and endorses the following recommendations. The IAC acknowledges the engagement and effort of these three working groups over the past months. This is seen as a testament to the commitment of the participants to the sustainability of the ACT model. The buy-in that has been achieved among the diverse membership of health care providers, professional organizations, educators and government will be essential to the ongoing success of the ACT implementation.

5.0 Conclusion

The results to date, both evaluative and anecdotal, have provided the IAC with evidence of the success of the ACT pilot initiatives. The IAC has concluded that there is a compelling case for sustaining the ACT model beyond the life of the pilot program. The IAC supports the ACT model as a highly desirable solution to addressing the ongoing challenge of anesthesia manpower in the province now and into the future.

Further, the IAC has concluded that in order to support the ACT model, an investment in operating funding and educational resources will be required. To be truly sustainable, this investment will need to have the full support of the MOHLTC, the OMA and participating ACT hospitals across the province.

The IAC would recommend that as a first step the MOHLTC and the IAC leadership convene to review this report and explore the appropriate next steps towards evolving the ACT Model. With Phase 1 funding concluding in March 2010 there is some urgency in moving forward to ensure that these sites may continue to support the investment made to date. In the meantime, the Phase 2 sites will proceed into year two with the evaluation to be reported in the summer of 2010.

The IAC would further recommend that key stakeholders be engaged in subsequent discussions and planning. This would include the regulatory colleges (College of Nurses of Ontario and the College of Respiratory Therapist of Ontario), educational institutions (Michener Institute, Fanshawe College, Algonquin College, University of Toronto) as well as the professional leadership of the ACT member organizations.

6.0 Recommendations

Following review of the Working Group reports, the IAC recommends:

ACT Model

1. That the ACT be permanently established within the Province of Ontario as an Anesthesiologist led anesthesia care model that includes Anesthesia Assistants and other professional team members (NP-A, RN, RT, ORT) as deemed appropriate within any given practice setting. Provincial deployment of the ACT model should not be limited by geographic setting and decisions as to sites should be based on both the demonstrated need and capacity of each hospital to provide adequate supervision, ongoing support to the AA and NP-A and ensure continued competency.

ACT Roles, Responsibilities and Regulation

2. That participating hospitals establish a reporting structure such that the AA and NP-A report to both the Chief of Anesthesia and an appropriate professional practice or clinical leader within each hospital. The Chief of Anesthesia will be directly responsible for the introduction of AAs into the ACT and determine the extent of their clinical activities, as per CAS guidelines. The AA and NP-A will work under the supervision of an Anesthesiologist.

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3. That the full AA role and responsibilities be standardized across the province, informed by the CAS guidelines. Each participating hospital should establish an AA role description based on the work that is to be performed in any given practice setting. The role description should be well communicated in order that there is common understanding of the role among care providers with whom the AA will have contact. Medical directives and associated policies and guidelines must be established and approved based on the institutional practices in each hospital e.g. Medical/Professional Advisory Committee within each practice site that employs an AA. Each hospital will be required to develop a job profile for the AA role and evaluate the compensation for the AA based on the additional skill, training, responsibility and risk assumed in this role.
4. That the regulatory Colleges [(College of Nurses of Ontario and College of Respiratory Therapists of Ontario (CNO/CRTO)] and the Ministry of Health and Long Term Care (MOHLTC) adopt the guiding principles and scope of practice for AAs as set out by the Canadian Anesthesiologists' Society and:
 - i. Require that any practicing AA adopt the title Anesthesia Assistant and note this on all health record documentation;
 - ii. Protect the title of Anesthesia Assistant (AA)
 - iii. Require that the AA be a member in good standing of their provincial professional regulatory body and adhere to the requirements set out by their respective College and be accountable for ethical standards, quality assurance and continuing education.
5. That the Chief of Anesthesia:
 - i. Identifies the situations in which concurrent care of more than one patient by one Anesthesiologist assisted by AAs, will be appropriate in their local situation and have written guidelines for same;
 - ii. Ensure that whenever supervising the care provided by an AA, the Anesthesiologist must be 'on site', free of or immediately able to absent him/herself from patient care responsibilities, available for immediate communication by wireless phone or other similar technology and be personally able or have designated another anesthesiologist to immediately physically attend to each patient if needed;
 - iii. Identify the situation where an NP-A may be appropriate in their local situation and have direct responsibility for the introduction of the NP-A into the ACT and determine the extent of their clinical activities.
6. That the College of Nurses of Ontario continue to collaborate with members of the profession, the health care sector, the Faculty of Nursing and the Department of Anesthesia at the University of Toronto to work towards a solution for registration and regulation of the NP Anesthesia within the Province of Ontario. The NP-A will be required to be a member in good standing of their provincial professional regulatory body and adhere to the requirements set out by their College (College of Nurses of Ontario). At this time they will be governed by the

requirements of their college and be accountable for ethical standards, quality assurance and continuing education.

Education

7. That following confirmation by the Michener Institute of the number of 'basic' students who desire to proceed with AA training, the Michener Institute and Fanshawe College each be funded by the MOHLTC and/or MOTCU to conduct advanced/semester two cohorts to address the backlog of 'basic' trainees requiring additional education and clinical placements. The MOHLTC and MOTCU is requested to fund existing training programs at the Michener Institute, Fanshawe College and Algonquin College, providing up to 50 student enrollments per year over the next two years in addition to addressing the existing backlog.
8. That the MOHLTC identify funding models that will ensure the ongoing training and education of NP-As in the Province, thus generating the critical mass necessary to fully integrate into the delivery of Anesthesia services.
9. That each educational institution:
 - i. Set a minimum standard for entry to the AA program as an RN or RT with a minimum of 4000 hours of critical care experience within the last five years.
 - ii. Adopt a consolidated program of study with two didactic semesters [semester 1 (basic equivalent) semester 2 (advanced equivalent)] to be completed over a 12 month period. The clinical component (semester 3) should be completed within the following 6 months, followed by a common final written exam and simulation assessment.
 - iii. Enhance the existing clinical education component of training by extending the current 12 week preceptorship (minimum 450 clinical hours) by adding additional electives, rotation among specialties and a range of clinical learning locations (teaching, community) beyond the student's home/sponsoring hospital.
10. That the ongoing collaboration between the Bloomberg Faculty of Nursing and Department of Anesthesia at the University of Toronto continue in the development and delivery of NP-A education.
11. That the AA section of the CAS provides guidance as to what expectations should be established for mandatory continuing education for the AA.

Performance Measurement

12. That the MOHLTC:
 - i. Appoint a governance body to provide ongoing oversight to the implementation and maintenance of the ACT model and that the mandate of this group includes regular review of performance reports;

- ii. Establish accountability agreements with each ACT participating hospitals that include assurances of compliance in establishing and monitoring performance standards and reporting of performance indicators;
- iii. Subject these data bases to periodic audit for accuracy and consistency with established standards for data collection and reporting.

13. That the MOHLTC adopt:

- i. An ongoing ACT safety reporting process to be undertaken with ICES in order to evaluate the continued safety of the ACT model in the peri-operative setting and
- ii. The SETP performance metrics as the efficiency measures for ongoing evaluation of the ACT model.

14. That the MOHLTC establish accountability agreements with each ACT participating hospital that include the requirement to have in place a quality assurance program that includes reporting of critical incidents associated with the provision of anesthesia care, the performance of the ACT team and compliance with CAS established ACT standards of care.

Financial Model

15. That the MOHLTC adopt the Cataract Funding Model (Model A) for any high volume cataract centre and consider application of this model to other procedures that have predictable populations with known outcomes and ASA 1 and 2 classifications.

16. That the MOHLTC fund remaining ACT programs using the Shared Model (model C) with an equal contribution from each of the MOHLTC, the hospital and the OMA with each hospital determining desired team members based on case volume and number of anesthesia settings/operative rooms.

17. That the MOHLTC consider alternative funding models in the future including:

- i) Team/Case Based (model D) – an alternate funding model that pays for work performed with OHIP funding distributed among team members, and
- ii) Physician Billing Model (model F) – based on the OHIP pool of funds, this model may be more acceptable if a management arrangement could be established with the hospital.

Appendix A: ACT Model Pilot Hospitals

Phase 1:

- § Halton Healthcare Services
- § Kingston General Hospital
- § London Health Sciences Centre, St. Joseph's Health Care London (Cataract)
- § Royal Victoria Hospital
- § Sault Area Hospital
- § Sunnybrook Health Science Centre
- § The Ottawa Hospital
- § Toronto East General Hospital (Cataract)
- § University Health Network

Cataracts (separate from Phase 1):

- § St. Joseph's, Hamilton
- § North York General Hospital
- § Southlake
- § The Ottawa Hospital

Phase 2:

- § Hospital for Sick Children
- § Kingston General Hospital
- § Lakeridge Health Corporation
- § Mount Sinai Hospital
- § North Bay General Hospital
- § North York General Hospital
- § The Ottawa Hospital
- § Quinte Health Care Corporation
- § St. Joseph's Health System (Hamilton)
- § St. Joseph's Health Centre (Toronto)
- § St. Michael's Hospital
- § Sunnybrook Health Sciences Centre

Appendix B: Phase One Evaluation Overview

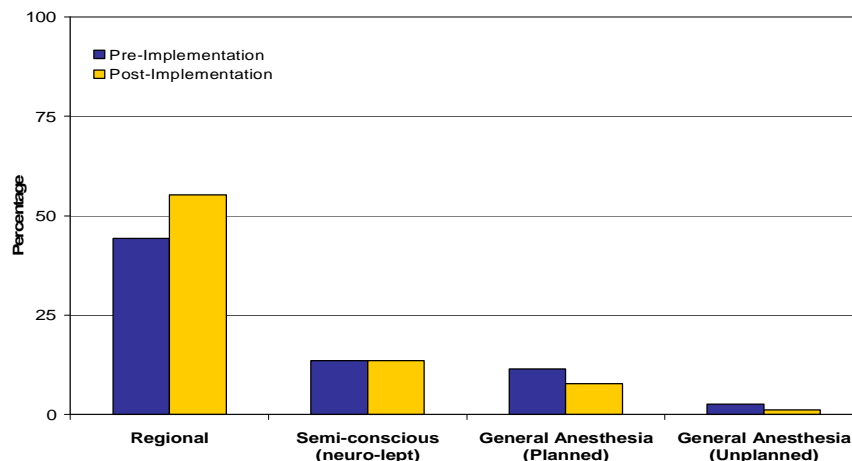
The Phase One evaluation report was presented to the IAC in September 2009. The key findings are summarized below. The full report, *Anesthesia Care Team Post-Implementation Evaluation Report August 2009* provides detailed findings including each of three study reports and site specific results. The purpose of the ACT evaluation was to measure the safety, effectiveness and efficiency of the new model of care. A safety audit in the form of a retrospective chart review, a quality web survey and an economic analysis were conducted to evaluate the implementation of the ACT model in ten Ontario hospitals.

B1. Safety Audit

A safety chart audit on primary hip and knee surgeries was conducted at three ACT Phase One sites. This study compared the safety of the pre and post implementation of ACT model in the peri-operative setting. Trained medical data abstractors reviewed, abstracted and transferred patient chart information onto a paper-based collection tool. Analysts entered results into a database to facilitate data cleaning in preparation for statistical analysis by a statistician. The variables collected include: general demographics, medical history, anesthesia type, intra-operative variables, including start and end times, complications and length of stay. The results concluded that patient demographics and medical history were comparable.

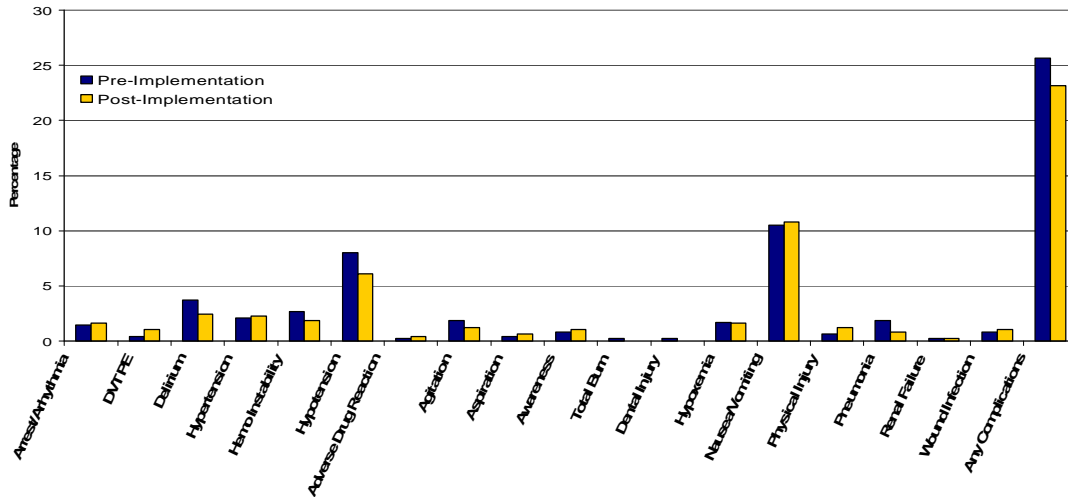
The audit confirmed a noticeable practice change between the ACT pre and post implementation periods, with an increase in the incidence of regional anesthesia in the post implementation phase. The graph below illustrates this change.

Figure 1: Anesthesia Type



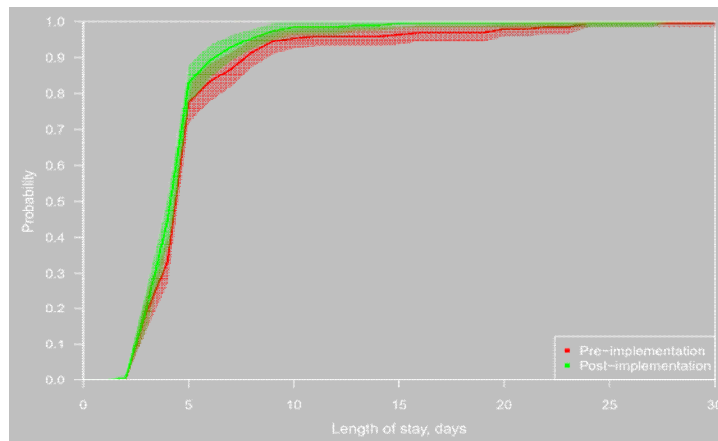
Another notable finding was no increases in serious adverse events identified between the pre and post implementation groups. The graph below illustrates the incidence of adverse events.

Figure 2: Peri-operative Complications



Furthermore, there was a reduction in post anesthesia care unit (PACU) time and hospital length of stay (LOS). As illustrated below, there was a higher probability of a shorter LOS in the post-implementation period.

Figure 3: Length of Stay in Days



It was concluded that there were no safety concerns with the implementation of the ACT at these hospitals, in the setting studied.

B2. Quality Audit

The objective of the ACT Quality Audit was to examine the satisfaction of AA's, anesthesiologists and surgeons with the ACT model and the AA role, according to several key quality domains in different hospital settings. A web-based quality survey was undertaken.

Key findings include:

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- § Results from the survey domain “Teamwork Climate” showed 86% of responding anesthesiologists agree or strongly agree that they, in fact, prefer working in a team;
- § The “Safety Climate” domain results indicated that AAs and anesthesiologists mostly agree (96% and 91% respectively) that the ACT model had enhanced the safety climate within the operating room;
- § Anesthesiologists perceive that their job satisfaction has increased since the implementation of the ACT model;
- § Both AAs and the anesthesiologists agree that there are not enough AAs currently working in their hospital;
- § Some AAs commented that AAs are dissatisfied with the salary disparity amongst AAs between sites;
- § The majority of AAs and anesthesiologists agree that AAs have an appropriate education;
- § Seventy-three percent of responding AAs agree or strongly agree that their scope of practice should be expanded, while only 16% of anesthesiologists agree or strongly agree with the same item;
- § Furthermore, 80% of responding surgeons feel comfortable allowing AAs to monitor their stable patients for up to half an hour under general anesthesia with an anesthesiologist immediately available if needed;
- § The Patient-Centred Care domain results indicate a need for patient education about the roles of AAs. Fifty-eight percent of AAs and 20% of surgeons respectively believe that patients understand the AAs’ role in the ACT.
- § Anesthesiologists were satisfied with AAs’ communication skills with patients and other professionals;
- § Surgeons agreed AAs to be professional in the workplace;
- § Eighty percent of responding surgeons disagreed with the statement “I have received complaints from my patients about AAs”, and
- § All groups perceive the ACT Model to be patient centered.

The full report includes comments and testimonials in support of the ACT model. The quality audit results support the conclusion that the ACT model has been well accepted in the pilot sites and there is strong support from the anesthesiologist community to continue to evolve this model as a province wide initiative.

B3. Economic Evaluation

An economic analysis was conducted in order to compare the costs and benefits pre and post implementation of the ACT model. There were two populations studied (cataract surgery and hip and knee replacement surgery) with cost-benefit data from two phase one sites of the ACT model. The average overall cost of pre and post-implementation of the ACT model was determined on a per case basis and on a per annum basis.

Results from the analysis determined that in terms of cataract surgery, there was a reduction in unit cost per case post-implementation of the ACT model. The approximate annual cost savings ranged from \$132,000 to \$396,000 per annum based on volume of work and number of OR rooms.

Table 4: Annual Cost of Cataract Surgery

Number of ORs	Pre ACT	Post ACT	Difference*
1 OR (2,400 cases)	\$444,000	\$312,000	-\$132,000
2 OR (4,800 cases)	\$888,000	\$624,000	-\$264,000
3 OR (7,200 cases)	\$1,332,000	\$936,000	-\$396,000

*Post minus pre

For hip and knee surgery, an overall increased efficiency was noted post-implementation of the ACT model; specifically, peri-operative times and length of stay were noticeably shorter with less variability. According to administrative data collected at the pilot site, there was an enhanced number of hip and knee replacement surgeries post-implementation of the ACT model.

Table 5: Cost per Case Hip and Knee Replacement

Cost Element	Pre ACT	Post ACT	Difference*
Anesthesiologist	\$500	\$500	\$0
AA	\$0	\$125	\$125
Medication	\$18	\$18	\$0
PACU	\$100	\$60	-\$40
LOS	\$12,000	\$10,000	-\$2,000
Implants	\$1,000	\$1,000	\$0
OR Suite labour	\$550	\$550	\$0
OR Suite materials	\$200	\$200	\$0
Total	\$14,368	\$12,453	-\$1,915

*Post minus pre

This analysis may be concluded in two perspectives: from a hospital perspective, there would be additional costs required for the implementation of AAs. A hypothetical cost per time model did show a decrease of \$1,915 per case due to the reductions in PACU time and length of stay. However, from the MOHLTC perspective, the ACT results in an overall reduction in cost per case of cataract surgeries. Additional benefits include an increase in the number of cataract surgeries performed per annum by an anesthesiologist, thereby reducing surgery wait times, and improving the availability of anesthesia personnel for other cases.

B4. Conclusion

Based on these results, the evaluation team concluded that there were no safety concerns identified with the implementation of the ACT at the pilot hospitals studied. Positive feedback was received from

participants including anesthesiologists, AAs and surgeons. There was further evidence of economic benefit and improved access to care. The Phase Two evaluation is now underway with findings to be reported in 2010/11. The evaluation will include a quality survey, 'time and motion' study examining anesthesiologist and AA workload activities and time as well as a safety analysis to be undertaken by the Institute for Clinical Evaluative Sciences (ICES).

Appendix C: Report of the Professional Practice and Education Working Group

C1. Introduction

The Anesthesia Care Team (ACT) Professional Practice/Education Working Group was one of three teams established by the ACT Implementation Advisory Committee to assist in developing options and recommendations to sustain the ACT model going forward. The primary purpose of the ACT Professional Practice/Education Working Group was to develop recommendations as to the scope of the Anesthesia Assistant (AA) role, professional standards, regulatory requirements, training requirements including entry to practice and continuing education. The working group also considered the role of the Nurse Practitioner Anesthesia (NP-A) within the context of the ACT. Terms of reference and membership of the working group are included as Attachment C-1.

The working group referenced the report '*ACT Think Tank Summary of Deliberations June 2009*' as well as other key documents including the Canadian Anesthesiologists' Society (CAS) *Position Paper on Anesthesia Assistants* (June 2006). Additional materials and expert opinion were provided by working group participants. The following report identifies the key findings and recommendations of the ACT Professional Practice/Education Working Group.

C2. Key Elements of the ACT Model

Having reviewed the findings of the June 1, 2009 Think Tank and considering the evaluation results of Phase 1, the Working Group supported the establishment of the ACT model in Ontario beyond the life of the existing pilot sites. To this end, the Working Group developed a series of recommendations that highlight the key elements of the ACT model.

Members of the Anesthesia Care Team (ACT)

The Working Group considered the range of professionals who should constitute the ACT and agreed that at a minimum the team should include an Anesthesiologist, as the team leader, and an Anesthesia Assistant (AA). The ACT may also include:

- § Nurse Practitioner Anesthesia (NP-A)¹
- § Respiratory Therapist (RT)
- § Operating Room Technicians (ORT)
- § Registered Nurses (RN) and
- § Others that contribute to the care of patients requiring anesthesia.

¹ Nurse Practitioner-Anesthesia (NP-A) is a new role, with the first four students projected to graduate in 2010. The role is not yet regulated, therefore candidates will, at present, be registered as Nurse Practitioner - Adult or Nurse Practitioner - Pediatrics.

Recommendation 1: That the ACT be permanently established within the Province of Ontario as an Anesthesiologist led anesthesia care model that includes Anesthesia Assistants and other professional team members (NP-A, RN, RT, ORT) as deemed appropriate within any given practice setting.

Each professional role should be clearly delineated with a common understanding of responsibilities and accountabilities. While there will need to be tolerance for role overlap among these professionals, each will perform within the scope of practice as determined by each profession's regulatory college. As the team lead, the Anesthesiologist and Department of Anesthesia must assume full responsibility for the provision of anesthesia services and supervise care that is performed by professionals under approved medical directives and protocols. The Working Group concluded that the full AA role and responsibilities should be standardized across the province yet applied in each hospital setting based on approved medical directives and parameters that align with the specific work requirements and practice environment within each institution. See detailed discussion on the AA role in the section titled Roles and Responsibilities, below.

Recommendation 2: That the full AA role and responsibilities be standardized across the province, informed by the CAS guidelines. Each participating hospital should establish an AA role description based on the work that is to be performed in any given practice setting. The role description should be well communicated in order that there is common understanding of the role among care providers with whom the AA will have contact. Medical directives and associated policies and guidelines must be established and approved based on the institutional practices in each hospital e.g. Medical/Professional Advisory Committee within each practice site that employs an AA.

The CAS guidelines stipulate that the AA works under the direction and supervision of the anesthesiologist. The Working Group concurred with this arrangement. The reporting relationship within any given organizations was considered and it was agreed that the AA and NP-A must have a dual reporting relationship to the Chief of Anesthesia and to the clinical leadership and/or professional practice leader within their specific disciplines.

Recommendation 3: That participating hospitals establish a reporting structure such that the AA and NP-A report to both the Chief of Anesthesia and an appropriate professional practice or clinical leader within each hospital. The AA and NP-A will work under the supervision of an Anesthesiologist.

Practice Settings

The ACT pilot sites have included a number of hospital settings and services. The Working Group agreed that in theory the AA role is applicable to any acute care hospital within the province regardless of geography (urban/rural/north) or complexity of care (teaching/community/ambulatory). Once the first NP-A students graduate in 2010, the applicability of this role to a range of hospital settings will be

clearer. The decision as to the appropriateness of the ACT in any given setting should be made by the hospital leadership with consideration to the availability and willingness of Anesthesiologists to lead and supervise the team as well as the capacity of the organization to fully engage individual AAs and NP-As. The extent to which the full role of the AA and NP-A can be realized and the extent to which specialization within a given clinical area can be achieved should be expected to vary across settings. For example, the AA may mainly practice within a selected surgical specialty and work primarily in the operating room complex. Another AA may practice both within the operating room as well as a range of ambulatory and diagnostic settings where anesthetic care is required or post operative settings such as the acute pain service. The NP-A may provide clinical services to patients across a variety of practice settings such as pre-op clinics, acute care (pain services), ambulatory clinics and post-operative care units. This diversity in roles is to be expected.

The Working Group concluded that the ACT model cannot be a 'fix' for those hospital settings where anesthesiologists are not readily available to supervise the work of the AA. Likewise, the NP-A requires the close collaboration of the Anesthesiologist to fully carry out the role within the ACT. The AA and NP-A are not substitutes for Anesthesiologists but rather can enable better deployment of available Anesthesiologists. It is therefore understood that it may be difficult to support the ACT model in northern and/or remote rural areas.

Recommendation 4: That the provincial deployment of the ACT model not be limited by geographic setting and that decisions as to sites be based on both the demonstrated need and capacity of each hospital to provide adequate supervision, ongoing support to the AA and NP-A and ensure continued competency.

C3. Roles, Responsibilities and Regulation

The AA and NP-A roles as practiced within the ACT pilot sites in Ontario are distinct from models seen in the United States and Europe. The training, scope of practice and level of supervision are very different. The AA in Ontario is delegated to provide anesthetic assistance throughout the continuum of anesthesia care in contrast to the more established and developed roles of Anesthesiologist Assistants or Certified Registered Nurse Anesthetist (CRNA) in the US. The Working Group endorsed the Ontario model.

Anesthesia Assistant (AA) Role

Anesthesia Assistants are specifically trained professionals whose activity focuses on assisting the anesthesiologist in the delivery of patient care during the intra-operative and the immediate post partum period. The AA is an emerging new professional in the Canadian healthcare system. The full scope of the role of an AA cannot be performed by a Registered Respiratory Therapist (RRT) or a Registered Nurse (RN). The knowledge, skills and critical care experience of a RRT or RN provides a foundation upon which training of an AA can occur. The AA in Ontario must complete a course of study and clinical training specific to the scope of practice that they will undertake in this role. The Working Group concurs with the *CAS Position Paper on Anesthesia Assistants* (June 2006) that stipulates that the practice of anesthesia remain physician-based and that the delivery of anesthetic care may be delegated

to an AA. The CAS has described the scope of practice for the AA to include technical, clinical, administrative, education and orientation duties during each phase of the peri-operative period (see Attachment C-2). This role profile has been the basis for curriculum development for the three AA programs within Ontario.

The Working Group agreed that clear distinction should be made between the AA and Operating Room Respiratory Therapist (ORT) roles. Recognizing the additional training and education requirements for the AA, the role is most clearly differentiated based on the AA's capability to relieve an anesthesiologist during the stable phase of a general anesthetic. The AA role is differentiated from that of the NP-A in that the AA is largely focused on intra-operative care while the NP-A clinical role is focused on the pre and post operative aspects of the patient experience (see NP-A Role section below).

The Working Group also discussed the need for individuals who are fully trained and employed as an AA to assume the title Anesthesia Assistant and that documentation on the health record should reflect this title.

Recommendation 5: That the regulatory Colleges (CNO/CRTO) and the Ministry of Health and Long Term Care (MOHLTC) adopt the guiding principles and scope of practice for AAs as set out by the Canadian Anesthesiologists' Society.

Recommendation 6: That any practicing AA be required to adopt the title Anesthesia Assistant and note this on all health record documentation.

Recommendation 7: That the regulatory Colleges (CNO/CRTO) give consideration to protecting the title of Anesthesia Assistant (AA).

Nurse Practitioner Anesthesia (NP-A) Role

The NP is prepared to carry out advanced health assessments, order and interpret laboratory and other investigations, diagnose and manage select patient problems, including the prescriptions of both pharmacologic and non-pharmacologic therapies. The NP has a practice based on the principles of health promotion and disease prevention and provides comprehensive care to individuals and groups with acute, chronic and primary care health needs. The NP is an advanced practice nurse and as such is expected to engage in research, education and leadership internal to the employment agency and locally, provincially and nationally. A sample role description for the NP-A is included as Attachment C-3. How these domains can be best utilized within the ACT is currently being explored by the first 4 graduates of the University of Toronto Bloomberg Faculty of Nursing NP-A program.

The scope and standards of practice for NPs in Ontario are described with respect to the competencies required for NPs in Canada. The Canadian Nurse Practitioners *Core Competency Framework (2005)* and the Canadian Nurses Association *Advanced Nursing Practice: A National Framework (2008)* guide the development of role descriptions and competency assessments.

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Responsibilities

In the ACT Model, the AA is responsible to the Anesthesiologist. In a supervisory role, the Anesthesiologist is required to be immediately accessible to the AA during the provision of anesthesia care. In this regard, the Working Group recommends that guidelines be established to ensure that the supervisory role can be effectively carried out. To this end, 'immediately accessible' needs to be clearly defined such that in the course of care the AA can be adequately supervised and have the support of the Anesthesiologist whenever required. It is recognized that life-threatening circumstances can unexpectedly arise in what would otherwise be expected to be a stable clinical environment. In these circumstances, the judgment of the Anesthesiologist must be relied on to ensure that the best possible direction and delegation occurs in the circumstance. It is understood that the level of direct supervision will vary based on the anesthetic practice such that the highest level of availability be afforded the AA who is delegated to supervise general/major regional anesthesia and/or anesthesia care to children.

The NP-A is a new role with the first four students expected to graduate in 2010. How this role fits within an ACT will evolve over the next few years. A close collaboration between nursing and anesthesia will be necessary in order for the role to succeed. The Chief of Anesthesia and senior nursing leader will need to take the lead on the introduction and evaluation of this role into an ACT within their local settings.

Recommendation 8: That the Chief of Anesthesia be directly responsible for the introduction of AAs into the ACT and determine the extent of their clinical activities, as per CAS guidelines.

Recommendation 9: That the Chief of Anesthesia identifies the situations in which concurrent care of more than one patient by one Anesthesiologist assisted by AAs, will be appropriate in their local situation and have written guidelines for same.

Recommendation 10: That the Chief of Anesthesia ensure that whenever supervising the care provided by an AA, the Anesthesiologist must be 'on site', free of or immediately able to absent him/herself from patient care responsibilities, available for immediate communication by wireless phone or other similar technology and be personally able or have designated another anesthesiologist to immediately physically attend to each patient if needed.

Recommendation 11: That the Chief of Anesthesia identify the situation where an NP-A may be appropriate in their local situation and have direct responsibility for the introduction of the NP-A into the ACT and determine the extent of their clinical activities.

Regulatory Mechanism

Retention of affiliation and registration with the RRT or RN's professional College is essential at this time to allow access to the controlled acts required for the practice of an AA, as well as the other necessary aspects of self regulation. However, the practice of an AA is unique and requires an identity and title

distinct from an RRT or RN - this for both protection of the public and to support a professional identity for AAs.

The CAS has recognized the AA as the only non-physician professional that can be delegated to assume care of a patient while receiving anesthesia and has created a new Section to formally recognize and support this member of the Anesthesia Care Team.

Given that the AA is either a RN or RT by profession and as such is registered through either the College of Nurses of Ontario (CNO) or the College of Respiratory Therapists of Ontario (CRTO), the Working Group agreed that these colleges should remain the regulatory agencies for the AA at this time. The Working Group felt that consideration should be given to establishing a distinct professional regulatory body for the AA. In the interim, the CNO and the CRTO should be encouraged to consider designating a special AA category to foster collaboration in the parallel development of this role between both colleges.

The NP-A title is protected by the CNO. It is expected that with the development of a critical mass of NP-As working on ACT teams, that the CNO will be in a position to determine the appropriate entry to practice requirements for this evolving role. In the interim, all candidates are registered as NP-Adult or Pediatrics and will have completed a specialized program of study in anesthesia care.

Recommendation 12: That the AA be required to be a member in good standing of their provincial professional regulatory body and adhere to the requirements set out by their respective College (College of Nurses of Ontario or College of Respiratory Therapists of Ontario). At this time they will be governed by the requirements of their respective college and be accountable for ethical standards, quality assurance and continuing education.

Recommendation 13: That both the College of Nurses of Ontario and College of Respiratory Therapists of Ontario be encouraged to designate a common special category and protect the title of AA.

Recommendation 14: That the NP-A be required to be a member in good standing of their provincial professional regulatory body and adhere to the requirements set out by their College (College of Nurses of Ontario). At this time they will be governed by the requirements of their college and be accountable for ethical standards, quality assurance and continuing education.

Recommendation 15: That the College of Nurses of Ontario continue to collaborate with members of the profession, the health care sector, the Faculty of Nursing and the Department of Anesthesia at the University of Toronto to work towards a solution for registration and regulation of the NP Anesthesia within the Province of Ontario.

C4. Human Resources Issues

Compensation

The Working Group agreed that compensation for the AA should recognize the additional education and performance expectations associated with the role and should have a separately designated pay band from that of the RN or RT. Over time, other roles have evolved within the realm of patient care that are distinctly recognized for their skill and training required. For example, the role of Perfusionist is clearly delineated in those hospitals providing cardiac surgical care. At present, the pay range among AAs in Ontario is highly variable. This could impact the attractiveness of the role to existing RNs and RTs and contribute to recruitment challenges and staff dissatisfaction.

The chart below illustrates the range of salaries for the AA within the pilot sites in Ontario and compares these to the RN and RT pay band (Toronto and London). Perfusionist data is provided for comparative purposes. This information is based on a recent survey of ACT pilot hospitals.

Role		Salary Range	
		Low	High
Anesthesia Assistant 11 Hospitals Survey	Per Hour	\$27.060	\$48.015
	Annual Salary	\$52,767	\$93,629
Registered Nurse Sunnybrook	Per Hour	\$28.500	\$41.200
	Annual Salary	\$55,575	\$80,340
Respiratory Therapist Sunnybrook	Per Hour	\$30.611	\$38.975
	Annual Salary	\$59,691	\$76,001
Respiratory Therapist London	Per Hour	\$27.060	\$37.370
	Annual Salary	\$52,767	\$72,851
Perfusionist Sunnybrook	Per Hour	\$39.399	\$49.365
	Annual Salary	\$76,828	\$96,262
Perfusionist London	Per Hour	\$31.570	\$41.460
	Annual Salary	\$61,561	\$80,847

There is a wide spread of over \$20 per hour between the low end and upper end of hourly rates. This spread is approximately \$10 when the highest step in the pay grid is compared across hospitals. While the higher rates are provided within the Toronto and area hospitals, even within these hospitals there is as much as a \$5.50 dollar spread in hourly rates. Relative to the RN and RT salary bands, AAs are generally paid at a higher rate (exception London hospitals) however the extent to which their additional training and responsibilities are compensated is highly variable. This may in part be attributed to the pilot nature of the ACT in Ontario at present and that once the roles are confirmed and evaluated new pay structures may be deemed appropriate. As a point of comparison, the perfusionist rates were examined.

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Recommendation 16: That each hospital be required to develop a job profile for the AA role and evaluate the compensation for the AA based on the additional skill, training, responsibility and risk assumed in this role.

Employment Category

At present, AAs are in both union and non-union roles depending on the hospital location. While the Working Group identified a non-union designation as providing maximum flexibility, they concluded that the key was to ensure that there is appropriate portability and transferability among hospital sites within Ontario and that there is appropriate recognition for past seniority. The Working Group recognizes that the union/non-union designation is within the jurisdiction of each hospital. It was also recognized that existing union affiliation at different sites may preclude equal access for RTs and RNs to be trained and be employed as an AA. This was noted within one of the Phase 2 pilot sites where an agreement could not be reached with ONA and RNs could not participate in the AA program. This should be considered a detriment to the ACT program. The unique skills set that RTs and RNs brought to the program when summated lead to a more robust AA program.

Job Security

During the pilot evaluation it was noted that the issue of job security was of concern to AAs and Anesthesiologists. This is also a concern voiced by AAs and NP-As with the ACT Phase 2 teams. It is assumed that should funding support be extended beyond the pilot phase this will be sufficient to signal support of the model and provide a better sense of security in the continuance of the role within the ACT. It is recognized that the extent to which any given role is retained will depend on the circumstances of each hospital and cannot be assured.

Recruitment

The Working Group concluded that the ability to recruit and fill vacant positions is directly linked to access to education for training and clinical placement. At present there is a back-log of as many as 40 individuals at the Michener Institute who have completed the Basic AA program but who have not yet been offered access to the requisite Advanced AA program. Therefore they are not eligible to be employed as an AA. This is an essential issue that needs to be addressed in order for the ACT program to successfully proceed. The Michener Institute has indicated a readiness to address this backlog for the Advanced program. Fanshawe College has previously integrated Michener basic graduates into their semester two program and is prepared to continue do so.

The first step in the process will be to confirm who among the basic graduates is interested in proceeding to the next level of education and then fast tracking admission to either the Michener or Fanshawe programs. Michener could accommodate up to 16 students in their Advanced program at any time. Fanshawe's semester two program could accommodate up to 12 students starting as early as January 2010 however the number of external students would depend on residual capacity.

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Recruitment of a second cohort of NP-A students to U of T is expected to occur in 2010 with the approval of the program as an integrated Master of Nursing-Nurse Practitioner in Anesthesia Care Diploma. This program will run over two-and a half years, and as such will require a significant investment on the part of the student and employer to ensure successful completion. It is anticipated that this next NP-A cohort will include 10-12 students from across the province.

Recommendation 17: That following confirmation by the Michener Institute of the number of 'basic' students who desire to proceed with AA training, the Michener Institute and Fanshawe College each be funded by the MOHLTC and/or MOTCU to conduct advanced/semester two cohorts to address the backlog of 'basic' trainees requiring additional education and clinical placements.

Recommendation 18: That the MOHLTC identify funding models that will ensure the ongoing training and education of NP-As in the Province, thus generating the critical mass necessary to fully integrate into the delivery of Anesthesia services.

C5. Education

Education and Training Requirements

The Departments of Anesthesiology have played key roles in the development and delivery of education for both the AA and NP-As. At present there are three AA provincial programs (Algonquin College, Fanshawe College and Michener Institute) and one NP-A program at the Faculty of Nursing, University of Toronto.

The Working Group reviewed the entrance requirements and curriculum at both Fanshawe and Michener and found these to be very consistent albeit with some minor differences. The curriculum is based on the scope of practice set out in the CAS position paper. The current curriculum including distance learning options provides a strong foundation on which to build. In comparing the initial cohorts of students to those entering the programs today, it is noted that current applicants tend to have less experience with resulting impact on the learning needs of these students. The Working Group determined that a minimum entrance requirement should be maintained at each educational institution. Currently Fanshawe requires 4000 hours of work experience within the past five years as well as a pre-admission test whereas Michener requires two years of critical care (ICU, NICU, ER) experience in the last four years. The preference of the Working Group was to have critical care experience that could include ICU, NICU, ER, OR and/or PACU.

Recommendation 19: That each educational institution set a minimum standard for entry to the AA program as an RN or RT with a minimum of 4000 hours of critical care experience within the last five years.

The Working Group discussed the current approach of having a 'basic' and 'advanced' study component at the Michener Institute. Until such time as the 'advanced' component and clinical preceptorship is completed the student cannot practice as an AA. The 'basic' program is intended as an entry requirement for the 'advanced' program. Confusion can be created by the two terms when individuals indicate they have completed an AA course, which may only be the 'basic' entry program of study. Only those individuals who have successfully completed the full advanced AA program (including the clinical program) can be employed as an AA. Consideration should be given by the Michener to eliminating this potential source of confusion for level of training by modifying its nomenclature to remove the terms basic and advanced to describe its courses.

Fanshawe College provides a three semester program of study for the AA, the third semester being the clinical component. Semester one and two are comparable to the Michener Basic and Advanced program and are offered in consecutive semesters from September to April. The clinical program is completed in the subsequent nine months. Algonquin College has recently introduced a similar program of three semesters of study.

Going forward, a consolidated program of study should be considered. This would include the preclinical semesters to be completed over the course of 12 months of study. With this approach, study would occur over a more concentrated period of time, there would be a commitment to complete the full program of study at the outset and there would be fewer students lost to follow-up. Requiring the clinical component to be completed within a further six months will ensure that the clinical preceptorship is completed in a timelier manner than is currently the case. The full program of study could then be followed by a common written exam and OSCE (objective structured clinical examination) simulation assessment. A standardized final exam is not currently part of the training program and consideration should be given to adding this to the required education program. At present, work is underway within the AA section of the CAS to develop a standardized AA curriculum and national exam process.

Recommendation 20: That each educational institution adopt a consolidated program of study with two didactic semesters [semester 1 (basic equivalent) semester 2 (advanced equivalent)] to be completed over a 12 month period. The clinical component (semester 3) should be completed within the following 6 months, followed by a common final written exam and simulation assessment.

The Working Group identified a number of approaches to improving the current educational experience. The clinical learning could be enhanced with additional exposure to a range of specialties (e.g. Obstetrics and Pediatrics) and clinical settings. This will not only increase the portability of the AA but will ensure a more objective performance assessment as students will engage in learning outside their home hospital. The participation of additional community hospitals in the training of new students will be essential to this strategy and the challenge of making this an attractive proposition was noted. The benefit of inter-

hospital as well as inter-professional training was noted and opportunities to advance these approaches should be considered in future planning.

Recommendation 21: That each educational institution enhance the existing clinical education component of training by extending the current 12 week preceptorship (minimum 450 clinical hours) by adding additional electives, rotation among specialties and a range of clinical learning locations (teaching, community) beyond the student's home/sponsoring hospital.

The NP-A is a new member of the ACT. The Bloomberg Faculty of Nursing in collaboration with the Department of Anesthesia at the University of Toronto has offered an inaugural course, which commenced in the spring of 2009. The four students in this first cohort graduating in 2010 have previously completed Master of Nursing-NP programs in Ontario and have experience working as NPs in acute care hospitals. The Faculty of Nursing is seeking University approvals for a new Master of Nursing-NP program with a concurrent Diploma in Anesthesia care. The second NP-A cohort is expected to enroll students in 2010.

The NP-A coursework (which includes e-learning, face to face sessions, simulation), includes 700 hours of supervised clinical experience. The students also complete the 'basic' AA program at the Michener Institute. The four students are currently in their clinical phase and are expected to complete the course by January 2010. This course consists of a specific program of study of patients along the continuum of anesthesia care including pre-operative, peri-operative, post-operative and in the clinical care of patients in pain.

Recommendation 22: That the ongoing collaboration between the Bloomberg Faculty of Nursing and Department of Anesthesia at the University of Toronto continue in the development and delivery of NP-A education.

Future Demand

In considering the future demand for anesthesia services and the training requirements for the ACT, reference was made to three key reports that have been authored in the last decade:

- § *"A Physician Workforce Planning Model for the Specialty of Anesthesia"* authored by Eva Ryten in 2000 for the Association of Canadian University Departments of Anesthesia,
- § *"Review of Anesthesia Services in Academic Health Science Centres (AHSC)"* undertaken by Dr. John Marshall (2003) and updated in 2006
- § *"Transforming the Delivery of Operative Anesthesia Services in Ontario"*, a report of the Operative Anesthesia Committee (2006) chaired by Dr. Jack Kitts.

The Ryten report employed a detailed methodology to forecast anesthesia demand based on billing data for the Province of Quebec (1999/2000). Population projections for age and sex through to 2016 were generalized for each province. Based on the Ryten Report, the province will require 1,100 FTE

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Anesthesiologists by 2016. This report illustrates the significant differences between ‘head count’ and FTE. Approximately 60% of anesthesiologists practice in academic centres with a requirement for participation in teaching and/or research and this additional responsibility precludes full time participation in patient care. In addition, some anesthesiologists have limited their hours of practice as a result of administrative duties and/or lifestyle. It is therefore difficult to relate the current supply by ‘head count’ to the FTE demand. Ryten reported that as of 2000 there was a shortfall of 114 FTE anesthesiologists in Ontario.

Unfortunately, the data within the Ryten report has not been updated since it was authored in 2000. The report in all likelihood underestimates need given recent trends in anesthesia. The increasing demand for out-of-OR services (e.g. insertion/removal of catheters, diagnostic imaging and endoscopy sedation), pain control and management, non-surgical obstetrical anesthesia and after-hours care is evident in current practice environments.

The report of the Operative Anesthesia Committee (2006) included findings from Dr. Marshall’s update of his 2003 report. Two points of particular interest were noted. First, it appears the anesthesiologist shortfall across Ontario AHSCs did not change significantly between February 2003 and November 2005. This is due to an almost parallel increase in the volume of services (expressed as Daily Anesthetic Locations) and the general increase in FTE anesthesiologists, 35 and 42 respectively. This reflects the pent-up demand for services met by the increasing staff complement. Second, the use of other health professionals to assist in the provision of anesthesia services had grown significantly in the same period. In February 2003, these individuals represented approximately six anesthesia FTEs, while in November 2005, they represented almost 16 FTEs, a growth of 164%. These individuals contributed significantly to reducing the anesthesia shortfall. Without anesthesia assistants and registered nurses (RNs), the anesthesiology shortage would have been 65 FTE instead of the 55 FTE.

In an effort to relate demand to an understanding of the supply of anesthesiologist, the Working Group referenced the Ontario Physician Human Resources Data Centre (OPHRDC) Active Physician Registry 2008. This registry indicates that there are 1,102 licensed fellowship-trained Anesthesiologists in Ontario. This number would reflect many fewer FTE given the academic issues noted above and the understanding that some are not fully active. The following table provides an estimate of supply based on the number of anesthesiologists and residents reported in the 2008 OPHRDC. This chart represents a ‘head count’ and does not adjust for part-time and/or academic commitments. This forecast is based on the assumptions listed below.

		2008	2009	2010	2011	2012	2013	2014
1	Fellowship Trained Anesthesiologists	1102						
2	Estimate of Practicing Anesthesiologists	1058						
3	Residents in Ontario	222						
4	Residents Graduate in Ontario		45	37	45	53	49	47
5	Annual Attrition (Retirement/Relocation)		33	32	32	33	33	34

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		2008	2009	2010	2011	2012	2013	2014
6	Total Anesthesiologists		1070	1075	1087	1108	1124	1137

This table indicates that the 'head count' supply of practicing anesthesiologists in Ontario is forecast to reach 1,137 in the next five years. Given the factors previously outlined, the Working Group concluded that the supply of Anesthesiologists is not expected to keep pace with demand. At present, the ACT project supports 64.0 AA and 3.0 NP FTE positions. The Working Group concluded that 200 AAs would be a reasonable starting point for day time support recognizing that additional AAs would be required in the future. This would mean an additional 137 ACT team members will need to be added in the coming years to meet the increasing demand for services in settings beyond the existing ACT pilot sites.

The number of AA students and graduates is summarized in the table below.

AA Students	Michener	Fanshawe	Algonquin	Total
Graduated	80	2		82
Clinical Placements	24	6		30
Placements Pending	3			3
In Class		6 (estimate)	11	17
Total by 2010/11	107	14	11	132
Advanced Program Capacity	32 (16x2)	8	To be determined	40
Total by 2011/12	139	22	11	172
Eligible for Advanced	53			
Advanced Applicants	29			
Basic Applicants	30			

The Michener Institute in Toronto has graduated 80 fully trained AAs to date. In addition, there are another 24 students in their clinical placements at present with three additional ready to start, mainly students from the 2009 ACT Phase 2 program. Based on current enrollment, 107 could complete their training by the end of 2010/11. At present Michener has the capacity to graduate two cohorts of 32 students annually. There are another 53 students who have completed the basic program and are eligible to proceed to the advanced program, 29 of these students have applied and are on the wait list for an advanced program (24 are eligible to proceed to the advanced program but have not applied). There are a further 30 applicants for the Basic program that is currently on hold.

Fanshawe College in London has graduated one cohort in its first year (2008/09), two of which are now AAs with six still in clinical placement. A second cohort (2009/10) has begun with two students currently enrolled and potential for four to six more to join by January 2011 (having completed Michener 'basic' program). At present, the College has the capacity to graduate 12 students per year.

Algonquin College in Ottawa has introduced a training program to address the learning needs in the eastern section of the province. This program has been developed with the support of the Ottawa Hospital and the Department of Anesthesia and funded through the Ministry of Training, Colleges and

Universities. The first class of 11 students was enrolled in September 2009. The intent is for this program to address the immediate needs of the Ottawa Hospital and in the future attract students from the eastern region of the province. The difficulty with traveling to a college in London or Toronto is noted. The curriculum was developed in partnership with Fanshawe College and is based on the CAS core competencies. The education program and admission criteria are equivalent to Michener and Fanshawe.

Across the province, the total of AAs projected to have graduated by the end of 2010/11 would be 132. This leaves a deficit of 68 AAs at the end of 2010/11. This could be addressed through two cohorts at Michener (32) and one at Fanshawe (8) per year for two years to meet the estimated need of 200 graduates by the end of 2011/12.

Estimates for attrition and retirement would also need to be considered in determining the number of training programs required in subsequent years. The 'break point' in completion of the educational requirements is access to clinical placement. Additional time may be required to complete this final semester should ready access to a clinical environment not be achieved. Other factors will impact completion time such as maternity/paternity leaves. Each educational institution will have processes for reviewing these circumstances and awarding extension for completion of educational requirements. Given the future training requirements, the Working Group acknowledged that there is a place for three AA education programs across the province.

Recommendation 23: That the MOHLTC and MOTCU fund existing training programs at the Michener Institute, Fanshawe College and Algonquin College in providing up to 50 student enrollments per year over the next two years in addition to addressing the existing backlog (see recommendation 17).

The Working Group also discussed the International Medical Graduate (IMG) as a potential AA. At present, anyone who is to become an AA requires association with a professional regulatory body. The CPSO has not indicated willingness to regulate IMGs working in the capacity of an AA rather than as a physician. The response to the request of Physician Assistants to be regulated by CPSO is pending. The IMG would need to meet the entry requirements and equivalency expectations of an existing professional body in order to qualify as an AA. This would also be true of advanced practice paramedics, other similar positions or individuals classified as an AA in other provinces.

The contribution of the NP-A to the care of patients will become clearer with the introduction of the role in a variety of practice settings over the next few years. It is difficult to assess both clinical impact and ongoing requirements for training with only four graduates entering clinical practice in ACTs in 2010. A second cohort will provide added numbers of NP-As across practice settings and will be important to help define the unique contributions and competencies of this member of the ACT. Evaluation of the role will inform future needs.

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Maintenance of Competency

As with all regulated health professionals, maintenance of competency requirements would be designated by the appropriate College and be supported through opportunities for continuing education. Professional portfolios would be maintained that detail the ongoing professional development attained by each AA. The Working Group advised that standards for continuing education could also be addressed within the CAS AA section. This group is currently working on providing a standardized template for education for AAs across Canada and could be a forum to address and provide continuing education and certification for AAs. A number of hospitals and educational institutions offer within their existing training facilities ongoing simulation exercises and testing for AAs at all sites and this too could be an option for practicing AA's to maintain their competency and test their performance. The Working Group concluded that it is important that there be continuing education for the AA and that the CAS AA section be looked to for guidance on how expectations should be established.

Recommendation 24: That the AA section of the CAS provides guidance as to what expectations should be established for mandatory continuing education for the AA.

C6. Financial Implication

The Working Group supported the view that the cost of supporting the ongoing education requirements for the AA should be a shared responsibility of the Ministry of Training, Colleges and Universities, the Ministry of Health and Long Term Care and the student (and/or their sponsoring hospital). It was also agreed that the ACT model should be implemented in a phased approach across the province. This will allow training programs to graduate up to a provincial total of 50 AA students per year for two years initially commencing in 2010/11. The fee structure at each college is comparable. In most cases, student tuition support and/or time absent is provided by the supporting hospital. In the future, this may not be feasible and students will be expected to contribute to the cost of tuition.

The financial implication of the NP-A within the ACT, will be more apparent once further cohorts have completed training and demonstrated their clinical role. The first cohort has received support for tuition and salary from the MOHLTC. It is expected the next cohort will be enrolled in a Ministry of Training, Colleges and Universities supported Master of Nursing program. Students will also be expected to self-fund, at least in part, as other Nurse Practitioner students do across the province.

Attachment C-1: ACT Professional Practice/Education Working Group Terms of Reference

Purpose

The ACT Professional Practice/Education Working Group is one of several teams established by the ACT Implementation Advisory Committee (IAC) to assist in developing options and recommendations to sustain the ACT model going forward. The purpose of the ACT Professional Practice/Education Working Group is to develop recommendations as to the scope of the AA and NP-A role, professional standards and regulatory requirements and training requirements including entry to practice and continuing education standards. In developing options, the Task Team will reference the report 'ACT Think Tank Summary of Deliberations June 2009' and draw on the expert knowledge of the working group participants.

Responsibilities

The key responsibilities of the ACT Professional Practice/Education Working Group include:

1. Identify the key elements of the ACT practice model;
2. Determine the extent to which standardization of models can be achieved, considering the needs of urban/rural, northern and academic centres;
3. Define the scope of practice for members of the ACT team, differentiating the roles of professionals that routinely practice in similar settings;
4. Address the challenges associated with unionized environments, seniority and job security;
5. Identify AA regulatory structure including consideration of the appropriate regulatory authorities and key elements of performance standards and competencies;
6. Identify AA training needs including educational entrance, entry-to-practice requirements and maintenance of competency;
7. Determine future demand for educational programs including the number of teaching sites and identify financial implications for educational institutions, hospitals and AA candidates;
8. Formulate recommendations and provide a written report to the AIC.

Membership

Chair: Gerry O'Leary (UHN)

Members:	Norm Buckley (McMaster)	Keith Rose (Project Lead)
	Eric Goldszmidt (Sinai)	Jim Watson (SJHC)
	Krista Keilty (UofT)	Barbara Willis (Consultant)
	Claire Middleton (UHN)	Karen Winter (RVH)
	Patrick Nellis (UHN)	Homer Yang (Ottawa)
	Sydney Redpath (Michener)	

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Attachment C-2: CAS Position Paper on Anesthesia Assistants

Background

Tremendous advances in the practice of anesthesiology have taken place over the past two decades as the result of developments in the education and training of anesthesiologists; an expanded knowledge base; and remarkable innovations in equipment, technology, and pharmacotherapeutics. More complex surgical procedures are now conducted on a patient population that is older and at higher risk, often with significant medical co-morbidities. The increasing surgical load imposes severe strains on the ability of anesthesiologists to meet their clinical and academic obligations. The Canadian Anesthesiologists' Society (CAS) is searching for ways to improve the efficiency of anesthesiologists while maintaining or enhancing the quality of care. Given this background, the concept of anesthesia assistants (AAs) is endorsed by the CAS. As described in this paper, the CAS welcomes the addition of competent and well trained healthcare professionals to assist in the delivery of anesthetic care in the operating room. A model of an anesthesia care team (ACT) already exists in the province of Québec, where AAs practice under clearly defined legal status in the code of professions. Elsewhere, anesthesia care teams have been proposed, training programs established, and AAs hired without a standard definition of their scope of practice and curriculum for training. The CAS wishes to clarify its position on those issues.

Initial Premises

- § Anesthesiology in Canada is practiced by specially trained physicians.
- § Anesthesia assistants are specially trained healthcare professionals who execute orders prescribed by anesthesiologists.
- § Anesthesia assistants work under the direction and supervision of anesthesiologists.

Guiding Principles

The CAS Guidelines to the Practice of Anesthesia state that:

"The independent practice of anesthesia is a specialized field of medicine. As such, it should be practiced by physicians with appropriate training in anesthesia."

- § The CAS is of the firm view that ensuring patient safety and optimal delivery of patient care in the peri-operative setting requires that the practice of anesthesia remain physician-based. In this context, the CAS supports the role of AAs in providing technical support to improve the efficiency of anesthetic care delivery. The wider introduction of AAs in Canadian anesthesia departments should not be made with the remote objective of introducing non-physician independent practice of anesthesia.
- § Canadian anesthesiologists are proud of their high standard of clinical care and their reputation for the provision of safe anesthesia. One of the determinants of safe administration of anesthesia is the physician-to-patient ratio. On that issue, the current CAS guidelines state: *"Simultaneous administration of general, spinal, epidural or other major regional anesthesia by one anesthesiologist for concurrent diagnostic or therapeutic procedures on more than one patient is unacceptable."*
- § Any modification in clinical practice in contradiction to the CAS guidelines must be introduced with caution and careful evaluation of the outcome to ensure that patient safety is not jeopardized. The

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CAS recognizes that the ACT concept, with the specific addition of competent AAs, should be considered as one of the potential solutions for improving Canadians' access to surgical services. As new cohorts of AA graduates become available to play a role in the delivery of anesthetic care, the CAS will evaluate, with the safety of patients and quality of care as the primary principles in mind, the pertinence of revisiting its guidelines.

- § The introduction of AAs into the ACT and the extent of their clinical activities should be kept under the direct responsibility of anesthesiologists at the hospital, regional, and/or provincial levels.

Anesthesia Assistants: Training and Education

The CAS recognizes that many educational programs are currently emerging in Canada, and that professionals from various backgrounds are entitled to function as AAs. The educational background for becoming an AA must be clearly defined and standardized. The theoretical knowledge and course curriculum should cover pertinent areas of physiology, pharmacology, and technical aspects of anesthesia. A standard amount of clinical exposure during training should be defined. Existing organizations, such as the Canadian Society of Respiratory Therapists, l'Ordre Professionnel des Inhalothérapeutes du Québec, the Operating Room Nurses Association of Canada, the National Association of Perianesthesia Nurses of Canada, and the Canadian Nurses Association should be consulted to agree on the specific training needed.

Anesthesiologists must have major involvement in the curriculum design course content, teaching, and assessment of students. There should be direct links between the AA education programs, the CAS, and university anesthesia departments. Existing course content should be evaluated by the Allied Health Committee of the CAS and modified to ensure that the skills required are included. Such education programs constitute additional training and should be recognized by the award of a diploma.

Anesthesia Assistants: Scope of Practice

Anesthesiologists are involved in patient care pre-, intra- and postoperatively. During each phase of the peri-operative period, anesthesiologists are assisted by dedicated and highly trained healthcare professionals. Anesthesia assistants, as defined by the training and scope of practice outlined in this document, are specially trained professionals whose activity should focus upon assisting the anesthesiologist in the delivery of patient care during the intra-operative and immediate peri-operative period. The AA's scope of practice is as follows.

Technical Duties

The anesthesia assistant shall:

1. Set up, test, calibrate, and operate physiologic monitors, such as anesthesia workstations, intubation/airway devices, fibre-optic endoscopes, physiologic monitors, and infusion devices.
 - Perform equipment checks as indicated and maintain records of problems to ensure safety of equipment.
 - Replace and change anesthetic equipment supplies as per routine maintenance schedule.
 - Maintain a stock of drug supplies and equipment at anesthesia workstations.
2. Troubleshoot anesthetic equipment.

- Correct problems discovered and/or follow up with biomedical engineering technicians or service representative.
- 3. Monitor trace gas pollution levels.
- 4. Maintain and stock pediatric, difficult intubation, hemodynamic, and malignant hyperthermia carts.
- 5. Participate in the operating room infection control program by performing duties such as maintaining cleanliness in anesthetic equipment in accordance with quality assurance programs. Maintain measures, according to established procedures, to minimize operating room pollution.

Clinical Duties

The anesthesia assistant shall:

1. Assist in the preparation of the patient for surgery and perform preoperative assessments as requested by the anesthesiologist.
2. Assist with or perform the insertion of devices such as nasogastric tubes and intravenous and intra-arterial catheters.
3. Assist with the insertion of Swan Ganz catheters and central venous catheters.
4. Assist with regional anesthesia procedures.
5. Assist with or perform airway management, including insertion of laryngeal masks, tracheal intubation, and mask ventilation.
6. Assist in the positioning of the patient under the direction of the anesthesiologist.
7. Adjust therapies (e.g., ventilation, temperature control devices, etc.) as directed by the anesthesiologist.
8. Administer prescribed pharmacological agents to the patient under the direction of the attending anesthesiologist, observing for side effects and efficacy of treatment during anesthesia to ensure the patient responds appropriately.
9. Assess the patient's physiological status during anesthesia by performing duties such as monitoring vital signs and anesthetic gases and advising the anesthesiologist of the patient's status.
10. Assist at emergence from anesthesia by performing duties such as aspirating secretions from the trachea and pharynx, removing laryngeal mask airways, and tracheal extubation of the patient. Remove monitoring equipment after surgery.
11. Assist with the transfer of ventilated and/or anesthetized patients between areas of the hospital as required.
12. Transfer postoperative patients to the post-anesthesia care unit under the direction of the anesthesiologist.
13. Monitor patient progress in the post-anesthesia care unit, update anesthesia monitoring records, and report patient status to the anesthesiologist, as requested.
14. Provide diagnostic data for the anesthesiologist by performing duties such as blood sampling and analysis, pulmonary functioning testing, end tidal CO₂ monitoring, pulse oximetry, and transcutaneous monitoring.
15. Prepare fibre-optic bronchoscopes and other equipment as required, and assist the anesthesiologist during bronchoscopy with equipment setup, preparation of and instillation of medication, and sample procurement.
16. Assist the anesthesiologist with difficult intubations.
17. Assist the anesthesiologist with cases in locations outside of the operating room.

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18. Respond to cardiac arrests in the operating room, post-anesthetic care unit, or other locations, according to hospital procedures and policies.

Administrative Duties

The anesthesia assistant shall:

1. Establish and conduct a preventive maintenance program.
2. In conjunction with the anesthesiology and biomedical engineering departments, maintain a variety of anesthetic equipment by performing duties such as receiving and assessing equipment, testing and identifying malfunctions, and determining whether repairs should be made on site or equipment returned to the vendor. Carry out minor maintenance following manufacturer's and Canadian Standards Association guidelines and verify vendor repairs to ensure equipment is operating in a safe and effective manner.
3. Where appropriate, meet with medical equipment and pharmacological sales representatives to organize trials and evaluations of new equipment and drugs according to hospital protocols. Gather and collate feedback and participate in purchase decisions.
4. Arrange and coordinate servicing and repair of equipment.
5. Communicate with and act as a liaison with supply companies.
6. Remain current with available supplies and equipment and make recommendations for changes/improvements.
7. Maintain supply inventory.
8. Source out supplies and equipment.
9. Assist the department of anesthesia with capital equipment budget by conducting equipment needs assessments and research.
10. Assist in quality assurance activities.

Education and Orientation

The anesthesia assistant shall:

1. Participate in the orientation of new operating room and post-anesthetic care unit staff and students.
2. Participate in teaching of students.
3. Participate in in-service sessions for nursing staff and physicians on new equipment and supplies.
4. Attend training programs as required.

Attachment C-3: Sample Role Description NP-Anesthesia Care

Summary of Main Function and Purpose of Job:

The NP-A in Anesthesia Care uses knowledge of clinical expertise and systems of care to drive the expert nursing practice in pursuit of the highest standard of anesthesia care. Provides leadership and promotes excellence in anesthesia nursing care through the role competencies of expert practice, education, consultation, research and leader/change agent. Provides advanced nursing practice for patients requiring anesthesia care. Is a member of the health care team, and serves as resource for select patient populations/community. Uses clinical expertise and in-depth knowledge of families, disease processes and anesthesia-related issues to evaluate clinical practice. Responsible for coordinating the interdisciplinary plan of care for select patient population(s). Integrates research into practice. Creates, utilizes and/or disseminates new knowledge.

Responsibilities include:

1. Practice

A. Direct delivery of Advanced Nursing Care:

The NP-A in Anesthesia Care will provide direct advanced nursing practice to a select group of clients/families who require assessment, diagnosis, treatment and evaluation of complex anesthesia-related issues. NP-A practice areas and patient populations include but are not limited to: pre-operative care, postoperative care (recovery room), surgical units, diagnostic imaging areas, patients requiring sedation, and patients requiring pain management.

- § Performs and documents a comprehensive or focused health assessment, including physical examination as appropriate.
- § Orders laboratory and/or diagnostic imaging tests and other tests as appropriate
- § Develops a differential diagnosis and consults with other health professional on the diagnosis as appropriate
- § Decides on a plan of care
- § Initiates interventions such as ordering of drugs and procedures as appropriate (based on Medical Directives as required)
- § Initiates appropriate referrals to other members of the health care team based on assessment and referral guidelines.
- § Develops the nursing plan in collaboration with the family, nursing colleagues and other interdisciplinary health care team members.
- § Facilitates the development of the interdisciplinary plan of care.
- § Documents on the interdisciplinary plan of care.
- § Evaluates plan of care and revises plan as necessary.

B. Indirect care delivery:

The NP-A in Anesthesia care will use extensive clinical expertise, consultation, research, education and leadership skills to empower the primary care team to provide expert client care.

- § Provides standards to assist in the key areas of anesthesia care
- § Assist in development of a nursing plan of care addressing clients' concerns
- § Helps to identify creative strategies for implementing nursing care
- § Acts as a advisor for the interdisciplinary healthcare team
- § Identifies the need for Medical directives to enhance nursing practice and timely client care
- § Guides decision making in complex clinical situations
- § In collaboration with nursing colleagues, ensures the nursing plan is responsive to and supportive of the individualized needs of the patient/family.
- § In collaboration with the patient/family and other health care team members, evaluates and revises the interdisciplinary plan of care.
- § In collaboration with nursing colleagues and nursing management, devises methodologies to evaluate nursing practice and standards of care
- § Communicates internally and externally to facilitate patient management in all settings, such as case reviews.
- § Provides patient/family education and counseling.
- § Participates in the coordination of complex discharge planning.

2. CONSULTATION

- § Provides consultation to health care team regarding clinical situations (within area of expertise).
- § Role models expert nursing practice to nurse colleagues and members of the health care team.
- § Acts as a resource for addressing ethical issues, ethical decision making.
- § Provides internal and external consultation services for health care agency
- § Provides informal/formal consultation to Senior Nursing representative, agency and other organizations.
- § Provides leadership in developing and applying legislation.
- § Provides consultation to the community to collaboratively develop standards, policies and procedures to ensure seamless care for patients and families.

3. RESEARCH/EDUCATION

- § Provides leadership in identifying nursing research opportunities.
- § Develops and/or participates in, and promotes research.
- § Provides leadership regarding evidence-based nursing practice and integrates research into setting patient care standards/guidelines/protocols.
- § Disseminates research and clinical finding through publications, presentations, seminars, etc.
- § Provides/promotes educational programs for development of patient/families and health care practitioners within the agency and beyond.

- § Utilizes informal learning opportunities to educate nursing colleagues and health team members.
- § Promotes development, critical analysis and refinement of professional nursing practice.
- § Participates in the academic community by providing education, clinical supervision and mentorship through university cross-appointment.

4. LEADERSHIP/ORGANIZATIONAL RESPONSIBILITIES

- § Provides leadership for establishing and implementing goals related to nursing practice.
- § Participates in decision-making process regarding decisions which impact on nursing practice at all levels.
- § Acts as a clinical mentor and role model.
- § Lobbies for development and changes in health care delivery, with a specific focus on anesthesia care issues.
- § Contributes to strategic planning.
- § Accountable to align activities and performance with strategic goals and objectives of specific health care agency.
- § Advocates to influence health care practice, policy and outcomes.
- § Is accountable for own learning and participates in continuing education activities.
- § Monitors and ensures the quality of health care practices at specific health care agency and beyond by providing leadership in the establishment of standards, policies and procedures.
- § Anticipates future changes (needs, technology, standards) and recommends appropriate changes/implications

Minimum Requirements:

Minimum Education Required: Master's of Nursing with NP-A education.

Registration Required: Current license with College of Nurses of Ontario

Previous Job-Related Experience Required: Clinical nursing focus and expertise in critical care and pain management. Three to 5 years clinical nursing experience.

Special Skills/Aptitudes Required: Change agent, problem solver, critical thinker, team and consensus builder, role model, innovator, visionary, public speaker. Works well independently and as a leader in teams

* Incorporating College of Nurses of Ontario Practice Standards for Nurse Practitioners, 2009 and Canadian Nurses Association Advanced Nursing Practice National Framework, 2008

Appendix D: Report of the Performance Measurement Working Group

D1. Introduction

The ACT Performance Measurement Working Group is one of three teams established by the ACT Implementation Advisory Committee (IAC) to assist in developing options and recommendations to sustain the ACT model going forward. The purpose of the ACT Performance Measurement Working Group was to develop a methodology to measure, monitor and report on the impact and outcomes of the ACT model. The key objective of the measurement system is to ensure the provision of safe anesthesia practices now and into the future. Terms of reference and membership of the Working Group are included as Attachment D-1.

In developing recommendations, the working group made reference to the '*Anesthesia Care Team Post-Implementation Evaluation Report (August 2009)*' as well as the report '*ACT Think Tank Summary of Deliberations June 2009*'. In addition, materials and expert opinion were provided by working group participants. The following report identifies the key findings and recommendations of the working group.

D2. Approach

The primary objective in measuring the ongoing performance of the ACT is to ensure the safety of the model and mitigate any real or potential risk. In addition, information on access to care, patient centeredness and efficiency will be essential to providing key stakeholders such as the Ministry of Health and Long Term Care (MOHLTC) with assurances of the continued success of the ACT model.

The Working Group identified the need for a framework for best practice in order to effectively measure performance. As the ACT has been a series of pilot initiatives to date, best practices are still evolving. Measurement to date has been a 'before and after' design methodology within the pilot sites. Going forward, it will be important to develop a measurement and reporting methodology that evolves as new information on best practice is established. In the meantime, measurement should proceed.

An overview of the ACT Post Implementation Evaluation Report highlighted the results from Phase 1. A key learning was the need to have standardized definitions and methodology for data collection. Consistency in reporting can be difficult to achieve and will be a challenge for ongoing performance measurement.

The following summarizes the key principles of a measurement system for ACT:

- § Meaningful performance indicators that address the key objectives of safety, improved access, patient centeredness, efficiency;
- § Clear definitions for indicators;
- § Data standards and consistent methodology for data capture;
- § Easily administered data collection and reporting processes;
- § Applicable to all participating hospitals;

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- § Conducive to large population sizes;
- § Minimize time lag between practice and available data to report, and
- § Minimize self reporting and leverage existing administrative data bases and mandatory reporting practices.

D3. Governance and Accountability

The Working Group discussed the successes of other measurement practices that have been adopted within the province such as the Cardiac Care Network (CCN). It was agreed that a provincial governance body should be identified to assume the role of oversight for the ACT. The MOHLTC may choose to assign oversight to a specific branch of the Ministry and appoint a voluntary advisory group. This could be a future role for the ACT Implementation Advisory Committee as this group has broad representation from the key stakeholder groups including hospitals, MOHLTC, OMA, Anesthesiologists, Anesthesia Assistants and education facilities. An alternate approach would be for the MOHLTC to assign the ACT oversight to an existing provincial agency. Given the evolving role of Cancer Care Ontario (CCO) this organization may be appropriate for this purpose.

In order to support the work of the governance body, administrative resources and contract services would likely be necessary especially in support of specific aspects of the performance measurement plan (see below). A modest budget, to support administrative assistance, professional consultation and meeting costs, of approximately \$150,000 per year would need to be established.

Recommendation 1: That the MOHLTC appoint a governance body to provide ongoing oversight to the implementation and maintenance of the ACT model and that the mandate of this group includes regular review of performance reports.

The Working Group agreed that a minimum data set needs to be established for ACT participating hospitals. Data would be monitored internally for quality, decision support and performance management and reported to the centralized body to develop a provincial perspective on performance. In addition, the Working Group identified the need for each participating hospital to be accountable for ensuring performance practices are established and monitored e.g. critical incident reporting, adherence to WHO surgical checklist etc. and that standards of practice are met e.g. CAS Guidelines.

Recommendation 2: That the MOHLTC establish accountability agreements with each ACT participating hospitals that include assurances of compliance in establishing and monitoring performance standards and reporting of performance indicators. These data bases would be subject to periodic audit for accuracy and consistency with established standards for data collection and reporting.

The Working Group reviewed the *ACT Post Implementation Evaluation Report* of phase 1 pilot sites and considered the results in determining the key elements of a sustainable performance measurement

process. It was acknowledged that as the phase 2 evaluation study evolves, there will be further insight into determining the extent to which performance measures should be considered going forward.

The Working Group considered the extent to which ACT reports should be made publically available. It was agreed that an ACT internet site should be available where report cards could be posted. This could be achieved by linking to existing web sites e.g. Institute for Clinical Evaluative Sciences (ICES) or establishing a specific site for the ACT. The web site should be sponsored and maintain by the ACT oversight body. This will require limited infrastructure support.

D4. Performance Measurement Framework

Consistent with the principles noted previously, the Working Group agreed that performance measurement processes should build on existing data bases and rely on existing ongoing measurement requirements to the extent possible. This will minimize the reporting burden on participating hospitals and reduce the demand and infrastructure associated with the oversight body. The Working Group agreed that a performance measurement system should focus on the following areas:

Safety. The Working Group is proposing that an ongoing safety reporting study be undertaken in order to evaluate the continued safety of the ACT model in the peri-operative setting. The data sources to be used in this ongoing study would be population-based administrative healthcare databases housed at the Institute for Clinical Evaluative Sciences (ICES). These data sources would include Canadian Institute for Health Information (CIHI) Discharge Abstract Database (DAD) and Ontario Health Insurance Plan (OHIP) billings. Outcomes would be assessed within specific homogeneous groups of surgical procedures across a range of low to high-risk procedures. Procedures would also be stratified by urgency (elective versus non-elective) and timing. In addition, the care of non-operative singleton live births would be assessed. Several domains of peri-operative care would be assessed using these data sources.

- 1) Safety – indicators would include mortality, hospital length of stay, intensive care admission, need for mechanical ventilation, new need for renal dialysis, postoperative stroke, blood product administration and hospital readmission with thirty days of surgery
- 2) Access to Care – indicators would include use of regional anesthesia for surgical procedures and labour epidural analgesia for childbirth. It is hypothesized that the ACT model will improve access to these desired procedures.
- 3) Efficiency – measures would be time from hospital admission to surgical repair for hip fractures. It is hypothesized that increased operating efficiency from the ACT model will help decrease the time from admission to surgery for these procedures.

The Safety Reporting Study would measure rates of these safety, access-to-care and efficiency indicators at Ontario hospitals over time and compare them to the timing of the ACT implementation. Provincial level reporting would be developed annually with apparent outliers

being explored in more detail. These reports would be presented to the ACT governing body and made available to participating hospitals.

Efficiency. As part of the provincial wait time strategy, the Surgical Efficiency Targets Program (SETP) was established to improve surgical management by providing managers with the ability to identify delays, and subsequently decrease those delays so that patient anxieties due to surgical delay are reduced and quality of patient care is improved. Having reviewed the SETP indicators, the Working Group agreed that these performance indicators should form the basis for the ACT performance measurement processes. The proposed list of indicators is summarized in Attachment D-2. In addition, individual hospital sites should be tracking efficiency indicators to monitor their ongoing performance. These could include measure such as OR utilization, overtime, delays and cancellations that would be reported internally rather than be required to be submitted for provincial review.

Quality. Each participating hospital would be expected to maintain a quality assurance program. As part of this program, the Working Group is proposing that each hospital be required to provide evidence of a critical incident reporting and management system. This should be ensured within the language of the accountability agreement between the MOHLTC and the hospital. Hospitals would be required to demonstrate adherence annually as part of the accountability agreement process. In addition, the Working Group proposes that hospitals be required to demonstrate compliance and adherence to the CAS guidelines and supervision parameters. Adoption of surgical best practices such as the use of the WHO surgical check list, review of surgical and anesthesia mortality would be required. As participants in the Picker Patient Satisfaction Survey, hospitals will have access to appropriate metrics for monitoring progress. Additional measures such as effective pain management and epidural rates should be included as quality metrics. Again, this should be ensured within the language of the accountability agreement and through demonstrated adherence. An economic assessment was undertaken as part of the phase one evaluation. A 'time and motion' study examining anesthesiologist and AA workload activities and time is being undertaken with selected phase 2 hospitals. The Working Group concluded that on a 'go forward' basis, further economic evaluation would not be feasible or add any additional information.

Based on the performance measurement framework detailed above, the Working Group proposed the following recommendations.

Recommendation 3: That the MOHLTC adopt an ongoing ACT safety reporting process to be undertaken with ICES in order to evaluate the continued safety of the ACT model in the peri-operative setting.

Recommendation 4: That the MOHLTC adopt the SETP performance metrics as the efficiency measures for ongoing evaluation of the ACT model.

Recommendation 5: That the MOHLTC establish accountability agreements with each ACT participating hospital that include the requirement to have in place a quality assurance program

that includes reporting of critical incidents associated with the provision of anesthesia care, the performance of the ACT team and compliance with CAS established ACT standards of care.

Attachment D-1: ACT Performance Measurement Working Group Terms of Reference

Purpose

The ACT Performance Measurement Working Group is one of several teams established by the ACT Implementation Advisory Committee (IAC) to assist in developing options and recommendations to sustain the ACT model going forward. The purpose of the ACT Performance Measurement Working Group is to develop a methodology to measure, monitor and report on the impact of the ACT model. The key objective of the measurement system is to ensure the provision of safe anesthesia practices. In developing options, the Task Team will reference the report 'ACT Think Tank Summary of Deliberations June 2009' and draw on the expert knowledge of the working group participants. In addition, the Working Group will consult with other experts in evaluation. For example, the work of ICES in identifying critical incident markers using administrative data sets.

Responsibilities

The key responsibilities of the ACT Performance Measurement Working Group include:

9. Develop an accountability framework that identifies key performance parameters and reporting expectations of stakeholders;
10. Identify key elements of an ongoing evaluation and reporting system;
11. Identify and define key indicators of performance including the methodology for data collection;
12. Evaluate the cost/benefit of each indicator considering availability of data, collection methodologies and reporting requirements;
13. Identify reporting options including the appropriateness of publically accessible reports;
14. Formulate recommendations for consideration by the AIC;
15. Prepare a written report to be issued to the AIC.

Membership

Chair: Keyvan Karkouti (UHN)

Members: Kathleen Dattilo (UHN)
Don Duvall (RVH)
Sioban Nelson (UofT)
Nicole Mittmann (SHSC)

Keith Rose (Project Lead)
Mary Jane Salpeter (UHN/SHSC)
Duminda Wijeyesundera (UHN)
Barbara Willis (Consultant)

Attachment D-2: ACT Performance Measures

SAFETY				
#	Indicator	Definition	Data Source	Reporting Methodology/Frequency
1.	Anesthesia Type	GA, (planned & unplanned), regional block, semi-conscious, (neuro-lept) epidural, spinal, local	CIHI (ICES)	Annual
2.	ASA Class	1-4	CIHI (ICES)	Annual
3.	Priority codes	elective, urgent, emergency, trauma	CIHI (ICES)	Annual
4.	Hospital LOS	Length of stay in hospital	CIHI (ICES)	Annual
5.	ICU Admission	Admission to ICU within 48 hours of surgery	CIHI (ICES)	Annual
6.	Mechanical Ventilation	Need for postoperative mechanical ventilation	CIHI (ICES)	Annual
7.	Renal Dialysis	New need for renal dialysis	CIHI (ICES)	Annual
8.	Post-operative Stroke	Stroke during post-operative period	CIHI (ICES)	Annual
9.	Blood Products	Administration of blood products	CIHI (ICES)	Annual
10.	Hospital Readmission	Readmission within 30 days	CIHI (ICES)	Annual
11.	Mortality	In hospital Within 30 days Within 1 year	CIHI (ICES)	Annual

EFFICIENCY				
#	Indicator	Definition	Data Source	Reporting Methodology/Frequency
1.	Patient screened prior to surgery	The percentage of all cases that were screened prior to surgery compared to the percentage of all cases screened in the population defined by the benchmark	SETP	Monthly
2.	OR duration	Patient exit time minus entry time	SETP	Monthly
3.	First case on-time starts	Accurate start time of first case determined to be within 5 minutes of scheduled start time	SETP	Monthly
4.	Subsequent case on-time starts	Accurate start determined to be within 15 minutes of scheduled start	SETP	Monthly

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EFFICIENCY				
#	Indicator	Definition	Data Source	Reporting Methodology/Frequency
5.	Scheduling accuracy	Percentage scheduling accuracy	SETP	Monthly
6.	Patient anesthesia ready	<p>A. New Definition: Time in minutes that elapsed between patient entering OR and patient reaching sufficient level of anesthesia to begin surgical preparation compared to the same elapsed time for all cases in the population defined by the first benchmark</p> <p>B. Old Definition: Time at which patient has sufficient level of anesthesia and is ready to be positioned and prepped. All lines inserted by anesthesia and intubations complete and anesthesia hands off the patient to the surgical team to begin</p>	SETP	Monthly
7.	Incision Time	Time in minutes that elapsed between the patient entering the OR and the first incision is made compared to the same elapsed time for all cases in the population defined by the benchmark	SETP	Monthly
8.	Average Turnover	Number of minutes turnover from end of one case to start of next case	SETP	Monthly

PATIENT CENTREDNESS				
#	Indicator	Definition	Data Source	Reporting Methodology/Frequency
1.	Cancellation rates	Unexpected cancellation on day of surgery/the total number of cases completed	SET database	Q.6 -- 12 months hospital report
2.	Checklist pre during and post	See WHO checklist	SET database	Q.6 -- 12 months , specific hospital report

PATIENT CENTREDNESS				
#	Indicator	Definition	Data Source	Reporting Methodology/Frequency
3.	Epidural rate	Number of women with vaginal deliveries who received an epidural /total number of vaginal deliveries	CIHI and OHIP (ICES)	Q.6 -- 12 months
4.	Use of regional anesthesia for postoperative pain management	Any regional or nerve block inserted prior to surgery or within two hours of surgical completion	CIHI and OHIP (ICES)	Q.6 -- 12 months specific hospital report

Appendix E: Report of the Financial Model Working Group

E1. Introduction

The ACT Finance Working Group was one of three teams established by the ACT Implementation Advisory Committee (IAC) to assist in developing options and recommendations to sustain the ACT model going forward. The purpose of the ACT Finance Working Group was to develop financial models that would ensure continuance of the ACT program. Financial models were to consider mechanisms for cost sharing with the Ministry of Health and Long Term Care (MOHLTC), the OHIP pool of funds and the provincial hospitals as key players. Terms of reference and membership of the Working Group are included as Attachment E-1.

In developing recommendations, the working group made reference to the report '*ACT Think Tank Summary of Deliberations June 2009*'. In addition, materials and expert opinion were provided by working group participants. The following report identifies the key findings and recommendations of the working group.

E2. Current Funding Model

The Working Group reviewed a number of existing funding mechanisms for ACT as detailed below:

- § **Pilot Projects.** The ACT pilot projects are funded by the Ministry of Health and Long Term Care (MOHLTC) to up to \$8.0 million per annum. Funds are provided through the provincial Wait Time strategy. Phase 1, initially a two year project, includes fourteen hospitals and 45 AAs. Phase 1 has been extended into a third year concluding in March 2010. Phase 2 added eight additional hospital sites, 35 AAs and 3 NPs and will continue into 2011. At present approximately twenty-two hospitals across the province are participating in the ACT project (see Appendix A). Funding provided to ACT pilot hospitals is \$94,500 per FTE. Anesthesiologists continue to bill OHIP fee for service. The Wait Time strategy provides one-time funding and as such a new budget request is made each year with no assurance of continued funds.
- § **Cataract Funding Model.** A variation on the pilot project funding was implemented specifically for two cataract programs in phase 1. Four additional cataract sites were subsequently added. Each hospital was provided \$120 per case for payment of the Anesthesiologist and hiring of the Anesthesia Assistant (AA). In this model the Anesthesiologist was able to supervise the work of more than one AA. This model is independent of the \$8 million in Wait Time dollars. The model has been cost neutral with no additional funds required. The OHIP pool of funds was used in this case so this has proved to be a 'win win' for all concerned. This unique model could have potential in other areas that would be conducive to multiple, predictable, low anesthesia acuity cases running concurrently.
- § **Anesthesiologist Compensation.** In all other circumstances, the Anesthesiologist can only bill for one procedure at a time. Payment is front end loaded with an additional component for time.

Units increase with the complexity and length of cases performed. In some practices, funds are pooled and allocated to all. There are extra funds for academic programs and northern retention. In the case of private endoscopy clinics, OHIP is billed and the patient pays for ancillary services. A variation on this is seen in the US with Physician Assistants (PA) where the physician can bill 100% for the work of the PA if they are present and 75% if they are not.

- § Other Provinces. In other provinces, the AA role has been successfully implemented. In Manitoba, the government has provided ongoing funds to the regional health authority (RHA) in order to undertake additional 'wait-time' cases. Due to a provincial shortage of Anesthesiologists, surgeons were unable to accomplish these cases without the assistance of the AA. The RHA in turn funds individual hospitals within their region to employ AAs. Hospitals are required to submit regular reports on performance outcomes. In Quebec, the anesthesia care team model including the role of anesthesia assistants has been endorsed and accepted. While the Finance Working Group was unable to determine the extent of support provided from government, it is understood that funding has been in place for several years.
- § Training. Funds in support of training are provided through the Health Human Resources Branch of the MOHLTC in the case of the Michener Institute and for Fanshawe College, through the Ministry of Training, Colleges and Universities. Students fees are charged that may be paid in part or in full by the sponsoring hospital.

E3. Principles to Guide Financial Modeling

To assist the Working Group in review of potential financial models, a number of principles were identified. While it is not anticipated that potential models will include all of these elements, ideally as many of these principles as possible would be addressed in any given model. The preferred financial models will:

- § Increase available anesthesia hours;
- § Add value from the perspectives of the Anesthesiologist, the hospital and the MOHLTC;
- § Benefit patient and promote satisfaction with their care;
- § Keep the Anesthesiologist 'whole' i.e. no erosion of compensation for same work performed;
- § Minimize the financial impact on hospitals;
- § Utilize multiple sources of funding (MOHLTC, OMA/OHIP, hospitals);
- § Be considerate of existing pilot sites and the people investment made to date;
- § Provide an opportunity for other hospitals that desire to be engaged;
- § Be transparent, easily administered and understood with a fair and consistent process for allocation of funds;

- § Be flexible and adaptable to necessary modifications over time and/or geographic region;
- § Have a strong business case to stand up to the many other competing priorities for funding within the MOHLTC, hospitals and the OMA;
- § Incorporate oversight and accountability for clinical outcomes and appropriate allocation of resources as intended;
- § Take into account the balance of supply and demand;
- § Preferably include hospital employee status for the non-physician members of the ACT (having considered risk and benefit).

E4. Financial Models

The Finance Working Group acknowledged that there may be financial limitations for each of the potential funding models identified below. It also became clear that geography, size of hospital, human resource models and case mix may impact the implementation of any model and that flexibility will be needed in considering the most appropriate model in any given setting. A number of financial models were identified. The benefits and risks of each were considered and evaluated based on the principles detailed above. The following chart describes the six models identified by the Finance Working Group.

Model	Key Features	Source \$	Benefits	Risks
A. Cataract Model	<p>Volume based model. Hospital flows AA salary and allocates \$ to Anesthesiologist based on cases performed.</p> <p>Could be maintained for 1) cataract procedures only or expanded to 2) other procedures that have highly predictable outcome and ASA 1 and 2 classification</p>	OHIP pool \$	<p>Potential to increase volume of cases and reduce wait times</p> <p>Promotes group practice</p> <p>With sufficient volume can ensure Anesthesiologist income same or more</p> <p>Anesthesiologist can opt out of the plan but their practice will be limited to those services not covered under this model</p>	<p>Limited applicability. Only applicable for regional anesthesia and sedation. Will not work in situations where the Anesthetist cannot oversee more than one room at a time.</p> <p>Requires negotiated agreement between MOHLTC and OMA (Anesthesia Section)</p> <p>If volume not achieved income of Anesthesiologist could go down</p>

Model	Key Features	Source \$	Benefits	Risks
B. Incremental Model	<p>Establish base line volume for selected cases. Additional funds provided when demonstrate increased volume.</p> <p>Anesthesiologist bills OHIP fee for service. Could include a supervisory fee code</p>	<p>MOHLTC for increased volume – hospital administers AA salary</p> <p>OHIP billed by Anesthesiologist</p>	<p>Incentive for hospital to improve efficiency on increased case load – would work well for wait time funded procedures</p> <p>Opportunity for incremental resources for hospital</p> <p>Applicable when demand for care exceeds Anesthesia capacity (can do more with same number of Anesthesiologists)</p> <p>Incentive to increase Anesthesia hours of service and volume of work for both hospital and Anesthesiologist</p> <p>Anesthesiologist income independent of hospital funding mechanism (will be same or more)</p>	<p>Organizational commitment and surgeon dependent for volume of cases performed</p> <p>If cases not performed hospital does not receive funds yet will have incurred fixed costs associated with AA salary</p> <p>Determining baseline is challenging</p> <p>Job security for AA – difficult to recruit or retain</p> <p>To achieve supervisory code will need negotiated agreement between OMA and MOHLTC</p> <p>Assumes wait time funding continued</p>
C. Shared Model	<p>Hospital determines the model of care based on case volume and mix, number of rooms, desired ratio of AA to Anesthesiologist and other members of the operative care team.</p> <p>Team model enables increase in anesthesia care with no increase in Anesthesiologist hours.</p>	<p>Pooled MOHLTC, OMA, Hospital (desired ratio 33/33/33)</p>	<p>Shift from individual to team performance drawing on skills and abilities of all team members and enables improved efficiency</p> <p>Same cases can be performed with fewer anesthesiologist hours – good model if anesthesiologist</p>	<p>Hospitals needs to create operating efficiencies to pay for 33% portion</p> <p>Requires negotiated agreement between MOHLTC and OMA</p> <p>May not be sufficient financial incentive for OMA members</p> <p>Financial risk for</p>

Model	Key Features	Source \$	Benefits	Risks
			<p>shortage – can reduce number of rooms running to reduce operating costs</p> <p>If no shortage of anesthesiologists, provides potential to do more cases within existing hours and reduce overruns</p> <p>Model may be most effective in out-of-OR care settings or smaller centres with few anesthesiologists</p>	both hospitals and MOHLTC given available dollars
D. Team/Case Based Funding	<p>Pay for work performed with funding distributed among team members</p> <p>Similar to group practice/AFP models as there is shared resources and group accountability for an agreed volume of activity and outcomes</p> <p>In case based funding, the provider(s) are paid based on a predetermined amount of funding for each case treated. The funding is intended to cover all the providers' care related to that case for a set time period. In this approach the \$ follow the patient.</p>	OHIP funds	<p>Deliverables link to funding</p> <p>Based on OHIP pool of funds so that hospital not required to finance AA</p> <p>Precedent for alternate funding models within MOHLTC</p>	<p>Assumes long term shortage Anesthesiologist</p> <p>Could result in safety issues if hospital hires less costly AAs in an effort to keep the more costly Anesthesiologist numbers low</p> <p>Uses physician \$ (OHIP) to pay non-physicians.</p> <p>Substantial change in hospital operations</p> <p>Requires negotiated agreement between MOHLTC and OMA</p> <p>Hospital based – cannot generalize</p>

Model	Key Features	Source \$	Benefits	Risks
E. Modified Manitoba Model	<p>MOHLTC provides base funding to the LHIN to distribute to participating hospitals.</p> <p>Hospitals accountable to report on allocations and outcomes based on standard set of performance indicators</p> <p>LHIN based allocations decisions aligned to supply and demand in each region</p>	<p>There are 3 payment options to consider</p> <p>a) MOHLTC only allocated by LHIN</p> <p>b) Option to add 50% contribution from hospital e.g. Nurse First Assist program</p> <p>c) Split 33/33/33 with MOHLTC, OHIP and hospital</p>	<p>In funding option a) only \$8M Wait Time MOH funds provided so no new funds required by hospital or OHIP (fund approximately 70 FTE)</p> <p>In funding option b) hospitals would contribute additional \$8M enabling an increase to 140 FTE.</p> <p>In funding option c) all parties would contribute \$8M and increase to 210 AA across province</p> <p>Potential to increase surgical volume (in which case consideration could be given to including a component of surgeon income as part of OHIP contribution)</p> <p>Shared accountability for funding and results among multiple partners in option b) and c)</p> <p>Allocation methodology based on needs identified within each LHIN</p>	<p>Requires LHIN allocation processes to be established – creates complications</p> <p>Option a) will only fund 70 AA (pilot sites only) with existing \$8 million</p> <p>Option b) and c) require hospitals to contribute \$8 million – difficult in current climate</p>

Model	Key Features	Source \$	Benefits	Risks
F. Physician Billing Model	Anesthesiologist bills for both the work they do independently and that of the AA and in turn compensates the AA either directly or through a payment arrangement with the hospital	OHIP – could consider 100% billed if present with AA and 75% if AA on their own Option would be to bill supervisory code for one room while bill full code for second and pay AA out of total	Potential to test a new funding model Supervisory fee recognizes demand on Anesthesiologist time and medical liability Precedent may exist in Sleep Study payment model – technical fee that could be directed to pay AA	Limitation is existing requirement that Anesthesiologist bill only one procedure at a time – can't pay twice for same service - would require policy change Introduces physician as paymaster in hospital sector. Could mitigate HR responsibility for Anesthesiologist by establishing management agreement with hospital. Requires negotiated agreement between MOHLTC and OMA

E5. Recommendations

The Finance Working Group reviewed each of the models based on the principles noted above. Although it was noted that there was merit to each model, two models were excluded at this time.

- § Incremental Model (model B) was rejected due to the limitations associated with one-time funding and the consequent risk to sustainability of the ACT model, and
- § Modified Manitoba Model (model E) was determined to be complex at this time as it requires a process and methodology for allocations to the LHIN. The Finance Working Group determined that this model could be considered in the future once the ACT program is well established.

The Finance Working Group concluded that there was potential application for each of the remaining models based on scope of clinical service and geographic variances. The Working Group acknowledges there are limitations with each. Determining the source of funds to support each is at the heart of the

issue. Both the MOHLTC and hospital representatives to the Finance Working Group expressed concern as to their ability to meet the financial requirements associated with these models. The OMA representatives expressed concern as to the potential impact on their members and the fee negotiation process with the MOHLTC. Any of these models will require negotiation and consensus building in order to succeed.

It is recommended that:

1. The MOHLTC adopt the Cataract Model (Model A) for any high volume cataract centre.
2. The MOHLTC consider application of the Cataract Model to other procedures that have predictable populations with known outcomes and ASA 1 and 2 classifications.
3. The MOHLTC fund remaining ACT programs using one or more approaches:
 - iii) Shared Model (model C) – a shared funding model with contribution from each of the MOHLTC, the hospital and the OMA with each organization determining desired team members based on case volume and number of operative rooms;
 - iv) Team/Case Based (model D) – an alternate funding model that pays for work performed with OHIP funding distributed among team members, and
 - v) Physician Billing Model (model F) – based on the OHIP pool of funds, this model may be more acceptable if a management arrangement could be established with the hospital.

The Finance Working Group determined there were many similarities among these models and that a combination of these may be necessary given the diversity of hospital sites across the province.

Attachment E-1: ACT Finance Working Group Terms of Reference

Purpose

The ACT Finance Working Group is one of several teams established by the ACT Implementation Advisory Committee (IAC) to assist in developing options and recommendations to sustain the ACT model going forward. The purpose of the ACT Finance Working Group is to develop financial models that would ensure continuance of the ACT program. It is anticipated that financial models will consider mechanisms for cost sharing with the Ministry of Health and Long Term Care (MOHLTC), the Ontario Medical Association (OMA)/OHIP pool of funds and the provincial hospitals as key players. In developing options, the Task Team will reference the report 'ACT Think Tank Summary of Deliberations June 2009' and draw on the expert knowledge of the working group participants.

Responsibilities

The key responsibilities of the ACT Finance Working Group include:

16. Confirm existing funding allocations and arrangements between the MOHLTC and hospitals;
17. Confirm funding agreement between the MOHLTC and OMA for anesthesia services;
18. Identify funding issues/concerns going forward that will need addressed through the funding model;
19. Establish financial principles and decision making criteria on which options will be evaluated;
20. Research funding models that have been established for other programs/services (e.g. Wait Time Strategy) and in other jurisdictions (e.g. other provinces);
21. Identify financial options and assess risk and benefit associated with each;
22. Evaluate each option based on established principles and criteria;
23. Identify 2-3 options for consideration by the AIC;
24. Prepare a written report to be issued to the AIC.

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Members: Steve Bodley (OMA)
Stephen Brown (Co-Chair IAC)
Davy Cheng (LHSC/SJHC)
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