



The Thames Valley Acute Stroke Protocol

Barriers and Success Factors to Developing and Implementing a Regional Redirect Program for Acute Stroke

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(A Partnership of London Health Sciences Centre and
St. Joseph's Health Care, London)
and The Southwestern Ontario Regional Stroke Strategy

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The Authors

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is jointly sponsored and supported by the London Health Sciences Centre and St. Joseph's Health Care, London.

Our mandate is to work with health care providers and organizations in Southwestern Ontario, especially hospital-based services, to develop innovative solutions to regional health care delivery issues.

The Southwestern Ontario Regional Stroke Strategy

The goal of the Stroke Strategy is to decrease the incidence of stroke and improve patient care and outcomes for persons who experience stroke, by reorganizing stroke care delivery

- ensuring all Ontarians have access to appropriate, quality stroke care in a timely manner.

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Table of Contents

Executive Summary	4
1.0 Introduction	6
1.1 Background	6
1.2 Purpose	6
2.0 Methods & Findings	7
2.1 Materials and Method	7
2.2 Sample/Population	7
2.3 Confidentiality/Ethical Issues	7
2.4 Limitations	7
2.5 Findings	8
3.0 Success Factors	13
4.0 Conclusions	14
5.0 Comments & Kudos	14
Appendix A: Survey Questions	15
Appendix B: Survey Respondents	16
Appendix C: Thames Valley Acute Stroke Prompt Card and Protocol	17

Executive Summary

In late 2005 Integrated Strategic Alliances & Networks (ISAN)¹, in partnership with the Southwestern Ontario Regional Stroke Strategy² (RSS) launched a project to identify and delineate the challenges that were encountered during the development of the Thames Valley Acute Stroke Protocol, (the Protocol) more than three years earlier (June 2002).

Aimed at providing patients in Elgin, Middlesex and Oxford counties with access to thrombolytic therapy, the Protocol lays out a coordinated plan for transporting such individuals directly to the Regional Stroke Centre at London Health Sciences Centre (thereby ‘bypassing’ area community hospitals that do not have facilities to safely administer tPA³), and repatriating them to their local hospitals once they have been assessed, and (provided they’re deemed suitable candidates) treated.

To investigate the challenges that arose during development and implementation of the protocol, input was sought from key members of the committee that undertook these tasks. The committee members (representatives of pre-hospital organizations, community hospitals, affected areas within the Regional Stroke Centre at LHSC, as well as advisors from the Central Ambulance Communications Centre, and the Base Hospital Program were initially contacted via e-mail, and then interviewed by telephone. A survey consisting of sixteen questions formed the basis of these conversations. Queries focused on five different areas: personal beliefs and attitudes regarding the project (both prior to, and following development); clarity of the commitment asked of participants; barriers to participation, collaboration and implementation; if and how these issues were resolved; and maintenance and effectiveness of the protocol since it has been put in place.

¹ Integrated Strategic Alliances & Networks (ISAN) is an integrated program of the London Health Sciences Centre and St. Joseph’s Health Care London. It’s mandate, on behalf of the London academic, teaching hospitals, is to facilitate health systems integration through partnership and network development in Southwest Ontario. For more information go to www.lhsc.on.ca/isan

² The Southwestern Ontario Regional Stroke Strategy is a comprehensive, system-wide program designed to reduce the incidence of strokes on a population basis and ensure the highest quality and most progressive care for those who do have a stroke. For more information go to www.lhsc.on.ca/rss

³ Tissue plasminogen activator (tPA) is a thrombolytic agent (clot-busting drug). It’s approved for use in certain patients having a heart attack or stroke. The drug can dissolve blood clots, which cause most heart attacks and strokes.

tPA is one of the most important recent advancements in the treatment of ischemic stroke has been thrombolytic therapy. Thrombolytic drugs are "clot busters" – drugs that break up blood clots.

If given to the correct ischemic stroke survivor within three hours of the onset of the stroke, t-PA can improve the outcome of the stroke. Some patients who receive t-PA have a complete reversal of their symptoms

On balance, feedback obtained through the survey was overwhelmingly positive.

The majority of respondents stated that they supported the Protocol as a method of improving access to acute stroke therapy for patients outside of London.

Most participants also said the extent and nature of their involvement in the project was made clear at the outset, and many expressed appreciation for the cooperative nature of the other people involved, and how smoothly the project proceeded overall. None of the subjects identified barriers to collaborating with the other agencies and departments that helped plan and execute the initiative.

On average, respondents rated the Protocol's effectiveness at 7.5 out of a possible ten. One interviewee lacked sufficient data to draw a conclusion.

Respondents were asked a series of questions about possible barriers. These included barriers to participation, collaboration, implementation and procedural challenges.

The most oft-cited barrier was lack of time due to multiple priorities. Though not described as a true obstacle, lack of ready access to data (both for evaluating the efficacy of the program, and ongoing quality improvement) was identified by 50% of respondents as a continuing challenge.

While the survey identified several key success factors, an overriding commitment to collaboration clearly emerged as one of the critical elements: *None* of the respondents reported encountering any barriers to collaboration.

Finally, the following key success factors were noted:

- Commitment to collaboration
- Clearly defined goals and expectations
- Strong belief in thrombolytic therapy
- Creation of site 'champions'
- Willingness to 'manage the imagined'
- Creation of a formalized repatriation agreement

This is the second in a series of reports being published by ISAN to document and bring insight to the *Barriers to Integration*. To read the first report, *Barriers to Integration Phase One*, visit the ISAN website at www.lhsc.on.ca/isan.

Introduction

1.1 Background

In late 2005 ISAN, in partnership with the Regional Stroke Strategy (RSS), undertook a project researching barriers to a regional redirect program for acute stroke patients. Labeled the Thames Valley Acute Stroke Protocol (the Protocol), this initiative is a component of the Regional Stroke Strategy, Southwest Region, and moves toward the vision of providing “equitable access to best practice stroke care.”

1.2 Purpose

The purpose of the “Barriers and Success Factors to Developing and Implementing a Regional Redirect Program for Acute Stroke” project is to investigate and identify:

- Barriers to participation, collaboration and implementation
- If and how these issues were resolved
- How effective the Protocol is, and how it is being maintained

The above mentioned project was initiated in October 2005, and continued to February 2006. The information upon which this report is based was collected through a series of telephone interviews with individuals who were involved in planning and implementing the Protocol.

2.0 Methods and Findings

2.1 Materials and Method

Key representatives of the groups and organizations involved in drafting and implementing the Thames Valley Acute Stroke Protocol (see *Appendix B*) were contacted via e-mail, informing them of ISAN's aim to gather information about the challenges they encountered during the development, and subsequent implementation, of the Protocol.

An independent researcher and writer was contracted to conduct telephone interviews with the individuals in question, and subsequently prepare a report based on the findings.

The interviews were based on a set of sixteen questions that detailed the following (see *Appendix A*):

- A. **Clarity of Purpose:** one question asked whether or not the commitment asked of committee members was clear at the outset.
- B. **Attitudes:** two questions discussed any feelings, positive or negative, the interviewee held about the concept of transporting acute stroke patients to London for tPA treatment.
- C. **Barriers:** nine questions asked about obstacles to participation, collaboration, or implementation that respondents met; if and how they were resolved; and who facilitated the resolution.
- D. **Effectiveness & Maintenance:** one question asked respondents to rate the Protocol's effectiveness; two follow-up questions asked how the Protocol is being maintained.

The original e-mail identified a deadline of December 1, 2005. However, due to scheduling challenges, interviews were conducted until February 2006.

2.2 Population

Eleven individuals who sat on the implementation committee were identified as potential participants in the survey. One person was unable to participate due to a prolonged absence from work; the remaining ten agreed to, and were interviewed.

2.3 Confidentiality/Ethical Issues

The independent interviewer signed a confidentiality agreement with ISAN. Interviewees were informed that their responses would not be connected with their names and/or roles in the completed report.

2.4 Limitations

There are several limitations inherent in the research upon which this report is based. Since the interviews were conducted more than two years following implementation, respondents may have difficulty accurately recalling their perceptions of the Protocol before it was put in place, as well as challenges they encountered in the early phase of the project and details around how those issues were resolved. A few participants were

unable to answer certain questions because they were absent from meetings, or (due to a job change) had joined the committee some time after it was struck. While the interview format lends itself to gathering complex, shaded responses more so than does a simple questionnaire, answers cannot always be categorized as neatly. Additionally, despite the ‘arms-length’ measure of hiring an independent contractor to collect the information and prepare the report, and the promise to disconnect responses from names and roles, some respondents may still have been reluctant to fully share their concerns or criticisms.

2.5 Findings

2.5.1. Attitudes

Initial Perceptions

Respondents were asked an open-ended question about how they had personally felt about the Protocol upon first hearing about it. A solid majority (8 of 10) stated they had felt the project was a good idea, or a necessary step in achieving more equitable access to thrombolytic therapy. One of these people also admitted to feeling uncertain about how difficult it might be to win buy-in from all participants, and how challenging the implementation process might ultimately prove to be.

One participant acknowledged significant concern that the Protocol would increase patient volumes beyond projections, thus placing additional pressure on limited resources such as beds and staff.

A single individual admitted to skepticism about the need for the Protocol, citing a belief that thrombolytic therapy only benefits a small subset of patients.

Current Perceptions

Two years after implementation, only one of the eight respondents reported modifying their original opinion about the Protocol. That individual -- who admitted to some initial misgivings about how difficult it might be to implement the Protocol -- reported now feeling even *more* positive. The respondent went on to state that the readiness of all involved parties ultimately proved to be greater than it had first appeared. Consequently, the implementation process had gone more smoothly than expected thereby raising participants’ comfort level with the concept. This high level of support thus significantly shortened the development and implementation of a second Protocol for stroke patients within the city of London.

2.5.2. Clarity of purpose

Nearly all interviewees (9) believed the commitment being asked of them at the start of the project was made clear from the outset. Only one individual found the responsibilities involved were greater than originally anticipated; a situation that was due in part to the fact the person in question was simultaneously starting a new position.

2.5.3. Barriers

This section of the report addresses four different types of barriers: A. Barriers to Participation; B. Barriers to Collaboration; C. Barriers to Implementation; and D. Procedural Barriers.

A. Barriers to Participation

Respondents were evenly split on the question of whether or not they had encountered barriers to participation (either personally, or on an organizational level) in the Protocol. **Five stated they had not confronted any significant barriers** (though two of these individuals acknowledged time, and competing priorities had presented challenges, they added they considered the project sufficiently important to take precedence over other commitments).

The remaining five stated they had indeed encountered obstacles, all of which related to **resources: lack of time and/or multiple priorities** (3 respondents, one of whom noted the unpaid nature of his/her participation); and **concerns the Protocol would place additional pressure on already-scarce resources**, including personnel, and bed space (2 responses).

i. Resolution

Time and multiple priorities remained something of a struggle throughout the course of the project for two of the respondents who encountered this barrier. In the case of the other individual who reported time and clerical support represented obstacles, the region manager of the regional stroke strategy identified a gap in service. More specifically, the small community hospitals in one district lacked an area coordinator. This was rectified with the creation of a new, half time position.

The planning team took pains to allay fears about increases in patient volumes (for example, by obtaining statistics on stroke volumes from the counties involved in the Protocol, as well as examining the experience of another jurisdiction where a similar destination policy had been launched earlier). While these measures were helpful, they did not eradicate anxiety that the Protocol could lead to an unanticipated jump in the number of patients presenting to the Regional Stroke Centre, according to the person who expressed these qualms. However, the two individuals who expressed these reservations reported the feared increases never in fact materialized after implementation.

B. Barriers to Collaboration

All respondents (10) stated they had not encountered any barriers to collaboration, either personally, or on an organizational level.

C. Barriers to Implementation

Of the ten people who were interviewed, only a small minority (2) **said they had come up against barriers to implementation** of the Protocol. However, three of the eight individuals who said they had not encountered true ‘barriers’ found they did meet procedural difficulties or other minor ‘bumps’ in the road. These will be detailed in Section D.

Two respondents identified issues around *repatriation* as stumbling blocks to implementation. Representatives from the Regional Stroke Centre were concerned smaller ‘home’ hospitals would refuse to accept patients once they had been assessed and treated, while participants from community hospitals felt some trepidation about promising to accept such patients ‘no matter what’.

One of these individuals also cited several additional challenges; *a perceived need for RN accompaniment of ‘repatriated’ patients* during transport back to the ‘home’ hospital; *concern EMS personnel might have difficulty applying the Protocol correctly; inadequate resources to properly evaluate the program; and ensuring communication back to host organizations.*

i. Resolution

The abovementioned barriers were all overcome, at least to some extent.

a) Repatriation

Detailed discussions around how and when patients would be repatriated to their ‘home’ hospitals and the subsequent creation of a formal **Repatriation Agreement** (which was signed by the administration of all involved hospitals) went a long way to dispelling concerns around this aspect of the Protocol. A few process-related problems did arise later – see Section D for more details. At the community hospital level, the realization that patients covered by the Protocol would have presented to the home hospital regardless of whether the project existed or not helped reassure participants that it would be possible to find room for repatriated patients.

Another measure that helped mitigate concerns around repatriation was the recruitment of ‘project champions’ in each of the community hospitals. These committed individuals were designated as project ambassadors. They served as contacts and problem-solvers when any issues did arise.

b) RN Accompaniment

An investigation was undertaken to try and ascertain if RN accompaniment had in fact been required during similar patient transports in the past. This probe uncovered no evidence that RN accompaniment would be routinely or even rarely required; however, there was still concern that because of the nature of the protocol, RN accompaniment might be required. This obstacle was finally overcome with the agreement that the situation would be carefully monitored during implementation (the first 40 cases were carefully reviewed) and if in fact any problems did arise, they would be dealt with swiftly. The promised review revealed that no Thames Valley Stroke Protocol patients required RN accompaniment.

c) Application of Protocol

For the most part, concerns that there would be inconsistencies in the pre-hospital application of the Protocol were addressed by assuring committee members that each of the first 40 cases would be carefully reviewed and evaluated. This case-by-case audit,

performed by the region manager, resulted in the Regional Stroke Strategy uncovering a few situations in which EMS personnel apparently had difficulty addressing one component – determining the time of stroke onset. A communication detailing the nature of the challenge was sent out to all members of the planning committee (which was followed by periodic updates); and administration worked with the EMS service providers to address the issue. The review that was undertaken demonstrated that *all* patients transported under the protocol were in fact stroke patients; indicating that the protocol was being applied appropriately.

d) Resources for Evaluation

The project lacked the resources for a dedicated team to collect, enter, analyze, and report data which would allow for proper evaluation of the Protocol. However, a system was cobbled together whereby the region manager of the Regional Stroke Strategy collected the information, and ‘borrowed’ research staff were brought on to assist with the other tasks. Additionally, one of the hospital’s social workers agreed to conduct telephone interviews to obtain feedback from the first ten patients transported to London under the Protocol. Due to the intensive nature of this work, and the multiple commitments of the individuals involved, follow-up of this intensive nature was limited to the first 40 patients.

e) Communication Lapses

Delays in the ‘go live’ date were traced back to possible lapses in communication, though it is not clear where the breakdown occurred. In hindsight it would have been beneficial to outline in more detail the communication needs, particularly for members who were delegates.

However, it is important to note that while inconvenient, the resulting delays did not exert any negative impact on the project outcome.

D. Procedural Challenges

Once the Protocol was implemented, a few procedural ‘glitches’ arose. One of these challenges was identifying Protocol patients upon presentation at the Emergency Department, as this information was not always communicated prior to arrival of the ambulance. This concern was brought to the attention of the EMS service provider, who reinforced the importance of alerting Emergency staff when a Protocol patient is en route.

Another small, but important, procedural snag that became evident following implementation involved the repatriation of patients to home hospitals. Due to the unique organizational structure of each community hospital, the plan for repatriating patients occasionally ran into difficulty, particularly if the transfer was undertaken after regular office hours. In one such facility, it became clear that transfer requests were being routed to a contact at the community hospital that handled pre-booked beds. The person in this role agreed to reinforce with the Emergency Department physicians at the receiving home hospital the need for them to admit any repatriated Protocol patients, as patients need to be linked with a physician. Another community hospital representative suggested alerting the home hospital (perhaps through dispatch) when bypass patients were picked up, and

faxing discharge information ahead; thereby ensuring repatriation would proceed as smoothly as possible. The latter measure would help the facility better determine what level, and type of care the patient is likely to require.

One other unexpected complication that arose with respect to repatriation related to delays that were encountered in a few cases because patients participated in a research protocol, and consequently were required to stay at the Regional Stroke Centre longer than they would have ordinarily.

2.5.4. Effectiveness of Protocol

When asked to rate the Protocol's effectiveness on a ten-point scale, responses ranged from four (1 respondent) to nine (1 respondent), for an average of 7.5. While only one individual declined comment due to insufficient information, the majority of participants (6) also felt they lacked enough feedback to form a full picture of the Protocol's efficacy – not only about patient volumes and outcomes, but also whether the Protocol was failing to 'catch' all patients who could potentially benefit from thrombolysis.

2.5.5. Maintenance of Protocol

When asked how the Protocol was being maintained, the majority of respondents (8) stated that concerns were dealt with directly by calling or otherwise contacting the most appropriate committee representative and following up with the region manager of the Regional Stroke Strategy. One respondent identified meetings as the primary vehicle for raising concerns, another individual stated there is no system in place for handling problems, calling the current method of dealing with any issues that arise 'catch can'.

2.5.6. Next Steps

When solicited for their opinions on how the Protocol could be improved, half (5) of the respondents identified a need for ongoing data collection and dissemination. Three interviewees stated that more current, customized, detailed data – for example, exactly how many patients had bypassed their hospital, and the outcomes after treatment – would not only help overcome lingering doubts on the part of other medical professionals as to the 'value added' offered by the Protocol, but would also help foster a sense of pride and ownership. More information about the volumes of patients bypassing individual community hospitals would also aid these facilities in determining whether administering thrombolytic therapy on-site, with the help of telemedicine through PACS, would be feasible. Two individuals also identified the need to find out whether the Protocol is 'missing' potential candidates for thrombolytic therapy – perhaps with the assistance of the EMS service provider's database.

Unfortunately, there are several major stumbling blocks in the path of implementing these suggestions, including scarcity of resources, and limitations of the computer software used by the different organizations participating in the Protocol, and a lack of compatibility between some of these programs. In the future it is hoped these barriers to the integration of information will be addressed.

One respondent wondered whether the Base Hospital Program could play a more significant role in the development of any future Protocols dealing with destination policies.

3.0 Success Factors

A number of key success factors were identified in the course of the survey:

- ***Commitment to collaboration.*** A shared commitment to collaboration, with an overriding focus on patient welfare, clearly played a critical role in the project's success. None of the respondents reported confronting any barriers to collaboration. The fact that several individuals who were not part of the Protocol volunteered to help collect information stands as further evidence of this strong culture of cooperation. A history of similar collaborations undoubtedly helped lay the groundwork for this latest success. As one observer commented, *London has very good collaborative teams that get put together for these different initiatives.*
- ***Clearly defined goals and expectations.*** Nearly all committee members who were interviewed stated the commitment required (both personally, and on an organizational level) was made clear from the outset. These clearly-defined expectations help decrease the likelihood of unpleasant surprises that could sabotage commitment to the project. Moreover, an explicit set of goals – and a step-by-step plan for reaching them – helped prevent unnecessary detours, and thus saved time. A straightforward strategy for dealing with any issues that arose also helps get to the bottom of any problems, and solve them as swiftly as possible.
- ***Strong belief in thrombolytic therapy.*** Even before being recruited to the committee, nearly early all survey respondents were sold on the evidence that tPA therapy can significantly improve outcomes in a small, but significant percentage of stroke patients. Arguably this conviction helped pave the way for the project's success.
- ***Creation of site 'champions'.*** Community hospital delegates who sat on the committee were designated as 'project champions'. They were responsible for knowing the Protocol inside out (and, if necessary, defending it to the organization's Medical Advisory Committee) and serving as a combination contact/problem solver should any difficulties arise. The project champions played an invaluable part in 'selling' the Protocol and making the repatriation process operate as smoothly as possible.
- ***Willingness to 'manage the imagined'.*** Often, resistance to change stems from fear of 'imagined' outcomes, such as a perceived need for RN accompaniment or a potential increase in patient volumes. Arguably, one of the key components in this project's success was the willingness to take these misgivings seriously and make every effort to address them, rather than simply dismissing such concerns as

purely imaginary. *“If someone believes something, you have to use information to prove or disprove that belief”*, explained one respondent. Project organizers used data drawn from other jurisdictions, and even dug through records to combat persistent rumours that RN accompaniment had been needed during similar transports in the past – and when these measures failed to dispel lingering discomfort, assured participants the first 40 cases would be carefully monitored and any problems would be swiftly dealt with. *“Lots of attention was paid to relationships, and our concerns”*, one interviewee noted.

- ***Creation of a formalized repatriation agreement.*** The medical directors or chiefs of staff at all of the involved hospitals signed off on a formalized, written repatriation agreement – easing doubts that home hospitals would accept stroke patients following administration of tPA.

4.0 Conclusions

In the main, the information collected for this report paints the picture of a very successful project: Despite the fact the involved organizations possess markedly different cultures, backgrounds and objectives, stakeholders were able to surmount several hurdles to both participation, and implementation. In fact, the only lingering impediment is lack of ready access to data to evaluate the program’s efficacy, and to guide continuous quality improvement. Bridging it sufficiently to reach implementation consumed a great deal of time and effort. While this gap is not an implementation obstacle, it could definitely be an obstacle to long-term support and justification. The stopgap structure put in place to do so (undertaking a manual case-by-case review) simply could not be maintained indefinitely due to a lack of dedicated resources. Consequently, stakeholders continue to grapple with this scarcity of information.

5.0 Comments & Kudos

While the nature of this type of report usually does not allow for individual comments or quotes, several of the respondents shared a desire to communicate their congratulations on a job well done. Here are a few of their comments:

- *They’ve dealt with this in a very thorough manner, and prepared for it very well.*
- *Chris and the people in the Regional Stroke Program have done a great job, with surprisingly few problems.*
- *The service provided by the Neurology Team has been excellent – they have been very responsive; they come right away.*
- *I’ve always felt very comfortable to pick up the phone and call if I’ve got a problem.*
- *This definitely wasn’t one of those ‘dreaded’ meetings – the patient focus was always there.*
- *The consultants were really invested in making this good.*

Appendix A

Interview Questions

- 1) When the process of developing the protocol began, was it clear what kind of commitment was being asked of you?
- 2) When you first became aware of this project, what were your feelings about it?
- 3) Has your stance changed since then?
- 4) If so, why?
- 5) Were there any barriers to your participation (either personally, or on an organizational level) in the project?
- 6) If so, what were they, and how were they resolved?
- 7) Who facilitated the resolution?
- 8) Were there any barriers to your collaborating with the other agencies involved – either personally or on an organizational level?
- 9) If so, what were they, and how were they resolved?
- 10) Who facilitated the resolution?
- 11) Did any difficulties arise prior to implementation?
- 12) If so, what were they, and how were they resolved?
- 13) Who facilitated the resolution?
- 14) Now that the protocol has been in place for more than two years, how would you rate its effectiveness on a ten-point scale?
- 15) How is the protocol being maintained?
- 16) If issues arise, how are they resolved?

Appendix B

Survey Respondents (Group Name)

- 1) London Central Ambulance Communications Centre
- 2) London Health Sciences Centre:
 - a. Coordinated Stroke Strategy
 - b. Emergency Medicine
 - c. Emergency Services
 - d. Neurology
 - e. Stroke Program
- 3) Middlesex Hospital Alliance
- 4) St. Thomas Elgin General Hospital
- 5) Thames Emergency Medical Services

The Thames Valley Acute Stroke Protocol

**Memorandum of Understanding
for
Elgin, Middlesex, and Oxford Counties
and
Stroke Centre, London Health Sciences Centre
(attached)**

Thames Valley Acute Stroke Protocol

MEMORANDUM OF UNDERSTANDING for **Elgin, Middlesex, Oxford Counties** and **Stroke Centre, London Health Sciences Centre**

PARTIES TO THE UNDERSTANDING:

- Alexandra Hospital
- London Health Sciences Centre
- Middlesex Hospital Alliance
- St. Joseph's Health Care London
- St. Thomas-Elgin General Hospital
- Tillsonburg District Memorial Hospital
- Woodstock General Hospital
- Middlesex County*
- The County of Elgin*
- The County of Oxford*
- The County of Perth*
- Stratford General Hospital, Huron Perth Hospitals Partnership*
- Base Hospital for Elgin, Middlesex, Oxford and Perth Counties *
- Emergency Medical Services for Thames Valley District*
- London Central Ambulance Communications Centre (CACC)*
- SW Field Office EHS Branch*

(Parties covered through the Local Agreement - Destination Policy for Adult Acute Stroke)*

PURPOSE:

This Memorandum of Understanding ("Agreement") involving the Stroke Centre, London Health Sciences Centre (LHSC) and "The Parties" of Elgin, Middlesex, and Oxford counties will serve to guide on-going collaboration among "the parties". It is a voluntary agreement based on the principles of mutual respect, trust, and a shared commitment to providing excellence in patient care, education, and research.

GOALS:

Under the terms of this agreement, "the parties" agree to ensure that patients requiring the services of the designated Stroke Centre at LHSC (University Campus) for stroke thrombolysis will be able to access such services in a coordinated and timely manner (as per the Thames Valley Acute Stroke Protocol Algorithm); and to facilitate the provision of patient care closer to home when the services of a stroke centre are no longer required (as per the Repatriation Agreement).

It is Understood that:

Patients will be screened by paramedics and transported to the Stroke Centre at LHSC (University Campus), as per the Local Agreement - Destination Policy. There, patients will be assessed by the stroke team for administration of tissue plasminogen activator (tPA).

TERMS OF AGREEMENT:

The initial term of this agreement will be for a period of six months following the effective date. At the end of six months the agreement will be revised as necessary. From this point, the agreement will be reviewed annually by the Thames Valley Stroke Thrombolysis Planning Group to ensure that it continues to be applicable and current. If at any time, patient safety and/or outcome is compromised or the impact on the Stroke Centre at LHSC (University Campus) exceeds capacity as a result of the Thames Valley Acute Stroke Protocol, this agreement will be revisited and amended as needed.

ROLES AND RESPONSIBILITIES:

The parties will work together on an on-going basis to lead, plan, and manage the work associated with this agreement through the SWO Stroke Strategy.

FINANCIAL COMMITMENTS:

Under this agreement, LHSC will cover the costs associated with the administration of tPA. It is understood that LHSC will receive funding from the Ministry of Health and Long Term Care for such costs. Responsibility for costs associated with interfacility patient transfer will belong to the sending facility. The SWO Stroke Strategy will take responsibility for the administrative costs associated with the implementation and evaluation of the protocol. In the event that new costs are identified, "the parties" shall discuss the financial implications of these responsibilities.

EVALUATION:

During the initial term of this agreement, data will be collected through the Stroke Centre at LHSC (University Campus) to monitor the effectiveness of the Thames Valley Acute Stroke Protocol. An improvement process will be in place to address urgent concerns on an "as needed" basis. At the end of this period, the protocol will be evaluated. The results of the evaluation will be reviewed by the Thames Valley Stroke Thrombolysis Planning Group.

CHANGE IN PARTIES:

Other organizations may become parties to this memorandum with the mutual agreement of the parties who have signed this memorandum.

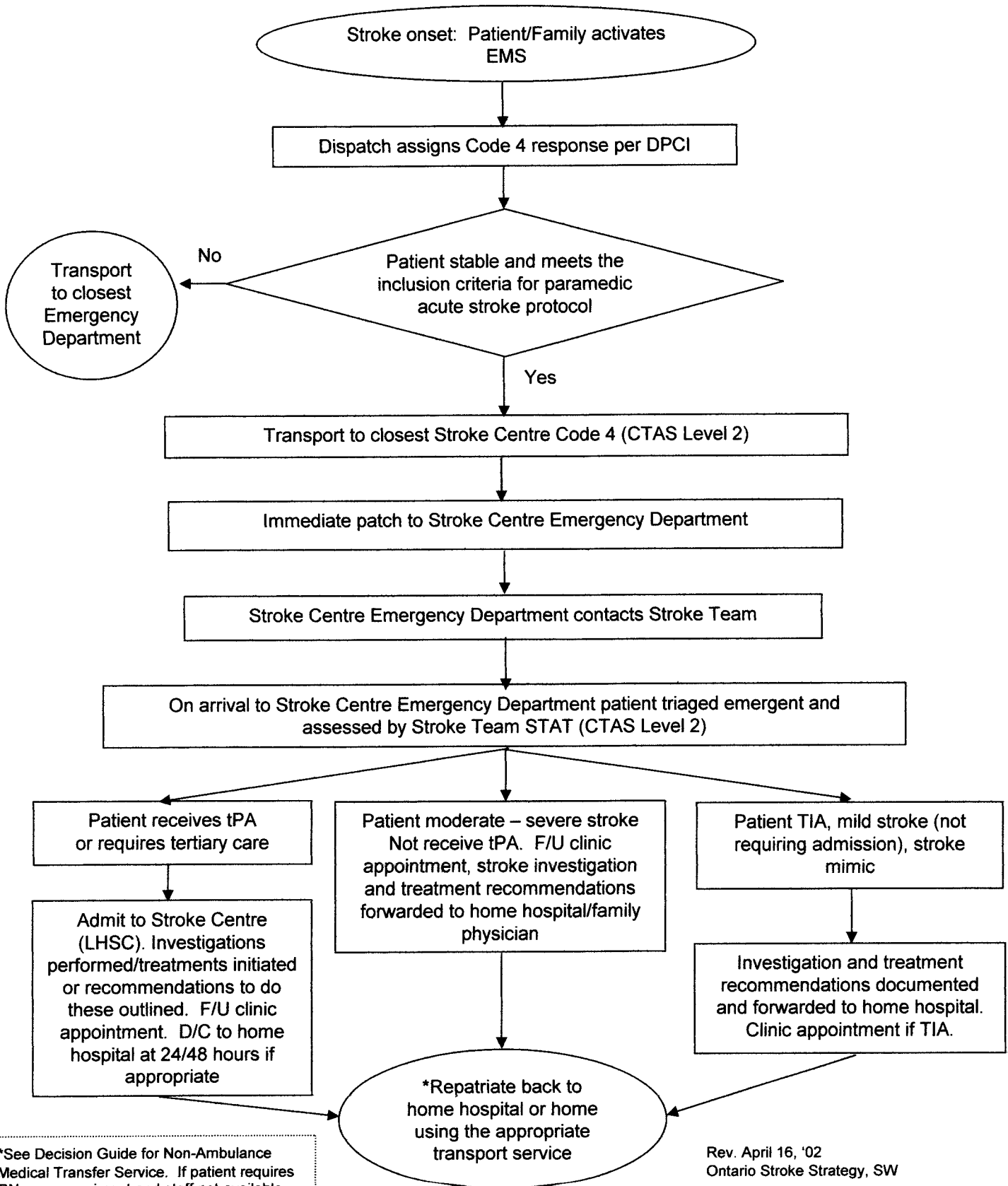
TERMINATION:

The parties may terminate this agreement at any time by giving 120 days written notice to this effect.

SUPPORTING DOCUMENTATION:

Attachment 1 - Thames Valley Acute Stroke Protocol Algorithm
Attachment 2 - Repatriation Agreement
Attachment 3 - Local Agreement - Destination Policy

THAMES VALLEY ACUTE STROKE PROTOCOL ALGORITHM



*See Decision Guide for Non-Ambulance Medical Transfer Service. If patient requires RN accompaniment and staff not available from ER or CNS → admit to Stroke Centre.

Attachment 2

REPATRIATION AGREEMENT

Transfer of tPA Candidates to Stroke Centre (LHSC, University Campus)

- Patients who access Emergency Medical Services (EMS) will be assessed by paramedics as candidates for tPA.
- “Walk-in” patients (those who do not access EMS) will be assessed by their local hospital as candidates for tPA (as per the existing Acute Stroke Protocol for Transfer of Acute Stroke tPA Candidates to LHSC).
- Patients who are candidates for tPA will be transported to the Stroke Centre Emergency Department at LHSC, University Campus Code 4 - CTAS level 2.
- Patients who receive tPA will be admitted to LHSC, University Campus.

Repatriation of tPA Patients to Local Hospitals from Stroke Centre

- Medically stable patients who receive tPA will be transferred to their local hospital inpatient unit within 24 - 48 hours of receiving tPA. Upon admission to the Stroke Centre, a physician from the stroke team will contact the physician “most responsible” for the patient at the local hospital, advising them of the admission and tentative transfer plan. The local hospital may be defined as the facility to which their family physician admits, or if they do not have a family physician, the facility which serves the community where the patient resides.
- Patients who are medically unstable for transfer to their local hospital at 48 hours will remain at LHSC, University Campus until medically stable.
- A physician from the stroke team at LHSC, University Campus will notify the receiving physician as soon as possible of the patient’s readiness for return.
- If an inpatient bed is not available at the receiving hospital upon transfer, tPA patients will be transferred to the Emergency Department at the receiving hospital.

Repatriation of Non-tPA Patients

- Medically stable patients who do not receive tPA, but require hospitalization, will be transferred as soon as possible to the Emergency Department at the local hospital to which their family physician admits, or if they do not have a family physician, the facility which serves the community where the patient resides. A physician from the stroke team at LHSC, University Campus will contact the Emergency Department personnel at the receiving hospital and provide a verbal report to the appropriate physician. Appropriate documentation will be transferred with the patient.
- A representative from the stroke team at LHSC, University Campus will use a decision guide (Non-Ambulance Medical Transfer Service) to determine if ambulance or non-ambulance medical transfer service is appropriate.
- If a patient requires RN accompaniment and staff are not available from the Emergency Department or Clinical Neurosciences unit at LHSC, University Campus, then the patient will be admitted to the Stroke Centre, LHSC, University Campus until medically stable or RN accompaniment can be arranged.
- The Emergency Department physician at the receiving hospital will review patient status and refer the patient to an appropriate on call physician for inpatient care.
- Patients not requiring admission to a local hospital will be discharged home using appropriate transport service. Investigation and treatment documentation will be forwarded to their family physician.

Anti-Microbial Resistance

- The Stroke Centre, LHSC and local hospitals will follow Ministry of Health and Long Term Care recommendations for screening anti-microbial resistant organisms (e.g., MRSA, VRE) so as not to delay patient transfer and admission.

LOCAL AGREEMENT - DESTINATION POLICY

Base Hospital for Elgin, Middlesex, Oxford and Perth Counties

Adult Acute Stroke

Introduction

The purpose of this policy is to facilitate the transport and assessment of adult acute stroke patients for the Thames Valley District. The procedures outlined below delineate the destination policies for this group of patients. Acute stroke therapies are currently available to this group of patients at the London hospitals. Many of these therapies may be administered only within very strict time parameters. It is the intent of this policy to maximize the number of patients that have access to these therapies.

Patients responded to within the City of London

Patients within the City of London, that are assessed by a paramedic as an acute stroke, will be transported to the closest appropriate Emergency Department. This may include London Health Sciences Centre, (University Campus and South Street Sites), or St. Joseph's Health Care London. The Patient Priority System must be followed for all patients.

Patients responded to outside the boundaries of the City of London, within Elgin, Middlesex and Oxford Counties

1. CTAS Level 1

These patients will be transported to the closest Emergency Department for treatment.

2. All other suspected Stroke Patients

These patients will be assessed by the responding paramedics, according to the "Thames Valley Acute Stroke Protocol Paramedic Prompt Card" (see attached). All patients that meet these inclusion criteria, will be transported directly to the closest Stroke Centre (e.g. University Campus, London Health Sciences Centre, or Stratford General Hospital, Huron Perth Hospitals Partnership), bypassing their local Emergency Department. If for whatever reason the CTAS level changes to level 1, the paramedics are to transport the patient to the closest Emergency Department.

Thames Valley Acute Stroke Protocol
Paramedic Prompt Card
 (Outside City of London)

ASSESSMENT ITEM	Yes	No
“ABC’s” stable?		
Patient has a sudden onset of at least one of the following? - Unilateral leg or arm weakness - Speech deficit		
Time of symptom onset, or when patient was “last seen in usual state of health” is clearly determined?		
Your ETA from symptom onset, or when patient was “last seen in usual state of health”, to closest Stroke Centre, is approximately 2 hours or less?		
Is the patient conscious?		
Consider Hypoglycemia Protocol. If patient is hypoglycemic, choose “NO”		
If the symptoms are rapidly improving/resolved, choose “NO”		
If patient had a seizure at onset, choose “NO”		
If patient is terminally ill or palliative, choose “NO”		
If patient is bedridden, choose “NO”		

If yes to all questions, patient meets the paramedic inclusion criteria for the Thames Valley Acute Stroke Protocol:

- Transport Code 4 (CTAS Level 2) to the **Emergency Department, at the closest Stroke Centre**
- Provide supplemental O₂, monitor BP and cardiac rhythm
- Provide patient/family with appropriate **pamphlet** “Why you need to go to right away”

SOUTHWEST REGION
LOCAL DESTINATION DETERMINATION GUIDE:

All CTAS level 1 and 2 patients to be transported to the closest appropriate hospital. Appropriateness will reflect the availability of essential medical services (eg. Trauma, Burns, Pediatrics, etc.)

LONDON AREA:

Adult Acute Stroke

- | | |
|---|--|
| - Within the City of London | Closest hospital |
| - Outside City, within Elgin,
Middlesex, Oxford Counties | Closest Stroke Centre: University
Campus, LHSC- ED or Stratford
General Hospital of the Huron Perth
Hospitals Partnership- ED |

SOUTHWEST REGION

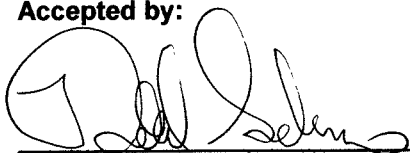
LOCAL AGREEMENT- DESTINATION POLICY

FOR ADULT ACUTE STROKE, LONDON AND THAMES VALLEY

SIGNATORIES TO THIS AGREEMENT:

Accepted by:

Signature Date:



Signing Officer: Donald Sanderson, Site Administrator/CEO
Alexandra Hospital

20 June 2002

Date



Signing Officer: Tony Dagnone, CEO
London Health Sciences Centre

June 21/02

Date



Signing Officer: Michael Marza, CEO
Middlesex Hospital Alliance

June 20/02.

Date



Signing Officer: Cliff Nordal, President & CEO
St. Joseph's Health Care London

19 June 02

Date



Signing Officer: Paul Collins, President & CEO
St. Thomas-Elgin General Hospital

20 June 2002.

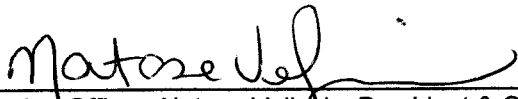
Date



Signing Officer: Brenda Butters, President
Tillsonburg District Memorial Hospital

20 June 2002

Date



Signing Officer: Natasa Veljovic, President & CEO
Woodstock General Hospital

20 June 2002

Date

SOUTHWEST REGION

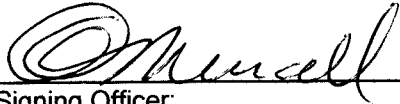
LOCAL AGREEMENT- DESTINATION POLICY

FOR ADULT ACUTE STROKE, LONDON AND THAMES VALLEY

SIGNATORIES TO THIS AGREEMENT (cont'd):

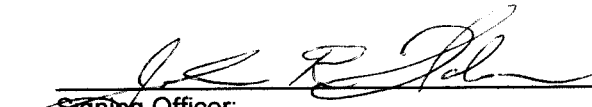
Accepted by:

Signature Date:



Signing Officer:
Middlesex County

June 4/02
Date



Signing Officer:
The County of Elgin

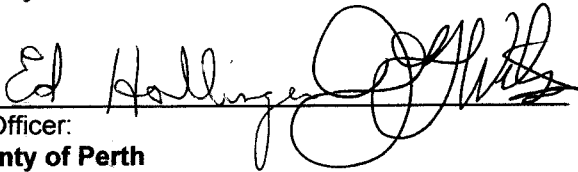
June 25/02
Date

David C. Oelshart

Signing Officer:
The County of Oxford

July 11/02
Date

Ken Whiteford

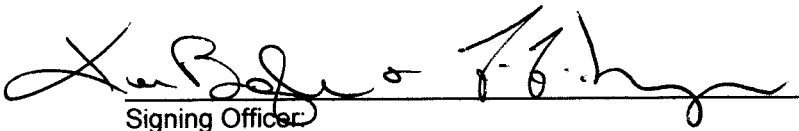
+ 
Signing Officer:
The County of Perth

Jan 20/02
Date

Bonnie Adamson

Signing Officer: Bonnie Adamson, President & CEO
Huron Perth Hospitals Partnership

June 19/2002
Date



Signing Officer:
Base Hospital for Elgin, Middlesex, Oxford and Perth Counties

July 4/02
Date

Pat Troop

Signing Officer: **Manager**
SW Field Office EHS Branch

July 12.02
Date